INDIAN FOREST AND WOOD CERTIFICATION SCHEME

GUIDELINES



Program for Recognition and Accreditation of Sustainable Management Practices for Agroforestry and Natural Forestry Resources



Ministry of Environment, Forest and Climate Change Government of India

Contents

1.	Scope	1
2.	Definitions	3
3.	Institutional arrangements for IFWCS	6
4.	Functions of IFWCS's Institutions	7
5.	Standard setting process	11
6.	Certification process	12
7.	Indian Forest Management Standard	20
8.	Standard for Sustainable Management of Trees outside Forest areas in India	56
9.	Chain of Custody (CoC) Certification Standard	66

1. Scope

- 1.1 India having adopted the principles of Sustainable Forest Management, has developed the National set of 8 Criteria and 37 Indicators on Sustainable Management of Natural Forests from the Bhopal India Process. This was pilot tested in 26 forest divisions spread over 12 states of the country over a span of 12 years (2001-2013) by IIFM, Bhopal.
- 1.2 The key premise of the National Working Plan Code 2023 (NWPC 2023) is based on the principles of Sustainable Forest Management and all the 8 criteria and 37 indicators of the National set have been imbibed into the NWPC 2023.
- 1.3 Moving a step forward, the Indian Forest Management Standard has been developed and made an integral part of the National Working Plan Code 2023.
- 1.4 The Indian Forest Management Standard provides a monitoring and evaluation framework to assess the progress towards achieving sustainable forest management in the Country. The standard is applicable to forests covered under approved working plans/working schemes. While all the 8 criteria are applicable at the forest division, forest circle, state and national levels, the indicators are flexible and can be adapted as per the specific context of each State and forest divisions within the State.
- 1.5 With the revised National Working Plan Code 2023 and the Indian Forest Management Standard (IFMS) in place, the next logical step is to develop an Indian Forest and Wood Certification Scheme.
- 1.6 The Indian Forest and Wood Certification Scheme (IFWCS) is the national forest certification scheme of India and is designed to promote sustainable forest

management and sustainable management of Trees outside Forests in the country. IFWCS envisages to provide market incentives to those forest divisions and plantation areas which effectively implement the criteria and the indicators of Indian Forest Management Standard (IFMS) as contained in the National Working Plan Code 2023 and the Standards for Trees outside Forests and thus exhibit responsible forest management and agroforestry practices in their operations.

- IFWCS is applicable across the country, both in forest areas and Trees outside Forests (TOF) plantations on government, private, agroforestry and other lands. The certification is applicable for both timber and non-timber forest produce (NTFP).
- 1.8 The certification may be recognized by various regulatory authorities but in no way is intended to serve as legal advice on compliance with any law, regulation or requirement.
- 1.9 A forest division or ToF area or any other entity which applies for the certification under IFWCS shall be assessed by approved Certification Body on their conformity to the requirements of this scheme.
- 1.10 The certification scheme may be of utility to the Forest Management Unit or forest divisions or corporations or wood-based industries, tree growers, timber or NTFP traders, saw millers, exporters/importers of wood-based and NTFP-based products, and other end-user Industries.
- 1.11 This document sets out the key requirements, governance structure, institutional arrangement and various processes and procedures related to forest certification under IFWCS.
- 1.12 This document contains requirements of three types of certifications namely -
 - 1.12.1 Forest Management certification or FM certification is the certification of Recorded Forest Areas that have an approved working plan/working scheme prepared in accordance with the NWPC 2023 and the forest management practices comply with the requirements of IFWCS standard as contained in this document (as Annexure I) and adopted and approved by the Indian Forest and Wood Certification Council (IFWCC) from time to time and duly assessed by a IFWCS accredited Certification Body.
 - 1.12.2 Trees outside Forests Management certification or ToF Management certification is the certification of Trees outside Forest areas (as defined in para 2.12) to the effect that such areas have an appropriate management

plan/working plan/working scheme and their management practices comply with the requirements of IFWCS standard as contained in this document (as Annexure II) and adopted and approved by the IFWCC from time to time and duly assessed by a IFWCS accredited Certification Body. Trees outside Forests has significance of all three components of sustainability viz. economic, environmental and social, including supply chain.

1.12.3 Chain of Custody certification or CoC certification – is the certification of unbroken path taken by products (such as timber or NTFP) from the forests, or trees outside forests to the point where the product is sold with an IFWCS claim and/or it is converted into a finished product (such as paper, furniture, handicraft, wood panels, herbal products) that are IFWCS labelled in compliance to IFWCS CoC standard as contained in this document (as Annexure III) and adopted and approved by the IFWCC from time to time and duly assessed by a IFWCS accredited Certification Body.

2. **Definitions**

In this document, unless the context otherwise requires, the following definitions shall apply

- 2.1. 'Accreditation body' is a national agency / board responsible for accreditation of certification bodies to undertake audit or assessment of organizations seeking certification of their management practices against a pre-determined certification standard;
- 2.2. **'Auditing**' is the process of assessment or verification of forest management practices of an entity against the requirements of IFWCS Forest Management, ToF Management or CoC standard by an accredited Certification Body;
- 2.3. 'Certification Body' (herein after referred as CB) means an entity approved by the Indian Forest and Wood Certification Council to undertake an audit or assessment of organizations seeking certification of their management practices against a pre-determined certification standard of IFWCS;

- 2.4. 'Client' is an entity such as a forest division, forest department or forest corporation, Individual, farmers' organization or a business organization at any stage of the wood / NTFP value chain that seeks to receive IFWCS certification;
- 2.5. 'Criteria' are aspects of forest management that is considered important and by which sustainable forest management may be assessed. A criterion is accompanied by a set of related indicators that describe a state or situation, which should be met to comply with sustainable forest management;
- 2.6. 'Forest Management Unit (FMU)' is a clearly defined forest area, managed to a set of explicit objectives and according to a long-term management plan. A FMU can be a forest division, plantation division, a protected area such as a national park or wildlife sanctuary, an individual private plantation plot/area, a group of private plantation plots/areas, or community owned/managed forest area etc.;
- 2.7. 'Indian Forest and Wood Certification Council' means Indian Forest and Wood Certification Council as refered to in para 4.1;
- 2.8. 'Indicators' means a qualitative, quantitative or descriptive attribute that, when measured or monitored periodically, indicates, the direction of change in a criterion.
- 2.9. **'Intended situation'** describes expected outcome with respect to the indicator in the context of the forest division;
- 2.10. 'SOA' means Scheme Operating Agency as refered to in para 4.4;
- 2.11. '**Standard**' is the Indian Forest Management Standard (IFMS) as contained in the NWPC 2023 (Annexure I) and the standard for sustainable management of Trees Outside Forest areas in India as developed by IFWCS (Annexure II) and as and when revised under the scheme;
- 2.12. 'Trees outside Forests' means trees growing outside recorded and notified forests, in farm lands of an individual farmers or group of small farmers or plantation area on private land of institutions and industries, etc. and include all trees on the hedges and bunds, trees in different models of agroforestry, silvo-pastoralism, urban and rural forestry systems and block plantations;
- 2.13. 'Verifiers' are the data or information needed for assessing an Indicator. They define the specific details that would show whether an indicator is establishing sustainability of forest. The verifiers are checked against a baseline, average value, published standard value, or collective wisdom of stakeholders.

3. Background

- 3.1. India adopted the principles of Sustainable Forest Management and developed the National set of 8 Criteria and 37 Indicators on Sustainable Management of Forests from the Bhopal – India Process. These Criteria and Indicators were incorporated in National Working Plan Code 2023 and thus, the Indian Forest Management Standard was developed as an integral part of the National Working Plan Code 2023. Subsequently, this resulted in the formation of the Indian Forest and Wood Certification Scheme (IFWCS) to provide market incentives to those forest divisions which effectively implement the criteria and the appropriate indicators, thus exhibiting responsible forest management practices.
- 3.2. Forest certification is regarded as an environmental label/ECOMARK for sustainable forest management practices. Consequently, the Green Credit Program (GCP), administered by the Ministry of Environment, Forest and Climate Change (MoEF&CC), provides the opportunity to earn Green Credits for additional activities. These activities include afforestation, water-harvesting, conservation and restoration efforts, as well as the production of timber as a sustainable construction and infrastructure development material.
- 3.3. The criteria, indicators, and verifiers developed for the Indian Forest Management Standard are primarily adopted from the Bhopal-India process, which is one of the 11 internationally (Castañeda, 2000 and Linser, 2018) accepted frameworks of criteria and indicators approach to sustainable forest management. Therefore, the forest certification received by the forest divisions or plantations, agroforestry/Tree Outside Forests (TOF) using this standard as adopted by IFWCS is in sync with any internationally recognized certification system while being relevant in the Indian context.

4. Institutional arrangements for IFWCS

- 4.1. The Indian Forest and Wood Certification Scheme (IFWCS) will be overseen by the Indian Forest and Wood Certification Council (IFWCC).
- 4.2. The IFWCC shall be responsible for the following:
 - 4.2.1. Adoption of the Indian Forest Management Standard (IFMS) (Annexure I, 8 criteria, 69 indicators and 254 verifiers) for the forest areas and TOF Management Standard for trees outside forests areas (Annexure-II, 5 criteria, 22 indicators and 76 verifiers) are the basis for achievement of sustainable forest management and sustainable ToF management certification in the country.
 - 4.2.2. Approval of independent institutions or agencies as the certification bodies to undertake certification audits on the accreditation by the National Accreditation Board of Certification Bodies (NABCB).
 - 4.2.3. Specifying the certification process for the relevant stakeholders that include managers of forest divisions, plantation divisions, a protected area such as a national park or a wildlife sanctuary, an individual private plantation plot/area, a group of private plantation plots/areas, community owned/managed forest areas etc.
 - 4.2.4. Prescribing the auditing procedure for the certification bodies (Forest Management certification (FM), ToF Management certification, and Chain of Custody (CoC) certification.
 - 4.3. The Indian Forest and Wood Certification Council (IFWCC) will have the following composition:

i. Addi	ional Director General of Forests	Chairman
ii. Direc Fores repre	tor General, Indian Council of stry Research and Education or esentative	Member
iii. Direc Dehr	tor General, Forest Survey of India, adun	Member
iv. Inspe (Surv	ector General of Forests rey and Utilization)	Member
v. Inspe (Nati Deve	ector General of Forests onal Afforestation and Eco lopment Board)	Member

vi.	Inspector General of Forests (Forest Policy)	Member		
vii.	Representative of the Ministry of Agriculture and Farmers' Welfare	Member		
viii.	Representative of Department of Commerce, Ministry of Commerce and Industry	Member		
ix.	Representatives from three State Forest Departments (SFDs)	Members		
х.	Representatives from three Forest Development Corporations (FDCs)	Members		
xi.	Representative of Quality Council of India	Member		
xii.	Two representatives from wood-based industries/associations	Members		
xiii.	Director- Indian Institute of Forest Management (IIFM)	Member Secretary		
The Council may also co-opt experts or individuals in the relevant field				

- 4.4. The Indian Forest and Wood Certification Scheme (IFWCS) would be governed by the Indian Forest and Wood Certification Council (IFWCC) and operated by the Indian Institute of Forest Management (IIFM) as the designated Scheme Operating Agency (SOA).
- 4.5. The IIFM shall establish a dedicated Scheme Operating Cell consisting of professionals and experts to operate and manage the IFWCS under the overall guidance of IFWCC.

5. Functions of IFWCS's Institutions

5.1. The functions of the IFWCC:

5.1.1. Overall responsibility of governance and administration of the Indian Forest and Wood Certification Scheme through an appropriate organizational structure and governance mechanism.

- 5.1.2. Approval of Certification Standards comprising Forest Management (FM) certification, Trees Outside Forests (ToF) Management certification, and Chain of Custody (CoC) certification on the recommendation of standard adoption committees, which will follow a multi-stakeholder consultative process.
- 5.1.3. Constitution of technical committees for advising and recommending certification standards, certification processes, certification procedures etc.
- 5.1.4. Approval of certification process for Forest Management (FM) certification, Trees Outside Forests (ToF) Management certification, and Chain of Custody (CoC) certification.
- 5.1.5. Approval of accreditation of Certification Bodies (CB) having relevant expertise in Sustainable Forest Management, Sustainable ToF management, Forest Certification and requirements of relevant ISO standards such as 17065 requirements of auditors/certification bodies and defining the auditing process.
- 5.1.6. Managing and monitoring the issuance of certifications and their renewals (Forest Management certifications, Trees outside Forests certification, and Chain of Custody certification), trademarks usage, licenses to certificate holders as certified under this scheme.
- 5.1.7. Review the compliance of the Certification Bodies as per the requirements of the Indian Forest and Wood Certification Scheme and take appropriate action including suspension or cancellation of accreditation, for non-compliance.

5.2. Functions of Scheme Operating Agency (SOA)

- 5.2.1. The Scheme Operating Agency shall be responsible for overall management of the Indian Forest and Wood Certification Scheme under the guidance of the Indian Forest and Wood Certification Council.
- 5.2.2. The SOA will be responsible for supporting and facilitating the process of standard development by the standard adoption committee, certification process and procedures through expert group/committee, and accreditation of CBs by the National Accreditation Board for Certification Bodies (NABCB).
- 5.2.3. The SOA would be tasked with overseeing the assessment and issuance of certifications through NABCB-accredited certification bodies.
- 5.2.4. Permission for certification mark/logo use will be issued by the Scheme Operating Agency (SOA) on the recommendation of an NABCB-accredited Certification Body.

5.2.5. Levying annual fees and charges for scheme operation as approved by the IFWCC.

5.3. Accreditation body

- 5.3.1. An accreditation body is a national agency/board responsible for accreditation of certification bodies to undertake audit or assessment of organizations seeking certification of their management practices against a predetermined certification standard. The National Accreditation Board for Certification Bodies (NABCB) is a Constituent Board of Quality Council of India and provides accreditation to certification bodies in India.
- 5.3.2. The National Accreditation Board for Certification Bodies (NABCB) will be the accreditation body under the scheme and responsible for the following:
 - 5.3.2.1. Accreditation of the Certification Bodies (CBs) according to the requirements of IFWCS, relevant ISO standards and international accreditation forum.
 - 5.3.2.2. Ensuring that the auditors of the accredited CBs satisfy the requirements of IFWCS regarding their knowledge and experience related to Forest Management certification, Trees outside Forests (ToF) Management certification, and/or Chain of Custody certification; and
 - 5.3.2.3. Establishing procedures to deal with complaints and appeals regarding the accreditation decision.

5.4. Certification Body

- 5.4.1. Forest Management (FM) certification, Trees outside Forests (ToF) certification, and Chain of Custody (CoC) certification under IFWCS shall be carried out by impartial, competent, and independent Certification Bodies (CBs). The CBs cannot be involved in consultancy or in the standard setting process as governing or decision-making bodies or in sustainable forest management activities, and are independent of the entity to be certified.
- 5.4.2. The CB is responsible for the following:
- 5.4.2.1. Receiving and processing applications for Forest Management (FM) certification, Trees outside Forests (ToF) Management certification, and Chain of Custody (CoC) certification;
- 5.4.2.2. Carrying out independent audits and making the certification decision.
- 5.4.2.3. Following-up on the certification decision including action taken on major or minor corrections required.

- 5.4.3. The CB shall have a complete understanding of IFWCS and its requirements for Forest Management (FM) certification, Trees outside Forests (ToF) Management certification, and Chain of Custody (CoC) certification.
- 5.4.4. The CB for forest management certification shall fulfill requirements defined in:
 - a. IFWCS and ISO/IEC 17021-1 (Conformity assessment Requirements for bodies providing audit and certification of management systems); and
 - b. Other requirements for CBs defined by NABCB.

