

National Forest Monitoring System / Forest Information Platform (NFMS/FIP)

Data Sharing Protocol

1) Background

The Forest Information Platform (FIP) is a centralized digital system hosted by the Kenya Forest Service (KFS) under the National Forest Monitoring System (NFMS). It serves as a national hub for integrating forestry and land-related datasets from public agencies, research institutions, county governments and other stakeholders.

The governance of this protocol is anchored in the FIP Governance Structure, which ensures that policy oversight, coordination, technical validation and implementation are aligned with national REDD+ priorities.

1.1 Authority

This Protocol is issued under the authority of the Ministry of Environment, Climate Change and Forestry (Kenya) through the State Department for Forestry in exercise of its national coordination mandate over forest monitoring, climate reporting and REDD+ implementation frameworks.

1.2 Definitions

For the purposes of this Protocol, unless the context otherwise requires:

Data Provider	refers to any institution or organization responsible for generating, collecting, maintaining or submitting data to the National Forest Monitoring System/Forest Information Platform (NFMS/FIP).
Data Custodian	is the institution responsible for the administration, storage, security and management of datasets within the NFMS/FIP platform without assuming ownership of such datasets.
Data Steward	refers to the designated officer responsible for coordinating data submission, quality assurance, metadata preparation and communication between the participating institution and the NFMS/FIP Secretariat.
Data User	means any authorized individual or institution granted access to datasets in accordance with the provisions of this Protocol.
Metadata	consists of structured information describing the content, quality, origin, spatial characteristics, temporal coverage, accessibility and management of a dataset, as specified in the approved NFMS/FIP Metadata Template.
Interoperability	is the ability of different information systems, applications and institutions to exchange, interpret and use data consistently through agreed standards and protocols.
Public Data	comprises datasets approved for unrestricted public access.
Restricted Data	refers to datasets accessible only to authorized institutions and users under specified conditions.
Sensitive Data	comprises datasets whose disclosure may compromise national security, privacy, environmental protection, commercial interests or other legally protected interests and therefore require additional authorization prior to access.

Unless otherwise specified, terms in this Protocol shall be interpreted in accordance with the Constitution of Kenya, the Data Protection Act, 2019 and applicable laws.

2) Legal and Administrative Status

- 2.1** This Protocol constitutes a binding inter-institutional administrative agreement governing data sharing, management and use within the NFMS/FIP ecosystem.
- 2.2** All data sharing and processing under this Protocol shall comply with the provisions of the Office of the Data Protection Commissioner - Kenya and the Data Protection Act, 2019 (Kenya).
- 2.3** Personal or sensitive information shall only be processed where such processing is lawful, necessary and proportionate to NFMS/FIP operational and reporting objectives.
- 2.4** This Protocol shall be interpreted in accordance with the laws of the Republic of Kenya and applicable public sector administrative governance principles.

3) Objectives

- Ensure timely, secure and standardized data sharing among stakeholders.
- Enhance data quality, consistency and integrity across institutions.
- Clarify institutional roles and responsibilities within the governance framework.
- Facilitate interoperability and reusability of data at national and international levels.
- Align with the Kenya ICT Authority's data governance framework and national legal instruments, including the Data Protection Act.

4) Parties to the Protocol

This protocol is entered into by:

- Kenya Forest Service (KFS) – Platform custodian, NFMS/FIP Secretariat and lead implementing agency.
- Partner Data Providers, including but not limited to:
 - Kenya Forestry Research Institute (KEFRI)
 - Directorate of Resource Surveys and Remote Sensing (DRSRS)
 - Regional Centre for Mapping of Resources for Development (RCMRD)
 - Kenya Meteorological Department (KMD)
 - National Environmental Management Authority (NEMA)
 - Kenya National Bureau of Statistics (KNBS)
 - Kenya Space Agency (KSA)
 - Kenya Wildlife Service (KWS)
 - Water Resources Authority (WRA)
 - Kenya Agricultural & Livestock Research Organization (KALRO)
 - The National Land Commission (NLC)
 - Kenya Tea Development Agency Management Services Ltd. (KTDA-MS)
 - Ministry of Mining, Blue Economy and Maritime Affairs
 - Survey of Kenya (SoK)
 - Wildlife Research and Training Institute (WRTI)
 - Universities and Academic Institutions
 - The Council of Governors (CoG)
 - NGOs and Conservation Organizations
 - International Research and Development Organizations

- Community and Private Sector ActorsAny other institution generating relevant forest and land data

Each participating institution, including County Governments, shall designate a Data Steward to coordinate data submission, metadata preparation, validation, communication, the submission and updating of county-level forest, land use, restoration and related environmental data in accordance with this Protocol.

4.1 Supplementary Institutional Agreements

Where necessary, participating institutions may enter into supplementary Data Sharing Agreements (DSAs), Memoranda of Understanding (MoUs) or other legally recognized administrative arrangements to govern institution-specific datasets, licensing conditions, confidentiality requirements, intellectual property considerations or operational responsibilities not expressly covered under this Protocol.

Such agreements shall be consistent with the objectives and provisions of this Protocol and shall not limit the interoperability or collaborative objectives of the National Forest Monitoring System.

5) Governance and Oversight

The successful implementation of this Protocol shall depend upon the coordinated participation of all institutions within the NFMS/FIP governance framework.

Institution	Primary Responsibilities
State Department for Forestry	Provide policy direction, approve the Protocol and oversee its national implementation.
National REDD+ Advisory Board/Steering Committee	Provide strategic oversight, endorse key protocols, policies, ensure alignment with national priorities and resolve high-level implementation issues.
Kenya Forest Service (NFMS/FIP Secretariat)	Administer the NFMS/FIP platform, manage user access, coordinate data submission, storage, publication, system maintenance and provide technical support.
REDD+ Coordination Unit	Coordinate implementation, facilitate inter-agency collaboration, oversee the Technical Working Groups, monitor compliance and report on implementation progress.
Technical Working Groups (TWGs)	Review datasets, validate technical standards, advise on safeguards and policy compliance, recommend approval or rejection of submissions and identify technical improvements.
Participating Institutions	Generate, validate, document and submit datasets with the required metadata, designate Data Stewards, maintain data quality and provide timely updates.
Authorized Data Users	Access and use datasets only for approved purposes in compliance with applicable access conditions, attribution requirements and legal obligations.

5.1 Capacity Development

The Kenya Forest Service(KFS), working in collaboration with the REDD+ Coordination Unit and participating institutions, shall facilitate continuous institutional capacity development to support implementation of this Protocol.

Capacity development activities may include:

- training on data standards, metadata preparation and submission procedures
- technical support for system integration and interoperability
- user onboarding and platform orientation
- periodic refresher training and
- dissemination of technical guidance documents and user manuals.

6) Scope of Data Covered

This Protocol applies to forestry, land use, climate and ecosystem-related datasets including but not limited to:

- Land Use / Land Cover (LULC) and change detection
- Forest extent, canopy cover, biomass estimates and vegetation indices
- Forest inventories