The CB carrying out forest management certification shall have the technical competence in forest management, its economic, social and environmental impacts, and a good understanding of the standard for forest management certification employed in IFWCS.

- 5.4.5. The CB for Trees outside Forests management certification shall fulfill requirements defined in:
 - c. IFWCS and ISO/IEC 17021-1 (Conformity assessment Requirements for bodies providing audit and certification of management systems); and
 - d. Other requirements for CBs defined by NABCB.

The CB carrying out trees outside forests management certification shall have the technical competence in trees outside forests management, its economic, social and environmental impacts, and a good understanding of the standards for trees outside forests management certification employed in IFWCS.

- 5.4.6. The CB for chain of custody certification shall fulfill requirements defined in:
 - a. IFWCS and ISO/IEC 17065 conformity assessment requirements for bodies certifying products, processes and services;

b. Other requirements for CBs defined by NABCB.

The CB performing chain of custody certification shall possess technical expertise in the acquisition and processing of forest-based products, material flows in various levels of processing and trading, and a thorough knowledge of the chain of custody certification standard employed by IFWCS.

5.4.7. The CB shall have established internal procedures for auditing and certification against IFWCS standards. The information describing the auditing and certification processes for granting, maintaining, extending, renewing, reducing, suspending or withdrawing certification of a client organization should be made publicly accessible by the CB.

- 5.4.8. The audit carried out by the CB will involve a document review, communication or consultation with stakeholders, wherever necessary, and an on-site visit.
- 5.4.9. The compliance of the CB with the above requirements shall be verified by the NABCB and SOA.

5.5. Engagement of Auditors

- 5.5.1. The CB shall engage auditors with the relevant qualifications and required experience in forest management, ToF management and chain of custody certification and, a complete understanding of the National Working Plan Code 2023, the Indian Forest Management Standard, ToF Management Standard, CoC certification standard, and all the provisions of Indian Forest and Wood Certification Scheme. The details of the qualification, experience and the competencies of the auditors shall be specified by the IFWCC.
- 5.5.2. The auditors shall also fulfill the requirements as defined in Part 2 of ISO/IEC 17021 and the requirements detailed by the IFWCC, in the case of Forest Management Certification. The auditors shall also fulfill the general criteria for quality and environmental management systems auditors as defined in ISO 19011 (Guidelines for auditing management systems), in the case of Chain of Custody. The compliance of the auditors with the above requirements shall be verified during the accreditation carried out by NABCB.

6. Standard setting process

6.1. The standard setting process is governed by key principles involving stakeholder consultation, periodic review, improvement, accountability and transparency. The IFWCC shall approve the certification standards required under the scheme based on the recommendations of a standard adoption committee constituted by the council. The SOA will support and coordinate the standard setting process to develop, review or revise the certification standards.

The standard setting procedures shall be independent from the certification or accreditation processes, and shall be done by the IFWCC based on the recommendations of a standard adoption committee following a multistakeholder consultation process.

6.2. The Indian Forest Management Standard (IFMS) as contained in the NWPC 2023 shall be the basis for finalizing the Forest Management (FM) certification standard

for forest divisions/plantation divisions/plantations in the country. The standard adoption committee will recommend changes/refinements in the Indian Forest Management Standard, if any based on the multi-stakeholder consultation.

- 6.3. The Trees outside Forests (ToF) Management Standard is attached as Annexure II. The standard adoption committee will recommend changes/refinements to the standard, if any based on the multi-stakeholder consultation.
 - 6.4. Chain of custody certification standard for forest divisions/plantation divisions/plantations and ToF areas including agroforestry is included in this document as Annexure III. The standard adoption committee will recommend changes/refinements to the standard, if any based on the multi-stakeholder consultation.
- 6.5. Chain of custody certification can be implemented as an individual or multi-site certification. Multi-site certification approach also covers the certification of groups of small independent enterprises and farmers.
- 6.6. The certification standards shall be periodically reviewed in light of new scientific knowledge and practical experience to ensure continuous improvement. The standards shall be reviewed at intervals that do not exceed a five-year period.

7. Certification process

- 7.1. The broad steps under the IFWCS certification include applicants for certification, application for certification, certification procedure and grant of certification, as detailed below.
- 7.2. Applicants for Certification
- 7.2.1. For the certification of forests, the applicants shall be the state/UT forest departments managing state/community-owned forests spread across forest divisions/plantation divisions.
- 7.2.2. For the certification of trees outside forests including plantations, agroforestry, farm forestry etc. raised on outside forest lands, the applicants shall be the owners of such trees or plantations individually as farmers or as a group of farmers or institutions or industries or other entities at any stage of wood value chain.
- 7.2.3. The entities seeking IFWCS certification shall comply with requirements of IFWCS standards and are also responsible for ensuring that the activities and operations

meet the certification criteria and follow the practices, process and procedures laid-down in IFWCS standards.

- 7.2.4. For chain of custody or stump-to-gate certification, the applicants shall be the custodian of forest or companies which manufacture, supply and/or export timber/NTFP products, as well as companies which import and carry out further processing, using raw materials which originate from the forest division/plantations/ Trees outside Forests or agroforestry or farm forestry certified under IFWCS, and/or imported certified raw materials.
- 7.2.5. The managers of the wood-based industry or entities seeking IFWCS certification shall comply with the certification requirements and are also responsible for ensuring that the activities and operations meet the requirements of IFWCS standards.

7.3. Application for certification

7.3.1. Application for certification

The entity (forest division/plantation division/farmer producer organization/agroforestry/Trees Outside Forests (ToF)/company) which has sponsored or promoted agroforestry/farm forestry among the farmers and is desirous of seeking Forest Management certification/Tree outside Forests (ToF) Management certification/Chain of Custody certification shall apply to the IFWCS approved certification body.

7.3.2. Application Requirements

The application must be submitted by the entity in the specified format to the CB. It must be accompanied by the Management Plan for the areas for which the entity intends to seek certification along with relevant supporting documents. Upon receiving the complete application, the CB may assign a unique client number, which would be used as a reference for future communications.

7.3.3. Application Fee (Non-Refundable)

The application fee may be decided by the SOA with approval of IFWCC in different slabs based on the scope of the certification area. The application fee will be charged by the Certification Body and will be non-refundable.

7.3.4. Certification Fee

The certification fee shall be charged by the CB based on the scope of certification. The IFWCC or the SOA shall intervene in matters where complaints or information

13

is received regarding abnormally low or abnormally high certification fees charged.

7.3.5. Annual Fee of CB

The certification body will be charged an annual fee for its accreditation to the IFWCS scheme. This fee will be decided by the IFWCC and will be paid to the SOA.

7.3.6. Information in the Public Domain

All pertinent and accurate information explaining the certification process for issuing, maintaining, extending, renewing, suspending, or withdrawing all certifications must be made publicly available on the SOA and CB's official websites.

7.3.7. Query Response

The CB shall respond to all enquiries received from the prospective applicants for the purpose of certification proactively within seven (07) days of the receipt of the query.

7.3.8. Declaration of Antecedents/Crucial Information

The entity intending to seek forest certification shall also declare all the judicial proceedings, any proceedings by any regulatory body, or suspension/cancellation/withdrawal of any certification/approvals under any regulations or otherwise, if any. In the event of concealed critical information impacting the certification process or standards under the scheme coming to light at a later stage, the application/certification shall be summarily cancelled with immediate effect.

7.3.9. Pre-review of Application

All applications for certification must be evaluated by the relevant certification body for sufficiency, and any shortcomings found must be communicated to the applicant within ten (10) days of receiving the application. An expert auditor of the accredited CB should study and evaluate applications. The records of the review of applications must be maintained by the CB.

7.3.10. Registration of Application

The complete applications, supported by all the necessary documents and verified antecedents, must be received and registered with a unique identification number, and records of the same must be maintained. An acknowledgement must be sent to the applicant along with the identification number.

7.3.11. Re-Application

Requests for the grant of certification from previous applicants shall be processed like fresh applications and the entire procedure for grant of certificate should be adhered to. If the CB has previously received an application, the applicant must give the previous application number; detail how the current application corrects the prior non-compliance; and justify why it should be reconsidered for forest certification.

7.4. Certification assessment/Audit procedure

- 7.4.1. On receipt of complete application form, the accredited CB shall undertake audit of the forest division/plantation division/ /Trees outside Forests (ToF) agroforestry/farm forestry areas.
- 7.4.2. The CB shall conduct an audit of the forest division/plantation division/ Trees Outside Forests (ToF) – agroforestry /farm forestry area to ascertain its compliance with the requirements of the certification standard through document review and on-field verification. The written audit report (for the main audit or recertification audit) will be subjected to comments by the applicant and a peer review process. If no non-conformities are recorded by the CB, the forest division/plantation division/Trees outside Forests (ToF) - agroforestry/farm forestry area will be eligible for the award of the certification for compliance with IFWCS standard.

7.4.3. Criteria for Compliance Assessment

Prior to the CB's evaluation, the entity desirous of seeking certification may verify the compliance of its procedures with the IFWCS standards. The IFWCS standard will be used as the benchmark for the certification body's conformance assessment of documentation and on-site evaluation of client activities.

7.4.4. Field Assessment

On-field assessment for conformity shall be conducted at the earliest after the receipt of the completed application by the certification body. The assessment may be carried out in two stages: Pre-Assessment and Main-Assessment.

7.4.5. Pre-Assessment

The pre-assessment phase evaluates the applicant's readiness for certification. This involves checking the availability of essential documents like the working/management plan/working scheme and assessing compliance with the required processes, along with maintaining adequate records. Any identified inadequacies will be communicated in writing to the applicant. It is the applicant's responsibility to address and rectify these issues and inform the certification body. Once resolved, the certification body can proceed with the main assessment.

7.4.6. Main Assessment

In the main assessment, the assessment teams shall observe the relevant processes to ensure adherence to the certification framework. Additionally, they will review and verify the supporting documentary evidence. The teams shall interact with relevant stakeholders such as community members, forest department personnel, farmers, farmer producer organization, forest produce collectors, the local community, relevant institutions, NGOs etc. Based on the assessment, the teams shall prepare a draft report with comments or feedback regarding any non-conformities or deficiencies observed which would be shared with the applicant. On receiving the applicant's response, the teams would prepare a final report recommending the decision on the award/rejection of certification, which would be submitted to the CB. The CB would seek review of the audit report from an independent expert. On receiving the review report, the CB will make a decision regarding the awarding of certification and intimate the client and the SOA simultaneously.

7.4.7. Communication Incidental to the Assessment

The CB needs to duly communicate and inform the applicant well in advance, the composition of the team of auditors and the schedule of the assessment, so as to leave enough scope for the applicant to raise queries, if any. Any query against non-conformance raised by the applicant must be addressed by the CB as per their grievance redressal system. In case the client is not satisfied with the grievance redressal by the CB, they can raise the query to SOA.

7.4.8. Timing of Assessment

The assessment is to be timed such that the key silviculture operations and key value chain activities are captured during the main assessment. However, mutual consent between the auditing team and the Applicant may also be taken into consideration while deciding the timing of assessment so that the key silviculture/value chain may not be missed.

7.5. Grant of certification

7.5.1. Validity

The certification shall be valid for five years after it has been awarded, but a yearly surveillance will be carried out to make sure that all certification standards are being met and to check for any new problems that may have arisen during this time, including during the annual surveillance.

7.5.2. Brand Name/Logo/Trademark Usage

The certification mark/logo of IFWCS on the products produced/processed in line with the scope of the certification may be used by the applicant after a submission of a certification mark/logo use declaration to the certification body (CB). The ownership of the certification mark/logo would be ascertained by the CB through adequate documentary proof and shall be recommended to the SOA for approvals. There also shall be a fee levied against the use of brand name/logo/ trademark usage by SOA.

7.5.3. Scope of Certification

The certification may be awarded only after complete adherence to the respective certification standards have been established. There is no scope for conditional certification other than for minor non-conformities. When a product is being considered for CoC certification, the certificate document shall clearly indicate the bio-resources covered and the corresponding territorial limits of the collection of bio-resources along-with the complete trail of the product under certification consideration.

7.5.4. Issuance of Certificate

On grant of certification, the CB must notify the entity and provide a certificate with a unique identification number that lists the names of the certified areas. The different products that have been incorporated into the management plan/prescriptions as well as the value chain segment for which certification is considered to be granted, the certification criteria against which the certification has been awarded, the effective date, the validity date, the name and address of the entity, and the forest and plantation areas that are covered under the scope of the forest certification shall be mentioned in the case of FM & CoC certification.

7.5.5. Chain of Custody (COC) certification

The entity can opt for applying for FM and CoC certification together. An audit of the entity shall be conducted by the Certification Body (CB) to ascertain the compliance of the entity with the requirements of the certification standard. To label a product as certified, it is imperative that both Forest Management and Chain of Custody certifications are obtained for the product originating from a certified area. On completion of the assessment and compliance with the CoC certification requirements as given in the CoC certification document (attached herewith as Annexure – III), the entity will be eligible for the issuance of the IFWSC's CoC certificate.

8. **Dispute resolution procedures**

- 8.1. The IFWCC shall form a Dispute Resolution Committee (DRC) to resolve or make recommendations for resolution of disputes.
- 8.2. The DRC will examine disputes involving activities related to the accredited Certification Bodies (CBs), issuance of forest management, ToF management and CoC Certificates, issuance of the certification mark/logo usage and licenses for the IFWCS logo to the holders of certificates issued by the CBs and any other disputes which may come under the purview of the Indian Forest and Wood Certification Scheme.

9. Implementation of changes to IFWCS

- 9.1. Continual improvement may call for periodic adjustments to some IFWCS components. The IFWCC is competent to make any required changes and improvements in the standard, compliance requirements, certification process, procedure, certification bodies (CB) accreditation, etc.
- 9.2. A transition period, not exceeding 12 months, as decided by the IFWCC, will be permitted for all new certifications and recertifications when such changes to IFWCS, such as standard, compliance requirements, certification process, procedure, certification bodies (CB) accreditation, etc. are made. The modifications must be in place for certificates issued prior to the end of the transition period by the time of the subsequent certificate holder surveillance audit.



Overview of Indian Forest and Wood Certification Scheme (IFWCS)

Annexure – I

Indian Forest Management Standard (Adopted from National Working Plan Code – 2023)

1. Introduction

The National Working Plan Code 2023 (NWPC 2023) envisions achievement of Sustainable Forest Management (SFM) in the country. Sustainable Forest Management offers a holistic approach to ensure forest activities deliver social, environmental, and economic benefits, balance competing needs and maintain and enhance forest functions now and in the future. Thus, the NWPC 2023 visualizes that the state forest departments (SFDs) conduct the management effectiveness evaluation on the implementation of the working plan prescriptions based on the framework developed by Ministry of Environment, Forests & Climate Change for the purpose as Indian Forest Management Standard.

This standard for sustainable management of forests is primarily derived from the rich heritage of scientific forest management in India. It is also in sync with internationally evolving system of criteria and indicators for SFM. This Standard has been developed from the Bhopal-India process as National set of Criteria and Indicators for Sustainable Management of Natural Forests in India.

The Standard is a basis for monitoring which sets guidelines for sustainable forest management in terms of broad framework of Criteria, Indicators, and Verifiers that recognizes that forests have environmental, economic and social objectives. Criteria are categories of conditions or processes by which SFM can be assessed, and each criterion is characterized by a set of indicators that can be monitored to assess change over time. Each indicator is accompanied by verifiers which are the data or information for assessing its status or change over time. State Forest Department / Working Plan Officers can adapt these indicators and verifiers according to the specific situation and local needs of the Forest Division.

The SFDs may consider engaging specialised agency for supplementing data for evaluation of progress against set indicators.

1. Definitions

1.1 Defining Criteria

A criterion is defined as an aspect of forest management that is considered important and by which sustainable forest management may be assessed. A criterion is accompanied by a set of related indicators that describe a state or situation, which should be met to comply with sustainable forest management.

This standard includes eight criteria as specified in NWPC 2023

- 1. Maintenance/increase in the extent and condition of forest and tree cover.
- 2. Maintenance, conservation and enhancement of biodiversity including wildlife.
- 3. Maintenance and enhancement of forest health and vitality together with

establishment of regeneration.

- 4. Soil and water conservation.
- 5. Maintenance and enhancement of forest resource productivity.
- 6. Optimisation of forest resource utilisation.
- 7. Maintenance and enhancement of social, economic, cultural benefits, and
- 8. Adequacy of Policy, legal and institutional framework.

The order of presentation of the criteria does not indicate priority or relative importance.

1.2 Defining Indicators

An indicator is defined as a quantitative, qualitative or descriptive attribute that, when measured or monitored periodically, indicates the direction of change in a criterion. Indicators identify the information needed for assessing and monitoring change, both in the forest itself (outcome indicators) and as part of the environmental and forest management systems used (input and process indicators). A time series of the values of any measurable or clearly descriptive indicator can provide information on the direction of change, either towards or away from SFM. However, the indicators cannot by themselves establish the sustainability of forest; rather require an assessment through a set of verifiers.

1.3 Defining Verifiers

Verifiers are the data or information needed for assessing an Indicator. They define the specific details that would show whether an indicator is establishing sustainability of forest. The verifiers are checked against a baseline, average value, published standard value, or collective wisdom of stakeholders.

1.3.1 Baseline

Baseline or benchmark is the reference point from which the trend or change is projected. With respect to SFM, this baseline describes the status of the indicators at the time of data collection. The first set of data collection undertaken in a forest division at the time of working plan preparation will constitute the baseline for the subsequent data collection. Future direction of change and progress towards sustainability can be assessed against this reference year/data.

1.3.2 Average value

The indicators for which it's difficult to reach on the fixed norm due to lack of defined benchmark, the data of previous 3-5 years can be used to find out the average value.

1.3.3 Published Standard values

The published values and data available from authentic sources can be used as a norm/standard. Comparison of the yearly values of the indicators can be done with the national/world average to reach on the acceptable standard value.

1.3.4 Collective wisdom of stakeholders

In some case it's difficult to reach on a concluding norm/standard value. In such cases the norm can be decided though discussion among different stakeholders.

1.4 Intended situation: The intended situation describes expected outcome with respect to the particular indicator in the context of the forest division.

1.5 Periodicity: Periodicity is a time interval between two successive data / information. It is suggested in manual as data collection interval at the indicator level and periodicity of verifiers changes as per prescription and situation.

2. Criteria, Indicators and Verifiers:

The following set of criteria, indicators, verifiers and periodicity of data collection may be used for assessing each of indicators within the eight criteria of this standard.

Criterion 1: Extent and Condition of Forest and tree cover

Forest boundaries in India are legally defined and activities to be done within the forests are regulated. The diversion of forests for non-forest use is governed by the Forest Conservation Act 1980. The increase in forest cover is primarily achieved in India through the trees outside the forests. The changes in the legal status and the extent of forest area reflect whether the coveris maintained or increased or reduced. The change in extent and the status of the forests are indicated by the following:

Indicator 2.1.1: Area of forests under different legal status (Reserved Forests/Protected Forests/Un-classed Forests /Village Forests and any other forests)

Indicator 2.1.2: Area of different forest types

Indicator 2.1.3: Change in the category of forest cover

Indicator 2.1.4: Area of different working circles

Indicator 2.1.5: Area of the Trees Outside Forests (ToF)

Indicator 2.1.6: Details of area of forests diverted under FCA

Indicator 2.1.7: Details of forest land where rights are given under the FRA

Indicator 2.1.8: Details of forest land under encroachments

Indicator 2.1.9: Demarcation of boundaries

Indicator 2.1.10: Details of any other factors affecting the existence of forests such as illegalmining, dumping of mining waste etc.

Indicator 2.1.1: Area of forests under different legal status (Reserved Forests/Protected Forests/ Un-classed Forests / Village Forests and any other forests)

Forests in India are legally classified as reserved forest, protected forests, village forests and un- classed forests under IFA 1927 with State specific amendments and State Specific Forest Acts and the orders of Hon'ble SC dated 12-12-1996 in the case titled TN Godavarman Thirumalpad VsUnion of India and others. There are other categories of forests as well and a compilation of the legalcategories of the forests and their change, if any, over a period of time reflects on the maintenance and extent of forests of a forest division.

Intended situation: Entire forest area of the forest division is notified or recognized under different legal categories such as reserve forest, protected forests, un-classed forests, village forests, community forests, deemed forests etc.

Verifiers:

- 1. Updated registries of area statistics, digitised maps as per legal status.
- 2. Compilation of Gazette notification with number and date issued for different legal status of theforest and their change under IFA-1927 or state acts.
- 3. Status of digitization of forest boundaries in Geo-Coordinates boundary
- 4. Recognition of area as forests under revenue records, community practices or under the ordersof Honourable Supreme court of India.
- 5. Status of mutation of Forest area in Revenue Records.
- 6. Notification of Diverted land under FCA.
- 7. Extent of Area awaiting forest settlement or final notification under IFA, 1927 or State Acts.
- 8. Records of various forest settlements or leases.

Periodicity: Every year

Indicator 2.1.2: Area of different forest types

Forest type is a unit of vegetation which possess characteristics in physiognomy and structure sufficiently pronounced to permit the differentiation from other such units. Description of natural forests into distinct forest types and their extent provide scientific basis for their management. The assessment in the change in the extent overtime is a reflection of alteration in productivity, and status of the forest crop which will assist in the choice of silvicultural principles to be followed for the suitable management practices.

Intended situation: Maintenance of different forest types and species composition.

Verifiers:

- 1. The base year status of forest types along with *Digital*/GIS map and subsequent mapping is available in the division for any change or shift analysis.
- 2. Inventory of change in major species composition and attribution studies (anthropogenic, natural or climatic) for the changes.
- 3. Action Plan if any, for mitigating the change.

Periodicity: 10 years

Indicator 2.1.3: Change in the category of forest cover

The FSI categories the forest cover based on canopy density into very dense, moderately dense, open and scrub. Change in forest cover over a period of time reflects the actual changes of forest on ground. The positive changes could be, among other things, attributed to better forest protection and related conservation measures, including compensatory afforestation, whereas negative changescould be attributed to change of land use on account of developmental projects, excessive degradation due to anthropogenic pressures, harvesting of short rotation crop etc.

Intended situation: Improvement in forest cover as per the objective of management.

Verifiers:

- 1. Base year data on forest cover and map is available in the division.
- 2. Multi-dated satellite images from FSI or state agencies are used for change analysis and preparing change matrix.
- 3. Assessment of change in upward movement and downward movement of forest canopy classes. Assessment of change in open forests to moderately dense; and moderately dense forests to very dense forests, scrubs to open forests show upward movement.
- 4. Assessment of forest degradation in each forest type (soil erosion, species regeneration, fire affected area, area affected by grazing).
- 5. Actions for reducing forest degradation and enhancement of forest cover.

Periodicity: 2 years

Indicator 2.1.4: Area of different working circles

The forest is divided into different management zones as working circles based on the object of management. The working circles indicate the application of different set of silvicultural prescriptions and management practices in that area. A change in the area of working circle is often areflection of change in the object of management and/or change in the status of vegetation.

Intended situation: Range, beat, compartments/village wise, entire forest area shall be covered in different working circles with clearly defined objectives of and prescriptions for management.

Verifier:

- 1. Details of area under different working circles available in the working plan with clearlydefined objectives and prescriptions along with digitised maps.
- 2. Documentation of the change in the extent of areas prescribed in different working circles ascompared to previous working plan along with critical analysis and justifications.
- 3. Records of annual deviation from the prescriptions in the current plan.

Periodicity: 10 years

Indicator 2.1.5: Area of the Trees Outside Forests (ToF)

Trees Outside Forests (ToF) contributes significantly to increase in the forest and tree cover of a forest division. Periodic monitoring of the change in area of ToF reflects the overall change in the forest and tree cover of the forest division.

Intended situation: Trees outside the forest should be encouraged as alternate tree source. Periodic assessment of the growing stock may be undertaken and the potential area for extension of forestry outside forests explored for sustainable land use management and sustainable supply of raw material to the industries.

Verifiers:

- 1. Identification of target tree species & documentation of associated agro-forestry models/ practices for ToF in the division.
- 2. Estimation of growing stock of ToFs.
- 3. Strategies to enhance the ToFs.
- 4. Increase in the extent of ToFs and agriculture areas brought under agroforestry.
- 5. Assessment of demand on Agro-forestry for different industries.

Periodicity: 5 years

Indicator 2.1.6: Details of area of forests diverted under FCA

Approvals of diversion of forest lands allowed under the Forest (Conservation) Act envisage certain mandatory conditions for mitigating the impacts of such diversions. An analysis of the compliance of these conditions and progress in notification of the Compensatory Afforestation areas as RF/PF are, therefore, important.

Intended situation: Conditions envisaged in the diversion orders are complied with and CA areas are notified as RF/PF.

Verifiers:

- 1. Year-wise cumulative area diverted for different non-forestry purposes.
- 2. Progress in creating CA and success rate of CA is assessed.
- 3. Compliance to Environmental management plan; Catchment area treatment plan for hydro-electric projects; reclamation plan for mining projects etc.
- 4. Analysis of any other impacts related to diversions.
- 5. Progress in notification of all CA lands as RF/PF under IFA-1927 and all state acts.

Periodicity: Every year

Indicator 2.1.7: Details of forest land where rights are given under the FRA

The FRA recognises specified forest rights in favour of forest dwelling scheduled tribes and other traditional forest dwellers and their communities. The nature and extent of individual forest rights recognised under FRA, the nature and extent/quantum of forest resources on which the community forest rights and community forest resource rights have been recognised and the managementpractices prevalent to be indicated.

Intended situation: Updated knowledge on the status of registration of all the claims and settlement of the genuine claims along with list of individuals and communities to whom forest area is allotted, geo-referencing of rights on the forest map, status of forest management of areas given to right- holders and its impact on sustainability of eco-system services.

Verifiers:

- 1. Maintaining updated records of all FRA cases (Individual Forest rights, Community forest rights) in the division.
- 2. Digitised maps of all rights recognised in the entire forest division.
- 3. Area given under FRA is clearly demarcated on ground.
- 4. Best practices on Sustainable Forest Management under FRA

Periodicity: Every year

Indicator 2.1.8 Details of forest land under encroachments

Forest encroachment often leads to change in land use and has an impact on the integrity and quality of the forest. Encroachments could also lead to honeycombing of the forest leading to intense habitatfragmentation adversely affecting wildlife.

Intended situation: The forest to be free from encroachments to maintain ecosystem integrity. If encroachment is detected, appropriate measures taken as per existing law.

Verifiers:

- 1. Survey, identification & mapping of extent of encroachments in forest areas in the division.
- 2. Efforts made for eviction of encroachment.
- 3. Area freed from encroachment.
- 4. Effectiveness of JFM/PFM and participation of local public representatives in prevention of encroachments or in eviction operations.

Periodicity: Every year

Indicator 2.1.9: Demarcation of boundaries

Area of forests with clear demarcation of boundary with boundary pillars, trenches and othermeasures enables protection of forest areas and analysis of all the measures taken up for protection forest areas.

Intended situation: Demarcation of forest area shall be well defined and secured. The forest boundaries to be clearly marked in the field and geo-referenced.

Verifiers:

- 1. Locations of the boundary pillars are shown on the map with latitude/longitude on villagemap or such other map of convenient scale.
- 2. Extent of digitisation of forest boundaries and pillars.
- 3. Extent of perimeter is duly noted and updated during Working Plan (WP) revisions.
- 4. Percentage of forest area with secured boundaries including the number of boundary pillars constructed/maintained and recorded with unique registration/identification numbers, forwardand reverse bearings, GPS readings.
- 5. Allocation of budget for construction/maintenance of boundaries pillars.
- 6. Capacity building on survey and demarcation to the staff to independently demarcate

boundary as per gazette record to avoid dependence on revenue surveyors for primary survey. Creating survey cell in each division.

Periodicity: Every year

Indicator 2.1.10 Details of any other factors affecting the existence of forests such as illegal mining, dumping of mining waste etc.

Illegal mining, dumping of mining waste and other such factors have adverse impact on the existence of the forest. All measures must be taken up to stop illegal mining and appropriate mitigation efforts to rehabilitate the area.

Intended situation: Illegal mining and dumping of mining waste is stopped and mitigation measuresare in place.

Verifier

- 1. Area affected by illegal mining, dumping of mining waste and such other practices.
- 2. Identification of past mined out abandoned areas and reclamation measures.

Periodicity: Every year

Criteria 2: Maintenance, Conservation and Enhancement of Biodiversity

The forests offer diverse habitats for plants, animals and microorganisms. Forest biodiversity encompasses not only the trees but also the multitude of plants, animals and microorganisms that inhabits the forest ecosystem and their genetic diversity. Higher the diversity, higher is the climate resilience and it offers better livelihood opportunities to the local communities and tribals who are dependent on the forests. At the same time, loss of biodiversity makes it difficult for the ecosystem torecover from disturbances and adversely affecting the forest dependent communities. Analysis of theimpact of climate change and other factors including existing forest management may provide sight to take suitable adaptive and corrective measure for conservation of biodiversity. Different approaches are adopted in India for biodiversity conservation such as area-based conservation measures by establishing protected areas, species recovery programmes of threatened species and *in-situ* and *ex-situ* conservation programmes etc. These are indicated by the following:

Indicator 2.2.1: Adjoining Protected Areas

Indicator 2.2.2: Species diversity

Indicator 2.2.3: Details of any species-specific conservation programmes

Indicator 2.2.4: Details of species prone to over exploitation

Indicator 2.2.5: Details of unique/special habitats and high conservation value areas

Indicator 2.2.6: Details of diverse ecosystems such as grasslands, meadows, wetlands, mangroves, marine, deserts etc.

Indicator 2.2.7: Details of threats and challenges to vulnerable flora and fauna

Indicator 2.2.1 Adjoining Protected Areas

Details of adjoining Protected Areas under Wildlife Protection Act, 1972 (National Parks /Wildlife Sanctuaries / Conservation Reserves and Community Reserves/Tiger Reserves), Biosphere Reserves, Environment Protection Act, 1986 (Eco-sensitive zones/areas, Coastal Zone Regulation, Wetlands (notified under Wetland Rules) Biological Diversity Act 2002. The management of these areas which adjoins the forests has an impact on the management of the forests and the role of the forest as corridors for wildlife.

Intended situation: Prescriptions of working plans shall be harmonized with the management plans of adjoining protected areas.

Verifier:

- List of adjoining Protected Areas (National Parks/Wildlife Sanctuaries/Conservation Reserves and Community Reserves/Tiger Reserves), Biosphere Reserves, Environment Protection Act, 1986 (Eco-sensitive zones/areas, Coastal Zone Regulation, Wetlands notified under Wetland Rules), Biological Diversity Act 2002, wildlife corridors along with digitised maps.
- 2. Distribution of flora & fauna and abundance in the area of the forest division adjoining thePAs.
- 3. Prescriptions of working plan to be in consonance to the objective of management plans of the adjoining protected areas.

Periodicity: 5 years

Indicator 2.2.2 Species Diversity

Diversity indices indicate the abundance and richness of species in a locality. Evaluation of these indices considering the management prescriptions provides insight into management options. Biodiversity richness is a proxy for the health of forest ecosystem.

Intended situation: Base year documented species diversity is maintained or enhanced under sustainable management of forests. Effectiveness of actions implemented to conserve and/or restore the species diversity of the forest area as per natural undisturbed forests of the same type, to ensure sustained livelihood of communities as an incentive to communities to participate.

Verifiers:

- Biodiversity assessment in terms of density, frequency, total basal cover, dominance, Importance Value Index, Shannon Weiner Diversity Index and Simpsons' Similarity index etc. is done at the level of compartments/villages, beats, ranges & division level. Efforts should be made to make a base year documentation of species, habitat and genetic diversity (Taking the help of experts – SFRI/ICFRE/Local university colleges or knowledgeable individuals/ forest officers) status for future reference using GIS tools for change detections.
- 2. Document on vegetation structure and species heterogeneity, unique species identified

inaccordance to different forest types.

3. Action plan or management prescriptions for maintaining and enhancing species, habitat and genetic diversity.

Periodicity: 5 years

Indicator 2.2.3: Details of any species-specific conservation programmes

The presence of endemic, endangered species and actions taken up for their conservation, the progress and their impact.

Intended situation: Suitable action plan for conservation of endemic, endangered species is drawnand implemented.

Verifiers:

- 1. Approved policy and biodiversity plan and its sustainable use
- 2. List of species categorised as per IUCN Red List/ CAMP workshop results with IUCN participation, if available on red listing, CITES, etc.
- 3. *In-situ* and *ex-situ* conservation strategies in place including performance review of on-goingspecies recovery programs.
- 4. Budget allocated and utilised for biodiversity conservation.
- 5. Regular capacity building of BMCs for conservation, sustainable management of endemic, endangered species and use of bio-resources.
- 6. People's biodiversity register is prepared and updated.

Periodicity: 5 years

Indicator 2.2.4: Details of species prone for over exploitation

Some species are more vulnerable to over exploitation than others especially those who have a narrow ecological niche, and those which produce a smaller number of progeny. Identification of such species and their distribution and extent provide insight into need for management interventions.

Intended situation: Sustainable harvest protocols for overexploited species to be developed, standardized and implemented across the working plan area.

Verifiers:

- 1. List of species prone to over exploitation in the area.
- 2. Development of sustainable harvesting protocols for important NTFP / Medicinal plant species and awareness creation thereof.
- 3. Special focus on endangered species.

Periodicity: 5 years

Indicator 2.2.5: Details of unique/special habitats and high conservation value areas

Identification and mapping of the unique / special habitat and high conservation value ecosystemforms basis for special management interventions, if any, which may include inviolate areas.

Intended situation: All unique habitats and high conservation value areas identified along with their conservation plans approved and implemented.

Verifiers:

- 1. Documentation of high conservation values associated with unique/special habitats including inviolate areas and their mapping.
- 2. Management strategies specifically in place for unique habitat.

Periodicity: 10 years

Indicator 2.2.6: Details of diverse ecosystems such as grasslands, meadows, wetlands, mangroves, marine, deserts etc.

Identification and mapping of the ecosystems such as grasslands, meadows, wetlands, mangroves, marine, deserts etc. and their change overtime forms basis for sustainable management interventions.

Intended situation: Appropriate strategies for management of diverse ecosystems such as grasslands, meadows, wetlands, mangroves, marine, deserts etc. are in place.

Verifiers:

- 1. Identification & mapping of diverse ecosystems such as grasslands, meadows, wetlands, mangroves, marine, deserts etc. with base year for detecting change therein over time.
- 2. Assessment of ecological conditions of these diverse ecosystems.
- 3. Formulation of strategies for the maintenance and improvement of their ecosystem functions.

Periodicity: 5 years

Indicator 2.2.7: Details of threats and challenges to vulnerable flora and fauna

Habitat fragmentation and unsustainable extraction and trade are serious threats that affect the population of flora and fauna. An analysis of various threats will help in formulating mitigation strategies.

Intended situation: Threat and challenges to vulnerable flora and fauna on account of anthropogenic disturbances such as habitat fragmentation, unsustainable extraction and trade together with impact of climate change if any, are assessed and mitigation strategies are in place.

Verifiers:

- 1. Listing of changes in direct and indirect drivers of disturbances.
- 2. Analysis of any fresh threats to vulnerable flora & fauna.
- 3. Formulation of adaptive mitigation strategies for the changes.
- 4. Implementation of mitigation strategies.

Periodicity: 5 years

Criteria 3: Maintenance and Enhancement of Forest Health and Vitality

Natural forests are affected by various anthropogenic factors such as grazing, encroachment, forest fire, invasive alien species etc. Forest area is also affected by natural phenomenon like flood, landslides, windstorms, pests and diseases etc. Presence or absence of regeneration is a betterindicator on the health of a forest ecosystem. If the forest is poor or inadequate in regeneration, thenit indicates that the health of the forest is poor and compels the manager to take immediate action to obtain the regeneration by appropriate silvicultural interventions and by removing the factors that inhibit the regeneration and their establishment. Forest vitality is the ability of the forest ecosystem to survive external disturbances and unfavorable conditions. A forest ecosystem that has low vitality has a limited capability to recover from any unfavorable condition or natural disturbance. Low vitality is normally caused due to repeated disturbances with little time to recuperate and it must draw the attention of the manager to take immediate steps to remove or mitigate the impacts of those disturbances.

There are various factors that influence the forest health and its vitality as indicated below:

Indicator 2.3.1: Status of regeneration of the principal species and its associates
Indicator 2.3.2: Details of areas affected by forest fire
Indicator 2.3.3: Area affected by natural factors such as flood, landslides and windstorms etc.
Indicator 2.3.4: Area affected by and protected from grazing
Indicator 2.3.5: Area infested with invasive alien species
Indicator 2.3.6: Details of incidence of pest and diseases
Indicator 2.3.7: Forest degradation due to pollution
Indicator 2.3.8: Other drivers of forest degradation

Indicator 2.3.1 Status of regeneration of the principal species and its associates

The status of forest regeneration is estimated during the field survey. The regeneration status couldbe adequate, moderate, or poor. In case the regeneration is inadequate or poor, then the factors that inhibit regeneration must be analysed and brought out clearly to enable suitable silvicultural/ management interventions.

Intended situation: Adequate measures are taken to assess and ensure the regeneration of principal species and associates. Verifiers:

- 4. Assessment and categorisation of regeneration status in to adequate, moderate, and poor ofprincipal species and associates.
- 5. Factors that inhibit regeneration are documented and analysed.
- 6. Suitable silvicultural /management interventions are prescribed and implemented.
- 7. Assessment of the efforts made for successful assisted natural regeneration or artificial regeneration.

Periodicity: 5 years

Indicator 2.3.2 Details of areas affected by forest fire

Forest fire is one of the agents that has a direct impact on the regeneration and vitality of the forest ecosystem. Uncontrolled fire has a deleterious effect on the regeneration. Repeated fire impacts the capacity of the forest to recover from its impact on the ecosystem and thus reduces the vitality of the ecosystem. Fire frequency mapping and preparation of fire vulnerability maps help ineffective forest fire management. The use of real time monitoring tools is potential mechanism for effective fire management

Intended situation: Adequate measures are in place to prevent forest fire. In case of occurrence of Forest fire incidences, they are timely detected and controlled while adequately reported along with their identified causes and impacts.

Verifiers:

- 1. Field staff enabled for utilisation of real time fire alert system of FSI or any other informationsystem for timely reporting of forest fires.
- 2. Forest fire prevention plan is prepared and implemented.
- 3. Forest fire management plan is prepared and implemented.
- 4. Impact of forest fires on the ecosystem functionality needs to be monitored on regular basis.
- 5. Description of forest fire response teams and their achievements.
- 6. Budget allocations and their expenditure.

Periodicity: Every year.

Indicator 2.3.3: Area affected by natural factors such as flood, landslides and windstorms etc.

Documentation and assessment of all incidences of natural calamities and their impact on biodiversity and ecosystems will lead to the planning for disaster management. Potential negative impacts of natural hazards proportionate to scale, intensity and risk on infrastructure, forest resources and communities will lead to identification of proactive management activities to mitigate these impacts.

Intended situation: Role of forest division in case of natural calamities such as flood, landslides, and windstorms etc. are included in the Disaster Management Plan.

Verifiers:

- 1. Areas prone to natural hazards are mapped.
- 2. Documentation of disaster occurrences and their damage caused to ecosystems and biodiversity and planning of proactive management measures into a contingency plan including constitution of disaster response teams.
- 3. Budget allocations and their expenditure.

Periodicity: Every year.

Indicator 2.3.4: Area affected by and protected from grazing

Uncontrolled livestock grazing in forest areas is detrimental to forest health and ecosystem vitality. Itis known to be one of the most important factors degrading the forest ecosystem. The National ForestPolicy (1988) and other documents recognise that uncontrolled grazing in the forest is incompatible with sustainable forest management. Unregulated grazing affects crop (vegetation) composition and adversely impacts natural regeneration, causes soil compaction and consequently diminishes the infiltration capacity of the soil. Working Plan Officers (WPOs) may ascertain livestock numbersfrom Animal Husbandry departments and take the assistance of Grazing Settlement Officers to determine carrying capacity for grazing in forest areas.

Intended situation: Grazing is within the limits set by the carrying capacity of forest areas.

Verifiers:

- 1. Assessment of carrying capacity & impacts of grazing.
- 2. Implementation of measures to discourage uncontrolled grazing in the forests.
- 3. Reduction in the number of livestock unit dependent on forest areas for grazing.
- 4. Awareness creation among communities about carrying capacity and sustainable grazing.
- 5. Regular patrolling for preventing overgrazing.

Periodicity: 5 years

Indicator 2.3.5: Area infested with invasive alien species

Invasive alien species is a major threat to the forest ecosystem vitality and its health in terms of biodiversity. They affect the regeneration and also impact the growth of the native species. Effective steps taken for the control of invasive species positively impacts the natural regeneration of native species in forest areas.

Intended situation: Extent of the area under invasive species should be less than the baseline year. Native species are preferred over alien or exotics in aided natural regeneration (ANR), eco- restoration, re-habitation, and reforestation activities.

Verifiers:

1. Extent of area infested with invasive alien species and mapping.

- 2. Action plan & strategy to control invasive weeds (e.g. Lantana, Eupatorium, Parthenium etc.).
- 3. Implementation of appropriate techniques/protocols for weed control including plantation/regeneration activities and/or their replacement with native species (eg: Lantana replaced by bamboo) and/or bio-natural measures against invasive species.
- 4. Allocated budget and their utilisation for weed control.
- 5. List of species used in aided natural regeneration (ANR), eco-restoration, re-habitation, and reforestation activities.

Periodicity: 2 years

Indicator 2.3.6: Details of incidence of pest and diseases

Pest and diseases affect the health and vitality of a forest ecosystem. Mapping of the extent of area affected and the frequency of such events will be useful for effective management. Adaptations of suitable silvicultural practices, use of healthy planting material, reducing the injury to the forest crop are some means to prevent incidence of disease in a forest crop. An analysis of the incidences of pest and diseases and the adaptation of different preventive measures will lead to better understanding of drivers of degradation leading to effective management prescriptions.

Intended situation: Timely reporting of disease and pest outbreaks and impact assessment of treatment measures implemented.

Verifiers:

- 1. Documentation of disease and pest outbreaks, their physiological and morphological impactson native species.
- 2. Mapping of the extent of area affected and the frequency of such events.
- 3. Enumeration of infected/affected species and reporting of severity of affected health.
- 4. An analysis of the incidences of pest and diseases and the adaptation of different preventivemeasures.
- 5. Treatment measures undertaken directly, or in consultations with research institutions.

Periodicity: 5 years

Indicator 2.3.7: Forest degradation due to pollution

Incidence and extent of forest degradation due to pollution (soil, water, and in some cases air), and the mitigation measures taken and the impacts thereof.

Intended situation: Forest degradation due to pollution are prevented in the first place and sufficientmitigation measures are undertaken in case of degradation due to pollution.

Verifier:

- 1. Identification of probable points of pollution for taking preventive measures.
- 2. Incidence and extent of forest degradation due to pollution.
- 3. Seasonal records of Air / Water Quality Index.

- 4. Research based conclusions.
- 5. Appropriate treatment measures.

Periodicity: Every year

Indicator 2.3.8: Other drivers of forest degradation (REDD+ initiatives)

There are other drivers of forest degradation and deforestation and barriers to reforestation. Identification of these with inputs from stakeholders shall provide further insights for better management prescriptions.

Intended situation: Specific action plan on REDD+ shall be helpful in identification as well as addressing the drivers of degradation and barriers for enhancement of forest carbon stock specific to the forest division.

Verifiers:

- 1. Identification & mapping of direct drivers or barriers and underlying causes or indirect driversthrough stake holder consultation exercises.
- 2. Selection of priority drivers and enhancement activities through stake holders and expert's consultation.
- 3. Action plan for addressing the impact of drivers.

Periodicity: 5 years

Criteria 4: Conservation and Maintenance of Soil and Water Resources

Comprises of indicators of water and soil quality under influence of forests. Criterion addresses an area treated under soil and water conservation measures; duration of water flow in seasonal streams;status of wetlands in forest areas and groundwater levels from nearby wells (up to 5 km of forest area).

Indicator 2.4.1: Inventory of water bodies and sources

Indicator 2.4.2: Area treated under soil and water conservation measures

Indicator 2.4.3: Monitoring of ground water

Indicator 2.4.4: Identification of areas vulnerable for erosion and prescription for suitable treatment

Indicator 2.4.5: Mapping of riparian zones for special management prescriptions

Indicator 2.4.6: Monitoring of streams, lakes, wetlands, ponds and other waterbodies in forested catchments

Indicator 2.4.1: Inventory of water bodies and sources

The water bodies inside the forests improve the water regime of a forested watershed. Over exploitation of the ground water resources results in declining ground water levels; there is an urgent need to augment the ground water resources through suitable management interventions. Mapping ofall water resources in the forests including aquifers shall form the
basis for conservation and management of soil and water resources.

Intended situation: Identification and digital mapping of all water bodies and sources in the divisionare done as baseline for future monitoring. Suitable management interventions are taken to augment the water bodies and resources.

Verifiers:

- 1. List of all water bodies and sources in the division.
- 2. Extent and categorisation of waterbodies are documented and digitally mapped as baseline andfuture monitoring.
- 3. Efforts or management interventions to augment water bodies and resources.

Periodicity: 2 years

Indicator 2.4.2: Area treated under soil and water conservation measures

The soil and water conservation measures reduce the surface flow and aid in infiltration and reduce the soil erosion. However, soil and water conservation structures need to consider total rainfall in the catchment. The Soil and Water conservation structures are highly recommended in high rainfall areas, however the same must be very carefully and judiciously incorporated in low rainfall zones as it may adversely affect the water availability in downstream areas. Water conservation in dry areas isof paramount importance considering that the country has 76% dry forests.

Intended situation: Documentation & mapping of all areas treated under soil and water conservation measures are done. Biological and bioengineering methods included in WP on watershed management principles.

Verifiers:

- 1. Year wise area treated under minor soil and water conservation measures (Contour trenches,gully plugging, biological & bioengineering methods etc.).
- 2. List & mapping of major soil and water conservation structures created (Check dams, percolation tanks etc.)
- 3. Present status & maintenance of structures created.

Periodicity: 5 years

Indicator 2.4.3: Monitoring of ground water

Periodical recording of water level in open wells during dry and wet seasons to determine the groundwater level. It will help in the assessment of the impact of interventions taken in the catchment on thegroundwater.

Intended situation: Monitoring protocol for groundwater level assessment is in place in the vicinity of forest area.

Verifiers:

- 1. Periodic (Pre-& post monsoon) monitoring mechanism of water level of open wells in the 5 kmvicinity of forest area with respect to annual rainfall is in place.
- 2. Monitoring the status of select aquifers present in the forest landscape.
- 3. Annual quality check of water samples.

Periodicity: Every year

Indicator 2.4.4: Identification of areas vulnerable for erosion and prescription for treatment

Identifying areas vulnerable for erosion and planting of local grasses in such areas are very effective for immediate control of soil erosion. It may be followed by tree plantation which takes time to establish. Forest soils must be kept as healthy and fertile as possible while maintaining the hydrological services.

Intended situation: Soil erosion vulnerability assessment, mapping and interventions are done. Highly vulnerable areas should be prioritised for treatment. Ideally no erosion prone areas remain untreated.

Verifiers:

- 1. Soil erosion baseline data and improvements in tons/Ha to be recorded.
- 2. Soil erosion vulnerability assessment and mapping using any of the standard methods (e.g.: Revised universal soil loss equation (RUSLE) using the parameters of Rainfall, soil, topography, crop cover, conservation practices factor) along with map for the division is done.
- 3. Based on assessment suitable soil and water conservation measures are planned and implemented.
- 4. Budgetary support.

Periodicity: 5 years

Indicator 2.4.5: Mapping of riparian zones for special management prescriptions

Riparian zones act as discharge zones and with appropriate vegetation helps in lowering of water temperature, better dissolved oxygen, less turbidity and maintenance of channel shape. In areas with low rainfall, riverine plantations are likely to have a negative impact on the stream flow. Therefore, riverine plantation should be rainfall specific.

Intended situation: Riparian zones and their status must be maintained and improved w.r.t base year. Negative impacts of silvicultural interventions on the quality and quantity of water resources shall be reduced, soil and water erosion shall be controlled and severe damage to catchment within the forest shall be avoided.

Verifiers:

1. Identification, documentation and mapping of riparian zones within the buffer area of 5 kms onboth sides of major rivers, 2 kms for tributaries and up to 500 mts for streams and

around otherwater bodies.

- 2. Conservation plan for such buffer areas is prepared and implemented by using silvicultural or other means.
- 3. Riparian zones result in clean and continuous E-flow (Environmental flow) in rivers and streams.

Periodicity: 5 years

Indicator 2.4.6: Monitoring of streams, lakes, wetlands, ponds, and other water bodies in forested catchments

Eco-restoration, natural regeneration, tree/shrub/grass planting, soil, and water conservation structures as per locally suitable designs protect streams, lakes, wetlands, ponds and other water bodies and sea shores. The important forested catchments need to be equipped with the monitoring stations over selected streams to assess the discharge and silt load. The data shall help in developinga long-term understanding on the impact of various vegetative parameters and the management practices on the stream discharge and silt load.

Intended situation: Monitoring protocol in place for surface water bodies such as streams, lakes, wetlands, ponds and other water bodies in forested catchments. Verifier:

1. Periodic monitoring of waterbodies with parameters like water temperature, colour, odour, pH, Turbidity, TDS (Total Dissolved solids), DO (Dissolved oxygen), BOD (Biological Oxygen Demand), COD (Chemical Oxygen Demand), bank erosion etc.

Periodicity: Every year

Criteria 5: Maintenance and Enhancement of Forest Resource Productivity

Criterion deals with economic evaluation of forest functions in terms of wood and non-wood forestproducts. It aims to maintain/increase the productivity of forest resources.

Indicator 2.5.1: Estimation of growing stock of wood

Indicator 2.5.2: Estimation of current annual increment and mean annual increment of the forest crop

Indicator 2.5.3: Assessment of forest structure

Indicator 2.5.4: Estimation of Basal Area (BA) and the number of stems per unit area

Indicator 2.5.5: Estimation of Carbon stock of the forests

Indicator 2.5.6: Area taken up for eco-restoration, rehabilitation and reclamation

Indicator 2.5.7: Area taken up for improved productivity through forest plantation

Indicator 2.5.8: Area taken up for tending operation and other operations

Indicator 2.5.9: Analysis of Species composition

Indicator 2.5.1: Estimation of growing stock

Growing stock is the standing volume of a forest crop. Higher the growing stock more the

standing volume i.e., usable timber and thus higher carbon stock as well. Estimation of growing stock thus forms the basis for the forest management.

Intended situation: Maintenance and enhancement of growing stock w.r.t to base year. Forest crops must be maintained as vigorous as possible to produce as rapidly as they can till the biomass production attains its most desirable level including contributing to intangible benefits.

Verifiers:

- 4. Regular monitoring of growing stocks in sample plots.
- 5. Strategies to improve and enhance growing stock included in WP.
- 6. Assessment of extraction of timber (recorded and unrecorded extraction).

Periodicity: 5 years

Indicator 2.5.2: Estimation of current annual increment and mean annual increment of the forest crop

Increment is the increase in volume of growing stock over a period. Higher increment of Growing Stock also means higher carbon sequestration. The rate of increment depends on many locality factors including the growth of the forest crop, which will form the basis for decision making in forest management.

Intended situation: MAI/CAI is either maintained or improved w.r.t base year. Verifiers:

- 1. Sample plots that analyse MAI/CAI for important species.
- 2. Implementation of strategies to improve and enhance MAI as per the WP.
- 3. Trend analysis in production of timber and fuel wood in successive working plans in past 20years.

Periodicity: 5 Years

Indicator 2.5.3: Assessment of forest structure

The assessment of forest structure is generally done using age-class/diameter distribution. Maintenance of forest structure is essential for sustainable production of goods and services. The diameter is a proxy for age and the diameter distribution of the principal species, and their associates indicate the presence or absence of different age class in a forest crop. Presence of all age-classes in even-aged forest and presence of all diameter classes in selection forest indicate the sustainability of appulation and the benefits drawn from it.

Intended situation: Generally silvicultural and management practices in natural forests shouldsupport right distribution of age classes / diameter classes.

Verifiers:

1. Assessment of age classes / diameter distribution of identified species.

Periodicity: 5 years

Indicator 2.5.4: Estimation of Basal Area (BA) and the number of stems per unit area

Basal area is a function of crop diameter and number of trees per unit area. Basal area along with the number of stems per unit area is a better indicator of a forest crop to sustainably provide the goods and services it renders.

Intended situation: Maintenance of optimal basal area and number of stems per unit area as per themanagement objective.

Verifiers:

1. Assessment of basal area of identified species.

Periodicity: 5 years

Indicator 2.5.5: Estimation of Carbon stock of the forests

An estimate of the carbon stock of the forests over a period of time indicates the carbon sequestration potential of the forests thereby the mitigation potential of the forests against climate change.

Intended situation: Maintenance and enhancement of Carbon stock.

Verifiers:

1. Periodic estimation of total carbon sequestered against base year.

Indicator 2.5.6: Area taken up for eco-restoration, rehabilitation, and reclamation

The degradation of the forest leads to lower productivity. Analysis of measures taken up for mitigating the effects of the degradation, mining and shifting cultivation etc., especially through eco-restoration, rehabilitation and reclamation will be useful for effective management of forests.

Intended situation: Based on the identification and mapping of degraded forest areas, ecorestoration, rehabilitation and reclamation efforts are undertaken using native species of herbs, shrubs, and trees.

- 1. Total area treated under different schemes for Eco-restoration of degraded forest area.
- 2. Total area treated under different schemes for rehabilitation for areas affected with shiftingcultivation or forest area freed from encroachment.
- 3. Total area treated under different schemes for reclamation of mined out areas.
- 4. Budgetary allocation for the Eco-restoration, rehabilitation, and reclamation.

Periodicity: Every year

Indicator 2.5.7: Area taken up for improved productivity through forest plantation

The productivity of a forest depends upon the genetic material of the trees also. It is difficult to manipulate the genetic makeup of a natural forests but can be done while raising plantation. The superior quality planting material is essential for increasing the productivity.

Intended situation: Production from forests is augmented through forest plantations of timberspecies having maximum demand in the market. Productivity of forest plantations is improved with high quality planting materials and suitable management practices.

Verifiers:

- 1. Percentage of area of the forest division under forest plantations and areas under differenttimber species.
- 2. Sources of quality seeds and clonal planting material for improved productivity of targetedspecies.
- 3. Production of high-quality planting materials in forest nurseries.
- 4. Details of plantations carried out year-wise.
- 5. Percentage of area under plantation with improved planting materials/clonal plantation and/orintensive management practices.
- 6. Details of production from the plantations.
- 7. Improvement in productivity from improved plantations.

Periodicity: Every year

Indicator 2.5.8: Area taken up for tending and other operations

The timber, bamboo and NTFP productivity can be enhanced with suitable silvicultural treatments like thinning, cleaning, and pruning. Assessment of other silviculture practices undertaken to protect water resources and soils, reduce disturbance and damage to habitats, ecosystems, landscape, and environmental values. Areas taken up for these operations indicate the efforts taken up for enhancingthe productivity of the forests.

Intended situation: Productivity of forest area is enhanced through tending and other operations.

Verifiers:

- 1. Plan of operation for enhancement of productivity of timber, bamboo and NTFP.
- 2. Area under different silvicultural treatments such as thinning, cleaning and pruning.
- 3. Area under other silviculture practices undertaken to protect water resources and soils.
- 4. Area under specific habitat management and enhancement of ecosystems, landscape and environmental values.

Periodicity: Every year

Indicator 2.5.9 Analysis of Species composition

A forest with mixed species composition provides multiple goods. The object of management determines the species composition and an analysis of the tree diversity of a forest crop indicates the multiple goods a forest could provide.

Intended situation: Forest composition should include optimum number of associates apart from main species. The species composition should include fruit bearing and other NTFP species to provide various ecosystem services including wildlife habitat. Species composition is assessed and mixed species composition is enhanced in the forest area of the division.

Verifiers:

- 1. Percentage of species composition in forest area with regard to main species, associates, fruitbearing and other NTFP species is calculated.
- 2. Improvement in the species composition.

Periodicity: Every year

Criteria 6: Optimisation of Forest Resource Utilisation

Forests provide multiple goods for the use of the society in the form of timber, fodder, grass, fruits, nuts, gums, resin, tendu leaves, medicinal plants etc. The knowledge of the communities on the conservation, harvesting/collection practices, grading and storage helps in sustainable management forest resources. Identification of the important forest produce, their demand and sustainable supply and the harvesting pattern will form basis for making sound management prescriptions as indicated below:

Indicator 2.6.1: Agriculture customs and requirement of the local people

Indicator 2.6.2: Listing of important Non-Timber Forest Produce (NTFPs)

Indicator 2.6.3: Details of non-destructive/sustainable harvesting of resources

Indicator 2.6.4: Demand and supply of timber and NTFPs

Indicator 2.6.5: Low impact harvesting

Indicator 2.6.6: Recorded removal of timber, firewood, grasses, fodder, bamboos, NTFPs etc.

Indicator 2.6.7: Valuation of the forest resources

Indicator 2.6.8: Forest enterprises

Indicator 2.6.9: Access and Benefit sharing

Indicator 2.6.1: Agriculture customs and requirement of the local people

An estimation of the requirement of the local people for small timber for agricultural and other local community uses on the basis of the socio-economic survey will indicate the dependence of the population on forests.

Intended situation: Understanding of the gap between demand and supply of the small timber to meet the requirement of local people and artisans.

Verifiers:

1. Assessment of the estimation of requirement of small timber for agriculture,

handicraft andother local community uses on the basis of socio-economic survey.

- 2. Estimation of the supply of small timber to local people.
- 3. Demand and supply gap if any and strategy to meet the gap.

Periodicity: 5 years

Indicator 2.6.2: Listing of important NTFPs

It is expedient to identify, produce, or enable the productions of diversified products such as NTFPs, their use, parts used, based on the range of resources without jeopardising the flow of ecosystem services in order to strengthen and diversify the local economy proportionate to the scale and intensity of management activities.

Intended situation: All the species of important NTFPs must be recorded along with their marketability.

Verifiers:

- 1. Documenting all NTFPs including herbs and shrubs which diversify the local economy.
- 2. Assessment of demand & supply of NTFPs.
- 3. Market value of NTFPs/ Medicinal and Aromatic Plants (MAPs) (value should increase inconsonance with market forces, transportation and value addition.).

Periodicity: 5 years

Indicator 2.6.3: Extent of non-destructive/sustainable harvesting of resources

Bio resources are harvested and whole plants or different parts are used. If whole plants, underground plant parts or bark are used, this often leads to the death of the plant and is likely tohave an adverse effect on its population than a plant whose leaf or seed or flower is used. An analysis of the parts used, collection and harvesting practices shall indicate the sustainability of NTFPs.

Intended situation: Evolution and implementation of a mechanism to ensure the harvest is within sustainable limits for the species of important NTFPs including herbs and shrubs.

Verifiers:

- 1. Protocols for non-destructive/sustainable harvesting and collection of important NTFPsincluding herbs and shrubs.
- 2. Fixing annual extraction limits for major NTFPs/MAPs.
- 3. Creating awareness and promoting good collection practices.
- 4. Capacity building of local community on sustainable harvesting practices.
- 5. Assessment of adoptability of sustainable harvesting techniques.

Periodicity: 5 years

Indicator 2.6.4: Demand and supply of timber

The socio-economic study and the local market survey will provide an assessment of the dependenceof the local people on the forests for timber. This will also include the estimation of import and export of timber/ from other States and Country. This will enable the assessment of per capita consumption of timber and by the people living near the forests.

Intended situation: Assessment of the dependence of the local people on the forests for timber.

Verifiers:

- 1. Estimation of local consumption, production, import and export of timbers.
- 2. Timber requirement of industries and other stakeholders.
- 3. Regular documentation of timber production and harvest.
- 4. Supply and demand gap and strategy to meet the gap.

Periodicity: 5 years

Indicator 2.6.5: Low impact harvesting of timber.

Assessment of any low impact harvesting technique being followed in the forest division. Harvestingand extraction of forest resources are undertaken in the manner so that merchantable waste is reduced, and damage to other products and services is avoided.

Intended situation: Progressive implementation of low impact harvesting techniques in forestry operations.

Verifiers:

- 1. Document of low impact harvesting techniques for forestry operations.
- 2. Assessment of damage in various forestry operations.
- 3. Creating awareness and promoting low impact harvesting techniques.
- 4. Use of modern machinery, tools and technology for low impact harvesting.

Periodicity: 5 years

Indicator 2.6.6: Recorded removal of timber, firewood, grasses, fodder, bamboos, NTFPs etc.

Analysis of annual removal over a period of time indicates the sustainability of a species. Any reduction or excess extraction over the average extraction during a period of time warrants immediate action for its rehabilitation or augmentation of natural population.

Intended situation: All timber, firewood, grasses, fodder, bamboos, NTFPs etc. removals should be recorded and extraction should be within permissible limits. Verifiers:

- 1. Details of all removals of timber except for petty felling as per the control forms. Harvestshould not exceed the accretion (Growing Stock/ MAI).
- 2. Information on all removals of fuel wood based on socio-economic survey and assessment

is provided. Evolving mechanism for quantified data on recorded removals and sharing with the community is explored and highlighted.

- 3. Assessment of bamboo/rattans and mechanism for generating quantified data on their removal and sharing with the community is provided.
- 4. Description of cattle rearing community of forest dwellers with regard to removal of fodderand availability of palatable species and pasture land etc.
- 5. Record of forest produce removal by the community.
- 6. Analysis of annual removal of timber, firewood, grasses, fodder, bamboos, NTFPs etc over a period of time.
- 7. Measures taken to meet the energy demands of local communities using alternatives such as biogas stoves, solar powered stoves, etc. and improve fuel wood quality (wood gasifier).

Periodicity: 5 years

Indicator 2.6.7: Valuation of the forest resources

An estimation of the value of all the goods that are extracted from the forests based on the marketvalue gives insight for making decisions for the optimisation of the use of the goods from the forests.

Intended situation: Valuation of tangible benefits derived from the forest

Verifiers:

- 1. Recorded forest produce removal by forest department, community, others and their valuation on market price.
- 2. Change in valuation of forest resources if any.

Periodicity: 5 years

Indicator 2.6.8: Forest enterprises

Wood based industries and other industries that use raw materials sourced from the forests are important stakeholders. Listing of forest-based industries and enterprises in the forest division and outside forest division but sourcing raw material especially NTFPs from the division, not only indicate the forest-based employment generation but also the contribution of the forests towards the local economy and indicates scope for new forest-based enterprises.

Intended situation: All wood-based and forest produce-based industries operating in the forest division are listed and their raw material demand and consumption is assessed.

- 1. Listing of all wood-based and forest produce-based industries operating in the forest divisionand their annual requirement.
- 2. Listing of all wood-based and forest produce-based industries operating outside forest divisionbut sourcing raw material especially NTFPs from the division and their annual requirement.
- 3. Recorded forest produce removed and used within the division.

4. Recorded forest produce removed and supplied outside division.

Periodicity: 5 years

Indicator 2.6.9: Access and Benefit sharing

NTFPs are sourced from the forest areas for commercial use by the industry. Proper documentation of traded quantity and sharing of the benefits with the BMCs as per the provisions of BD Act and Access to Biological resources and associated knowledge and benefit sharing regulations (ABS guidelines) 2014 notified there-under can help in the conservation and sustainable use of NTFPs.

Intended situation: The forest bio-resources are accessed for commercial use as per the ABS guidelines.

Verifiers:

- 1. List of registered traders/manufacturers and their annual requirement.
- 2. Sharing of levy/fee with the BMC for the conservation, management and benefit sharing as perABS regulations.

Periodicity: 2 years

Criteria 7: Benefits to local people - social, and cultural values

The social and cultural values of forests aside from their ecological and economic benefits and optimisation of forests and their products are intrinsically connected with local stakeholders. Traditionally, they form a significant part of the life of the local people with many patches of forests across the country protected as sacred groves. Several floral and faunal species of religious and cultural significance also exist. Hence, such cultural and social sentiments are of great importance as motivational drivers behind their conservation ethos. The assessment of the role of forests on the social, cultural, economic and ecological aspects of the local people will provide inputs for making management decisions as indicated below:

Indicator 2.7.1: Details of employment generated
Indicator 2.7.2: Use of traditional Knowledge and listing of knowledge holders
Indicator 2.7.3: Sacred groves and other cultural values
Indicator 2.7.4: Details of social customs on forests and forestry practices
Indicator 2.7.5: Ecotourism sites and activities
Indicator 2.7.6: Identification of rights and concessions of the local communities (other than FRA)
Indicator 2.7.7: Ecosystem services and benefits

Indicator 2.7.1: Details of employment generated

The activities of the forest department generate livelihood and an analysis of the same provides

insight into the employment generation potential of the forest sector and the dependence of the local community on forests for employment. The details of trainings and capacity building programmes organised towards employment generation helps in identifying the potential human resource available for different activities including guides for ecotourism related activities.

Intended situation: The human resource undertaking forest-based activities is sufficiently trained.

Verifiers:

- 1. Details of the capacity building for the local community.
- 2. Status-Job card and employment generation activities.
- 3. Analysis of employment generation in terms of man-days.

Periodicity: Every year

Indicator 2.7.2: Use of traditional Knowledge and listing of knowledge holders

The local traditional health practitioners and indigenous medicinal systems are repositories of traditional knowledge which have a close linkage with the forests. This information may also be available in the Peoples' Biodiversity Register (PBR) prepared by the Biodiversity Management Committees (BMCs). Their knowledge on the distribution of the species, their extent, its diverse use and availability etc shall form the basis for making sound management prescriptions.

Intended situation: Utilisation of information from PBR and TKDL (Traditional Knowledge Digital Library) for conservation, management and utilisation of forest resources and incorporation of the same in the micro-plans and WP.

Verifiers:

- 1. Availability of Peoples' Biodiversity Register prepared by the Biodiversity Management Committees.
- 2. Identification of different communities living in and around forest having different types of indigenous knowledge.
- 3. Indigenous knowledge on forest management is incorporated in micro-plans and WP.

Periodicity: 2 years

Indicator 2.7.3: Sacred groves and other cultural values

Sacred groves are great repositories of biodiversity with religious, cultural and conservation significance. Listing of these groves such as trees, forest patch, ponds/lakes etc. shall provide insight into necessary special management interventions required.

Intended situation: Details of sacred groves, their significance and management interventions.

- 1. Sacred groves are identified, mapped and protected in consultation with local stakeholders.
- 2. Assessment of ecological services from sacred groves.
- 3. Conservation plan for sacred groves.
- 4. Good management practices borrowed from sacred groves are incorporated in micro plans and WP.

Periodicity: 5 years

Indicator 2.7.4: Details of social customs on forests and forestry practices

There are community specific social customs, customary laws on various forestry related activities like collection of NTFPs, their use etc. Identification of the same indicates the close cultural linkage of the communities with the forests which could contribute to making culturally conscious management prescriptions with the active participation of the local communities.

Intended situation: Social customs relevant to the forests and forestry practices are respected while making management prescriptions in the WP.

Verifiers:

1. Documentation and incorporation into micro plans and WP of the social customs on variousforestry related activities for conservation, management of bio-resources and benefit-sharing.

Periodicity: 5 years

Indicator 2.7.5: Ecotourism sites and activities

Ecotourism is responsible travel that involves interpretation and education about natural areas. Areasinside and adjoining designated forests, which have ecotourism potential shall be identified and documented for effective implementation of ecotourism principles.

Intended situation: Potential sites in the forest division identified and encouraged for ecotourism activities.

Verifiers:

- 1. Areas inside and adjoining designated forests, which have ecotourism potential, are identified and listed (Such as landscape, waterscape, wildlife and also the human-scape).
- 2. Ecotourism development plan is prepared and implemented in the division within the carryingcapacity.
- 3. Capacity building of eco-guides.
- 4. Records of tourist inflow to eco-tourism sites and commensurate benefits to the local community.

Periodicity: Every year

Indicator 2.7.6: Identification of rights and concessions to the local communities (other than FRA)

The communities living near the forest enjoy certain rights and concessions from the forests. Documentation of these rights and concessions, other than the rights recognised under FRA as considered in indicator 2.1.7, as they have bearing on the management of forests.

Intended situation: Documentation of Rights and concessions to the communities and their exercise within the management prescriptions.

Verifiers:

- 1. Document on rights and concessions of the local communities on forests.
- 2. Extent of exercise of rights and concessions and their bearing on the sustainable management of forests.

Periodicity: Every year

Indicator 2.7.7: Ecosystem services and benefits

The local community derives benefits from the forest ecosystem services which have bearing on the quality of life of the community and the forest. Wherever possible a framework for quantification and valuation of ecosystem services may be explored and documented.

Intended situation: Quantification and valuation of ecosystem services and documenting the benefits to the community.

Verifiers:

- 1. Identification of the ecosystem services and benefits to the community in the division.
- 2. Preparation of a plan to build capacities and infrastructure for quantification of ecosystemservices through existing technical expertise from Government institutions.
- 3. Budgetary provisions for quantification and valuation of ecosystems and capacity building.

Periodicity: 5 years

Criteria 8: Policy, Legal and Institutional Framework

National and State policies on forests, wildlife, water and environment govern the way forests are managed. The Indian Forest Act, 1927, the Forest Conservation Act, 1980, Wildlife (Protection) Act 1972, Environment (Protection) Act, 1986, Biological Diversity Act, 2002, Compensatory Afforestation Fund Act, 2016 and any other state specific law and rules made there under provide legal framework for the conservation and sustainable management of forests, wildlife and thebiodiversity that the forests harbours. The Forest Rights Act 2006 and PESA Act also impact the management of the forests in India. An analysis of these legal instruments and their implementation, various institutions involved with the forest

management and research will indicate the impact of these instruments on forest management as indicated below:

Indicator 2.8.1: Existing policy and legal instruments governing the forest management Indicator 2.8.2: Role of panchayats or any locally elected bodies in the district / council areas in forest management Indicator 2.8.3: Participatory forest management Indicator 2.8.4: Details of Biodiversity Management Committees (BMCs) Indicator 2.8.5: Forest, biodiversity and wildlife related offences Indicator 2.8.6: Financial outlay Indicator 2.8.7: Human resource Indicator 2.8.8: Gender aspects Indicator 2.8.9: Labour welfare Indicator 2.8.10: Environmental awareness and education Indicator 2.8.11: Infrastructural support Indicator 2.8.12: Research and development Indicator 2.8.13: Existence of monitoring mechanism

Indicator 2.8.1: Existing policy and legal instruments governing the forest management

This includes all national /state/ locality specific rules, regulations existing that govern forest management.

Intended situation:

Existence of legal framework at national, state and local level on environment, forest, tree preservation, wildlife, biodiversity, forest-dwellers and others related to forest management.

Verifiers:

- 1. Awareness amongst the forest personnel and local communities about the existing legal provisions for safeguarding environment, forests, wildlife, biodiversity and rights of the forestsdwellers.
- 2. Availability of important legal provisions in local languages with field staff and local organisations (JFMCs/EDCs/ BMCs and SHGs)
- 3. Awareness programmes conducted on legal issues

Periodicity: 5 years

Indicator 2.8.2: Role of panchayats or any locally elected bodies in the district / council areas in forest management

Analysis of the village / local body development plan and its focus on forests, wildlife and environment.

Intended situation: Development plan with focus on forests, wildlife and environment by involvement of division staff with panchayats or any locally elected bodies in the district /council areas for preparation of village development plans.

Verifiers:

1. Status of inclusion of management aspects of forest, wildlife and environment conservation invillage / local body development plan.

Periodicity: 5 years

Indicator 2.8.3: Participatory forest management

The listing of the committees constituted for the participatory forest management which are mandated to protect and conserve the forests and the biodiversity thereof. Microplans are prepared in congruence with working plan prescriptions. Analysis of the functioning of these committees and implementation of the micro-plans prepared through Participatory Rural Appraisal is an indication of the participation of the stakeholders in forest management for sustainable management of forests.

Intended situation: Participation of stakeholders in sustainable management of forest

Verifiers:

- 1. Listing of the committees constituted for the participatory forest management.
- 2. Mapping of forest areas covered under participatory forest management.
- 3. Participatory Rural Appraisals and involvement of local community in preparation of micro-plan.
- 4. Number of micro-plans prepared.
- 5. Mapping of the areas covered under Micro-plans.
- 6. Analysis of the functioning of these committees and implementation of the micro-plans.

Periodicity: 5 Years

Indicator 2.8.4: Details of Biodiversity Management Committees (BMCs)

BMCs are constituted under the BD Act for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, and chronicling of knowledge relating to biological diversity. The Access and Benefit sharing (ABS) Guidelines specifythe process for Access and Benefit sharing of bio-resources. Listing of BMCs, benefit sharing agreements, if any, data on the quantity and valuation of traded bio-resources including NTFPs indicate the benefits derived by the communities.

Intended situation: Duly constituted and functional BMCs

- 1. Constitution of BMCs.
- 2. Details of periodical meetings of BMCs.
- 3. PBR (People's Biodiversity Register) available with the BMC.
- 4. BMCs have management plans for sustainable use of their biological resources.
- 5. Records of NTFP harvesting/extraction and traded quantity and prices by the BMCs.

- 6. Records of Levy charges received by BMCs.
- 7. Records of ABS implemented.

Periodicity: 5 years

Indicator 2.8.5: Forest, biodiversity and wildlife related offences

Listing of year wise forest, wildlife and biodiversity related offences; details of conviction and compounding under various legal instruments governing the same indicate the effectiveness ofenforcement of law.

Intended situation: All offence cases are registered, investigated and concluded as per law.

Verifiers:

- 1. Maintenance of offences registers.
- 2. Use of IT in offence monitoring.
- 3. Higher rate of convictions of cases.
- 4. Capacity building of frontline forest staff to handle offence cases.

Periodicity: Every year

Indicator 2.8.6: Financial outlay

Requirement of funds as per the working plan vis-à-vis allocation of funds in the previous planperiod and expenditure.

Intended situation: Finances available match the annual plan of operations drawn from the workingplan.

Verifiers:

- 1. Trend analysis of allocation vis-à-vis plan prescriptions and expenditure and inflow of finances from other sources.
- 2. Outcome-based budget analysis.

Periodicity: Every year

Indicator 2.8.7: Human resource

Adequate and trained man power is essential for effective management of forests. Regular recruitments, promotions, induction and refresher trainings, skill up-gradation trainings are necessaryfor bringing efficiency in forest management.

Intended situation: Adequate and trained manpower available at all levels in the division. In servicetraining done periodically.

- 1. Number of posts sanctioned and positioned to assess the adequacy of the manpower.
- 2. Assessment of the requirement of daily wage/contractual man power.
- 3. HRD plan in place with regular Training Need Assessment (TNA) for meeting the emergingchallenges.
- 4. Trainings imparted at all levels.
- 5. Enforcement of Environment, Health and Safety (EHS) measures.

Periodicity: 2 years

Indicator 2.8.8: Gender aspects

Women are involved in forest-based income generation activities as they are the primary collectors of NTFPs and their primary processing. The women are likely to have knowledge on forestry resources linked with food, health, fodder and firewood. However, their commensurate roles do not reflect in the forest management. Mapping of gender-based roles and activities in forestry, assessing the contribution of the women in forestry activities, their role in forest management planning, training and capacity building for women organised by the forest department etc. are essential to understand gender mainstreaming in forest management.

Intended situation: Forest management with adequate gender participation and enabling working conditions.

Verifier:

- 1. Mapping of gender-based roles and activities in forestry operations.
- 2. Records of gender participation.
- 3. Capacity building for women community and frontline staff.
- 4. Adequate working conditions for all genders.
- 5. Enabling access to government schemes for child and women development.

Periodicity: 5 years

Indicator 2.8.9: Labour welfare

The welfare of the labour involved in forestry operations is of utmost importance. Listing of the applicable laws governing the labour welfare and analysis of adherence to the same indicate efforts taken for labour welfare.

Intended situation: Compliance to all applicable laws, rules and schemes governing the labour welfare.

- 1. Listing of the applicable laws, rules and schemes governing the labour welfare.
- 2. Adherence to the wages rates as applicable.
- 3. No engagement of child labour.
- 4. Direct payments to the beneficiary account.
- 5. Implementation of applicable government welfare schemes (life insurance, health

insurance etc.).

Periodicity: 5 years

Indicator 2.8.10: Environmental awareness and education

Assessment of all efforts made to increase public awareness and education on environment, forests, the benefits provided by the forests, along with list of the published material.

Intended situation: People are well aware of the tangible and intangible benefits of the forests and importance of sustainable forest management.

Verifiers:

- 1. Communication strategy for public awareness on the importance of and the benefits provided by forests and sustainable management of forest.
- 2. List of the published material such as brochures, pamphlets, leaflets, posters, etc for publicawareness.
- 3. Extent of use of social media handles.
- 4. Public participation & celebration of important events like Van Mahotsav, Wildlife week, Earthday, World environment day, International day of forests etc.
- 5. Number of meetings with the general public to inform them of the benefits provided by foreststo society
- 6. Details of forestry/environmental awareness and education programmes conducted for studentssuch as Prakriti etc.

Periodicity: 2 years

Indicator 2.8.11: Infrastructure support

Adequate infrastructure in terms of office, residential accommodation of the staff, transportation facilities and communication facilities are necessary for effective forest management. Listing of the entire infrastructure available enables identification of gap, if any, and planning for reducing the gap.

Intended situation: Adequate infrastructure for effective forest management.

Verifiers:

- 1. Listing of office, residential accommodation of the staff, transportation facilities and communication facilities.
- 2. Assessment of requirement of infrastructure
- 3. Infrastructure planning for reducing the gap

Periodicity: 2 years

Indicator 2.8.12: Research and development

Research and academic institutes are important stakeholders. Research plots, preservation plots, seed orchards, seed stands/seed production areas etc. established by forest department and research institutes, are important for research and development in the forestry sector.

Documentation of the efforts of the forest department, the details of research undertaken, application of results in the field and further identification of problems for research are essential for effective science-based forest management.

Intended situation: Long-term research and development plan in place.

Verifiers:

- 1. Listing of research plots, preservation plots, seed orchards, seed stands/seed production areasetc. established by forest department and research institutes and their status.
- 2. Number of research problems identified and referred to the research wing / research institution.
- 3. Utilisation/Implementation of research findings and transfer of knowledge and technology.

Periodicity: 5 years

Indicator 2.8.13: Existence of monitoring mechanism

Periodic monitoring and evaluation are essential tools for effective and adaptive forest management. Analysis of adherence to monitoring protocols like control forms, compartment history etc. gives insight into the management of forests.

Intended situation: Regular monitoring of management effectiveness. Verifiers:

1. Regular monitoring and evaluation mechanism is in place.

Periodicity: Every year

Annexure – II

Standard for Sustainable Management of Trees Outside Forest in India

Introduction

Trees outside Forests (ToF) have a crucial role to play in meeting the wood demands of various sectors, thereby alleviating the extraction pressure on natural forests and contributing to the conservation of forest resources. ToF performs various productive, ecological, economic, and socio-cultural functions. Ecological and recreational benefits from ToF are prioritized in urban areas, whereas in rural landscapes their economic and livelihood potential in addition to socio-cultural values are better recognized.

This standard is developed to monitor the performance of ToF including plantations/agroforestry on private, government or community owned lands, other than the territorial and protected areas designated as forest lands, for their sustainable management through the framework of criteria, indicators, and verifiers.

This standard is applicable for tree owners such as individual farmers, farmer groups and other entities in the timber or Non-Wood Produce (NWP) value chain who share and adhere to common principles of sustainable plantation/agroforestry management. This is a comprehensive standard developed with the objective of its applicability for diverse types of plantations/agroforestry systems. Therefore, the applicability of indicators within each of the criteria may change depending upon the context of the applicant in terms of the scope and diversity of ToF. The Certification Body shall have to provide due justification for any such non-applicability.

This standard will operate based on criteria and indicators as specified below. Verifiers are also prescribed for each indicator to facilitate the evaluation process while also ensuring their applicability to the Indian context. The periodicity of the verification could range from annual to once in 10 years depending on the nature of the indicators and local conditions.

Criteria 1: Maintenance and increase in the extent of area under ToF

This criterion records the extent of area under tree plantations/agroforestry and its sustainable management using criteria and indicators approach to sustainable management of trees outside forest areas. Promoting tree plantations through diverse agroforestry/farm forestry models is significantly important for India to meet the fast growing demand of wood in the country, to reduce dependence on wood imports, enhancing incomes of the framers and mitigating risks with crop diversification. The co-benefits of growing trees include enhancing ecosystem values, carbon capture and thus receiving additional benefits of carbon credits and green credits.

Indicator 1.1: Extent of tree plantation/agroforestry

The indicator documents the enhancement of land area under tree plantations/agroforestry practices.

Intended situation: Maintenance and increase in tree plantation/agroforests

Verifiers

- i. Documentation of land use/land cover
- ii. Plantation journal

Indicator 1.2: Extent of utility of ToF

Trees raised in farmlands yield a variety of commercial or non-commercial products at different time periods. Intermediate thinning may yield poles while pruning would yield fuel wood. Intercrops such as ginger, turmeric etc. may also be harvested. Appropriate value addition to these products at local level would enhance the benefits to stakeholders.

Verifiers

- i. Percentage of output from ToF used for commercial and non-commercial purposes
- ii. Monetary value of the products used for commercial purposes.
- iii. Percentage of raw material demand of the forest-based industries in the region met from ToF

Criteria 2: Maintenance, conservation and enhancement of biodiversity and ecosystem services through ToF

Plantations under different schemes should avoid monoculture and enhance biodiversity and various ecosystem services through raising multiple tree and crop species.

Indicator 2.1: Species diversity in ToF

This indicator records floral and faunal diversity in terms of planted and naturally growing plant species.

Intended situation: Maintenance and enhancement of biodiversity (to be prepared by institutions or accredited consultant) **Flora**

- i. Composition of the tree and agriculture crops, in terms of species (species
 - diversity) and varieties (genetic diversity) and type of the planting material (seeds, clonal propagation etc.)
 - ii. Species grown in the farmlands are found in the adjoining natural stands
 - iii. List of indigenous and exotic species grown in the farmlands

b. Fauna

- i. Composition and diversity of faunal community including mammals, birds, reptiles, insects, earthworms etc
- ii. Presence of natural predators or biological control agents

Indicator 2.2: Protected area network and ToF

Agroforests and plantations raised as corridors to connect fragmented forest ecosystems in wildlife sanctuary, national parks etc.

Intended situation: Encourage tree cover and diversity near protected areas for better connectivity.

Mature plantations and agroforests mimic natural forests and provide habitat continuity to facilitate the movement of animals.

Verifiers

- i. Establishment of wildlife corridors and development of wildlife habitats through plantations
- ii. List of species conserved by developing corridors for protected area network

Indicator 2.3: Effectiveness of ToF in soil and water conservation

Sustainable management of tree plantations would result in better soil and water conservation regimes that is reflected in enhanced flow of water in streams for longer duration throughout the year. Soil and water conservation measures in tree plantations can result in multiple benefits such as reduction in soil erosion, increase in water recharge, improvement in soil health and conducive environment for plant growth.

Intended situation: Plantation has stabilized the soil and helped in regulating surface run-off. Conservation measures undertaken in the plantation have facilitated soil and water improvements in adjoining areas

- i. Total area identified and demarcated for the protection of soil and water conservation
- ii. Number of physical and biological measures/structures for soil and moisture conservation in tree plantations
- iii. Documentation of the impacts of plantations on surface and ground water in the watershed
- iv. Enhancement in natural regeneration and growth of the saplings in plantations
- v. Improvement in land capability
- vi. Riparian zones (area adjacent to rivers/wetland) identified, defined and protected before harvesting
- vii. Reduced impact logging mechanisms are devised

Indicator 2.4: Ecological restoration and rejuvenation of degraded and denuded land using ToF

ToF is a sustainable strategy for restoring degraded lands and achieving the national restoration commitments. This will also fetch additional revenue through green credits.

Intended situation: Encourage land restoration activities for management of degraded lands

Verifiers

- i. Wasteland map with the extent and intensity of degradation or denudation
- ii. Land capability classification
- iii. Soil health status
- iv. Methods for managing culturable and non-culturable wastelands.

Indicator 2.5: Potential carbon stock mapping

This indicator will cover the estimation of carbon stock in tree biomass and soil if it has potential for carbon credits.

Intended situation: Maintenance and enhancement of carbon stock from the base year data.

Verifier

- i. Documents on growing stock (volume, biomass etc.)
- ii. Document on tree and soil carbon stock assessment

Criteria 3: Conservation, maintenance and enhancement of productivity and vitality of ToF

Maintaining and improving the productivity of plantations is very important particularly from the point of view of financial returns. Boosting productivity will increase the commercially valuable yield in addition to improving co-benefits such as carbon sequestration that can help in bringing additional capital/funds for plantations and thus increase areas under tree cover.

Indicators 3.1: Survival and growth of planted species

This indicator records the survival percentage of the planted species in the farmland. Survival is assessed during the initial years of plantation. Maximum survival is necessary to achieve the objectives of the plantation and in case of sapling casualty, replacement must be done to fill the gaps. Optimum spacing and density should also be prescribed in the management plan. The survival percentage would indicate the suitability of the planted species and the effectiveness of management practices. For long rotation crops tending operations are also done to increase productivity.

Intended situation: The survival and growth of tree species should be according to the documented growth parameters for the given locality.

Verifiers

- i. Plantation register with records of survival and growth statistics of different planted species at periodic intervals
- ii. Re-planting of saplings in the successive years
- iii. Annual growth parameter monitoring report including data on Current Annual Increment and Mean Annual Increment, growing stock and other growth parameters.

Indicator 3.2: Extent and nature of damage to ToF

This indicator will record the damages to plantations due various reasons such as pest and diseases, weeds, wildlife, drought, storms and others. Weeding activities should be undertaken to reduce competition of weeds with the planted species.

Intended situation: Maintaining records of species prone to various disturbances will help in successful establishment of ToF

Verifiers

- i. Type and extent of diseases and pest infestations
- ii. Records on the frequency of natural calamities and area damaged
- iii. Integrated pest and disease management to minimise tree damage and mortality
- iv. Weed management practices to reduce weed competition promoting early canopy closure

Indicator 3.3: Rotation period of the tree species

Timely harvesting of mature plantations is important for maximizing returns. It is desirable that harvesting should be done as per prescribed rotation period in the management plan.

Intended situation: Rotation period may be fixed and documented in management plan based on the silviculture characters of the tree to obtain optimum income

Verifiers

- i. Long-term projections, strategies and plans for enhancing production
- ii. Harvesting plan as per the rotation period fixed at the time of planting tree or deviation, if any

Indicator 3.4: Regeneration status of planted species

Intended situation: Records/observations on regeneration through seeds or coppice/root suckers will facilitate raising future crops.

Verifiers

- i. Natural regeneration assessment reports
- ii. Practices for promoting assisted/natural regeneration

Indicator 3.5: Harvesting of trees

Harvesting of trees in a phased manner and as per plan may facilitate the management of plantations in perpetuity.

Intended situation: Records of harvested trees will be used for yield projections which may help in planning for new plantations.

Verifiers

- i. Percentage area harvested for which pre-harvesting surveys have been conducted and harvesting proposal prepared with estimation of level of sustainable harvest for each species
- ii. Documentation of age v/s volume of harvested trees
- iii. Cost estimation of the harvest plan is as per the guidelines

Indicator 3.6: Existence and application of site-specific technologies for enhancing productivity.

Intended situation: Enhanced use of technology blended with indigenous knowledge for raising ToF

Verifiers

- i. Report of potential productivity of the site from reputed R&D and management institutions, NGOs, accredited consultants
- ii. Document showing the chronological list of activities for use of appropriate technologies in site selection, species selection, seed collection, nursery techniques, plantation and its maintenance
- iii. Records of use of local resources and use of indigenous knowledge in raising plantations

Indicator 3.7: Greater reliance on ecofriendly methods for raising and management of ToF

This indicator reflects the use of eco-friendly technology and inputs such as use of renewable energy sources (solar pumps, solar dryers for NWPs etc.) for the day-to-day management activities, use of bio fertilizers etc.

Intended situation: Encouraging use of renewable energy and alternative natural products for sustainable management of ToF.

- i. Installed renewable energy equipment
- ii. Extent of energy saved
- iii. Extent of use of organic manures/biocontrol agents (compared to total quantity of chemical fertilizers used, if any)
- iv. Available facility for on-site production of vermicompost
- v. Integrated pest management

Indicator 3.8: Optimization of use, value addition and enhancing marketing opportunities of produce from ToF

Facilities and knowledge for value addition and institutionalization of marketing are needed to enhance the optimum utilization of products from tree plantations. The documentation of ecosystem benefits such as increased carbon stocks, restoration of degraded lands, and water shed services can also be monetized through the National Carbon Market (NCM) and Green Credits program (GCP).

Intended situation: Incorporating value addition options and ensuring market linkages at the time of plantation planning will enhance financial viability

Verifiers

- i. Existence and application of local processing and utilization of tree produce
- ii. Effective purchase and supply mechanism with availability of online platforms
- iii. Market intelligence to provide assistance in timely disposal of products
- iv. Diversifying the mix of commercial products derived from the forest plantation

Criteria 4: Socio-economic and cultural benefits of ToF

Many communities have been traditionally dependent on tree products for their cultural and socio-economic needs. Documenting traditional tree management practices will help in managing the plantations sustainably. Indigenous knowledge and local traditions are useful in bringing degraded lands under tree cover.

Indicator 4.1: Economic and sociocultural benefits generated for local communities

ToF support local livelihoods and add to the income of the communities through supply of fuel wood, fruits, fodder etc. Local employment generation from planation activities is also an important socio-economic benefit. Mechanism for distribution of specified share of harvested material, revenue and usufruct benefits should be assured in the management plans. Respect for indigenous traditional knowledge and cultural practices of communities should be ensured.

Intended situation: Contribution towards direct and indirect benefits for local community

Verifiers

i. Records on fruits, fuelwood, fodder etc. used by local community

- ii. Records on employment of local workers in plantations
- iii. Labour rules are implemented, and labour rights are protected
- iv. No child labour is involved in plantation activities
- v. Health and safety measures for employees in plantations including health insurance, suitable gears (helmet, hand gloves etc.), availability of first-aid kit, maintenance of up-to-date safety records in compliance with all applicable laws and/or regulations etc.
- vi. Cultural values such as recreation, religious worship and tourism are maintained.

Indicator 4.2: Social Impact Assessment

The indicator assesses the impacts of tree outside forest/plantations/agroforests on the rural livelihoods

Intended situation: Help in identifying potential social impacts, both positive and negative

Verifiers

- i. Social Impact Assessment report
- ii. Focus Group Discussion report

Criteria 5: Adequacy of policy, legal provisions and guiding documents for the establishment of trees outside forest

The criterion is concerned with the existence of conducive environment in terms of available rules, regulations, policy guidelines and management plans for the sustainable development and management of ToF. Well defined rules and regulations shall be in place based on a National/State Policy/Act to support and motivate tree based farming in the country for meeting the production, conservation and socio-cultural needs.

Indicator 5.1: Adherence to the legal framework for establishment of trees outside forest for production, conservation, and socio-cultural needs

The indicator will record all the issues related to the adherence to rules, regulations and legal frameworks to support trees raised in government or private lands by government institutions or by private organizations/individuals. Sound knowledge of the legal provisions will be beneficial for planting, harvest, transport and management of depot/storage place.

Intended situation: Establishment of ToF/plantations/agroforest as per the law of land

- i. Land ownership documents land lease rules/legal agreement with farmers in case of company seeking certification on behalf of farmers or group of farmers.
- ii. Registration of plantation with concerned authority as required by the relevant State Acts and Policies

- iii. Documents on policy/legal requirements regarding tree plantation, harvest and transport consistent with the national objectives and the direction of apex court, if any are available.
- iv. List of tree species that require licence/permission for cultivation, harvest and sales
- v. Felling and transit rules
- vi. Applicable rules/legal provisions for disposal/selling of trees in open market or through timber depots

Indicator 5.2: Availability of comprehensive management plan with clear objectives and guidelines

A comprehensive management plan would ensure the ecological, economic and sociocultural aspects of sustainability. Principles of sustainability given in the National Working Plan Code 2023 may be used as guiding document for the preparation of management plan for ToF. Management plan should also encourage the application of traditional/indigenous knowledge.

Intended situation: Management operations as per the plan and the maintenance of plantation register.

Verifiers

- i. Copy of duly approved management plan/micro-plan with guidelines for silvicultural operations (including sustainable harvesting/collection practices) for wood and non-wood produce
- ii. Plantation journal with details and timeline of silvicultural operations, with deviation, if any

Indicator 5.3: Institutional framework for research, development and best practices, if any

Research & development and transfer of technology mechanism for the plantation are important in raising quality plantations. Development of Quality Planting Material (QPM) of different tree species, maintenance of clonal seed orchards, and application of the results of provenance trials are important. Knowledge of suitable species and their survival and growth rates according to specific site conditions are important for successful plantations. This indicator will document these aspects and capture the shortcomings in technology transfer and further requirements of technology to meet the objectives of plantations.

Intended situation: Extension activities conducted by various institutions (Forestry and Horticulture departments, universities, NGOs etc.) for tree growers.

- i. Availability of best package of practices for raising and management of plantation.
- ii. Research & Development Plan of institutions

- iii. Availability of adequately trained manpower with the growers or concerned institutes
- iv. Transfer of technology (lab to land) mechanism

Indicators 5.4: Guidelines to identify, incorporate, retain, and encourage the adoption of native multipurpose species in ToF

This indicator will set the guidelines to maintain the diversity of indigenous species of trees, shrubs, herbs, shrubs and agricultural crops in ToF in accordance with the ecological conditions of the area and objectives of the plantations.

Intended situation: Endemic species identified, recorded and protected as per the People's Biodiversity Register (PBR) (Biological Diversity Act, 2002)

Verifiers

- i. People's Biodiversity Register from the concerned local body
- ii. Register of number of native and endemic plants retained/adopted
- iii. Guidelines for retention and management of native species

Indicator 5.5: Comprehensive Monitoring and Evaluation (M&E) mechanism

Monitoring and Evaluation(M&E) is an important aspect of any development work. M&E of plantations should be regular to assure the desired outputs. The indicator will assess the arrangements made by the certification agency and follow-up action taken for monitoring and evaluation of plantations.

Intended situation: Monitoring and evaluation mechanism in place

- i. Written M&E Mechanism
- ii. Periodic M&E reports
- iii. Compliance of the feedback received
- iv. Complaint/suggestion register

Annexure – III

Chain of Custody (CoC) Certification Standard

1. **INTRODUCTION**

The objective of chain of custody (CoC) certification standard of the Indian Forest and Wood Certification Scheme is to allow organizations to provide reliable and verifiable information that forest and tree-based products are sourced from IFWCS certified sustainably managed forests and/or trees outside forests / plantations.

The IFWCS chain of custody certification allows organizations to demonstrate their strong commitment to the Indian Forest Management Standard as contained in NWPC 2023 and approved by the IFWCC on the recommendation of the Standard adoption committee and the Standard for Sustainable Management of Trees outside Forests. The aim of communicating the origin of forest and tree-based products is to encourage demand for and supply of those products originating from sustainably managed forests and/or originating form sustainable managed trees outside forests and hence motivating the

potential for market-driven continuous improvement of the management practices.

The IFWCS chain of custody (CoC) is the unbroken path taken by products (such as timber or NTFP) from the forest, or farmers' field in the case of plantation wood, to the point where the product is sold with an IFWCS claim and/or it is converted into a finished product (such as paper, furniture, handicraft, wood panels, herbal products) that are IFWCS labelled.

The CoC includes each stage of sourcing, processing, trading, and distribution where progress to the next stage of the value chain involves a change of product ownership. Any change of ownership in the value chain of IFWCS-certified products requires the establishment of effective CoC management systems at the level of the respective organization and their verification by an independent IFWCS -accredited Certification Body, if the organization wants to make an IFWCS claim about their products. IFWCS certification of such management systems is designed to provide a credible assurance

that products which are sold with an IFWCS claim originate from well managed forests/ or trees outside forests / plantations. IFWCS CoC certification thereby facilitates the transparent flow of goods made from such materials throughout the value chain.

2. **SCOPE**

The IFWCS chain of custody standard covers the requirements that must be met by an organization in order to successfully implement a chain of custody for forest and treebased products, and to make IFWCS claims to customers on the origin of forest and tree-based products from IFWCS sustainably managed forests/ or trees outside forests / plantations. These chain of custody requirements describe a process of how to classify forest and tree-based products according to specified material categories to transfer information about the source of procured raw material to an organization's output products. This standard specifies three optional approaches for chain of custody, namely physical separation method, percentage method and credit method.

This standard also specifies management system requirements for the implementation and management of the chain of custody process. This Chain of Custody standard shall be used in compliance for the IFWCS claims. The usage of claims and relating labels, as a result of implementation of this Chain of Custody standard, is based on ISO 14020. The labelling of products is considered as an optional communication tool, which may be incorporated into an organizations' chain of custody processes. Where the organization applies the IFWCS trademarks for on-product or off-product labelling, the requirements for IFWCS trademark use becomes an integral part of the chain of custody requirements.

This standard shall be implemented for the purposes of third-party conformity assessment based on requirements defined by the IFWCC. The conformity assessment is considered as product certification and shall follow ISO 17065.

The term "shall" is used throughout this standard to indicate those provisions that are mandatory.

The term "should" is used to indicate those provisions that, although not mandatory, are expected to be adopted and implemented.

The term "may" used throughout this standard indicates permission expressed by this standard whereas "can" refers to the ability of a user of this standard or to a possibility open to the user.

3. TERMS AND DEFINITIONS

For the purposes of this standard, the relevant definitions given in ISO/IEC Guide 2 and ISO 9000 apply, together with the following definitions:

3.1 Certified content

Percentage of IFWCS certified material in a product or product group.

3.2 Forest and tree-based material from certified area

Forest and tree based material sourced from:

a. Sustainably managed forests/plantations following the principles of sustainable management of forests as per the Indian Forest Management Standard contained in the National Working Plan Code 2023 and as prescribed in the Working Plan/scheme of the forest division/plantation area (as annexure I).

b. Sustainably managed trees outside forests as per the Sustainable Management Standard for ToF as contained in the IFWCS document (as annexure II).

The following referenced documents are useful guiding documents for the application of this standard.

For both dated and undated references, the latest edition of the referenced document (including any amendment) applies.

ISO/IEC Guide 2, Standardization and related activities – General vocabulary

ISO 9000 and related standards, Quality management systems – Fundamentals and vocabulary

ISO 14020:2022, Environmental labels and declarations – General principles

ISO 14021:2016/Amd1/2021, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

ISO 19011:2018, Guidelines for auditing management systems

ISO/IEC 17065:2012, Conformity assessment – Requirements for bodies certifying products, processes and services.

ISO 38200: 2018, Chain of custody of wood and wood-based products

4 CHAIN OF CUSTODY CERTIFICATION

4.1 **Process documentation**

The organization/agency/firm shall establish written documented procedures for its IFWCS chain of custody. The process documentation shall include all the elements from the extraction of forest product, storage, product flow including effective chain of custody. The forest product can be categorized as timber and non-timber forest produce or finished products thereof.

4.1.1 Wood from forest and plantations

The Indian Forest and Wood Certification Scheme (IFWCS) - Chain of Custody has two major sources for establishing traceability of timber/Non-timber products from 1) Forest areas/divisions /Plantations; and 2) /Trees outside Forests (ToF) including agroforestry.

4.1.1.1 Wood coming from certified forest/plantation and/or Trees outside Forests (ToF) including agroforestry **area**

The certified wood must carry the logo along-with hammer mark for transportation from forest coupe to timber depot in case of wood sourced from forest. Quantity of certified wood should normally match with the Annual Allowable Cut (AAC) from forest as envisaged in the Forest Working Plan/Scheme.

The stump-to-gate legally sourced logs should have hammer mark on both sides of the log. The mark contains tree number and log number so that it could be reconstructed sequentially into a tree. Such a log or logs could be extracted from stacked wood log and then could be reconstructed into a tree. Anyone in the process can trace the compartment and coupe number, species and its dimensions (volume, height, dbh etc.), number of logs and total volume. This verification should demonstrate the CoC/traceability for legally harvested timber.

Wood coming from the certified forest (FM certification) and /or Trees outside certified sources and non-certified area may be dealt separately. The lot with 100% wood from certified areas should be stacked distinctly whereas, the wood from non-certified area must be dealt conventionally as non-certified material. This can be executed by adopting **physical separation method**.

4.1.2 NTFP from certified forest area and other acceptable sources

In order to establish source of verification for the non-timber forest produce, a self-declaration first party record/proforma indicating the source of origin, name of species, collected part, collection date, collection place/compartment no./collection time/quantity collected (kg/No.), method of collection (destructive/non-destructive) must be observed as first stage of scrutiny for CoC forest certification. Since most of the NTFPs are being used as food or ingredients for medicines thus the records for safe and hygienic conditions at all stages i.e. collection, storage, transportation need to be ensured. This can be depicted by keeping images of the material at various stages.

Second stage record/proforma with backward linkages must include the registration no. of NTFP custodian/collectors, if any as per the provisions of Access and Benefit-sharing (ABS) of Biological Diversity Act, 2002. Moreover, the custodian of NTFP must indicate the status as intact NTFP or in changed form with clear indication of stage of procurement channel such fresh

collected material, primary processed, secondary processed or tertiary processed/finished product.

Forest product reaching to manufacturing/processing unit, while keeping the records of the flow of product may be ensured by appending all proforma of IFWCS CoC certification. A separate permission to use IFWCS logo on each stage of product form changes shall be required.

The **physical separation method** and the **percentage method** as described in international processes would be used for the **IFWCS chain of custody certification**. Depending on the nature of material (whether wood or non-wood), material flows and processes, the **organization/agency/firm** shall choose the appropriate method. Centralized database created under the provisions of the National Working Plan Code - 2023 may be used for establishing product traceability and quantity.

4.2 Physical separation method

The organization/agency/firm applying the physical separation method shall ensure that material with different material categories and different certified content are kept separately or clearly identifiable at all stages of the production or trading process.

Physical separation can be achieved by any means ensuring that **material category** and **certified content** can be identified, for example, through separate storage, marking, distinguishing product characteristics or production/collection time.

Where material with different certified content is used as input in the same IFWCS product group, the organization/agency/firm shall use the lowest certified content of the input as certified content of the output.

Example: An organization/agency/firm using material with 100%, 75% and 60% certified content as input in the same IFWCS product group under the physical separation method can claim the output as 60% IFWCS certified.

71
4.3 Percentage method

The percentage method may be implemented to calculate the certified content of IFWCS product groups for which IFWCS certified material were used as input material.

Calculation of certified content

The organization/agency/firm shall calculate the certified content separately for each IFWCS product group and for a specific claim period according to the following formula:

(Cc: certified content; Vc: volume of IFWCS certified material; Vcm: volume of IFWCS controlled sources material)

Note: Neutral material is not considered in the calculation of the certified content.

The **organization** shall calculate the **certified content** based on a single measurement unit used for all material covered by the calculation. In case of conversion to a single measurement unit for calculation purposes, the **organization** shall only use generally recognized conversion ratios and methods. If a suitable, generally recognized conversion ratio does not exist, the **organization** shall define and use a reasonable and credible conversion ratio.

If input material/products include only a proportion of **IFWCS certified material**, then only the quantity corresponding to the **certified content** shall enter the calculation formula as **IFWCS certified material**. The rest of the material shall enter the calculation as **IFWCS controlled sources** material.

Example: 1 ton of material delivered with **IFWCS claim** "70% **IFWCS** certified" and 1 ton of material delivered with **IFWCS claim** "100% IFWCS certified" are used as input. Using the formula under 5.3 the **certified content** is Cc [%] =

(700kg+1000kg)/(700+1000)+300))x100 = (1700/2000)x100 = 2 ton of 85% IFWCS certified material.

4.4 Credit method

4.4.1 The credit **method** may be implemented to transfer credits gained from the input of **IFWCS certified material**.

4.4.2 The **organization** shall create and manage a credit account for credits gained from input of **IFWCS certified material**. The credits shall be calculated in a single measurement unit. It may be required to define conversion factor(s) for the conversion of the measurement unit(s) of the input components to the output products.

4.4.3 The total quantity of credits accumulated in the credit account shall not exceed the sum of credits entered into the credit account during the last 24 months. The 24-month maximum period may be extended, where the organization can demonstrate that the average production period of the product in question is longer than 24 months.

Example: If the average production period of a product (including maturing, for example) is 36 months, the **organization** can extend the 24-month maximum period for the accumulation of credits to 36 months.

4.4.4 The organization shall apply the credit method for a single claim. The organization receiving a delivery of material with a IFWCS claim and a claim against another certification system, shall either use it as a combined credit covering both claims or shall only use one of the received claims for calculating the volume credits.

Example: An organization receiving a delivery of material with two claims relating to two certification systems either establishes a credit account for the multiple claim (e.g. IFWCS certified [other system claim]) or decides, which single claim (either IFWCS certified or [other system claim]) will be entered into the respective volume credit account.

73

4.4.5 The organization shall calculate the credits using either:

- a. Certified content and volume of output products or
- b. Input material and input-to-output ratio

4.4.6 The organization applying the credit method shall calculate the credits by multiplying the volume of output products of the claim period with the certified content for the relevant claim period.

Example: If the certified content for the product group of the specific claim period, which consists of 100 tons of output products, is 54%, the organization achieves volume credits equal to 54 tons (100 x 0.54) of the output products.

4.4.7 The **organization** shall distribute the credits from the credit account to the output products covered by the credit account. The credits shall be distributed to the output products in a way that the certified products will be considered as either having 100% **certified content** or as having less than 100% **certified content** and meeting the organization's own threshold. The result of the volume of output products multiplied by the **certified content** of the output products shall be equal to the distributed credits withdrawn from the credit account.

Example: The organization can use 7 units of credits to sell 7 units as 100% IFWCS certified, or to sell 10 units as 70% IFWCS certified.

5. **RECORD KEEPING**

To provide evidence of conformity with the requirements of this standard, the **organization** shall establish and maintain at least the following records relating to the **forest products** covered by **IFWCS chain of custody**:

- a) Records of wood harvesting and collection of NTFPs.
- b) Records of first party/self-declaration

c) Records of all **suppliers** of input material delivered with a **IFWCS claim**, including evidence of the suppliers' IFWCS certified status.

d) Records of all input material, including **IFWCS claims** and documents associated to the delivery of the input material.

e) Records of calculation of the certified content.

f) Records of all products sold/transferred, including **IFWCS claims** and documents associated to the delivery of the output products.

g) Records of the **Due Diligence System**, including records of risk assessments and significant risk supplies management, as applicable.

h) Records of internal audits, periodic chain of custody review, nonconformities and corrective actions.

i) Records on complaints and their resolution.

j) The **organization** shall maintain the records for a minimum period of five years.

6. **INSPECTION AND CONTROL**

The organization/agency/firms shall conduct internal audits at least once in a year, and prior to the initial certification audit, covering its compliance with all requirements of this standard applicable to the organization, including activities covered by outsourcing, and establish corrective and preventive measures if required.
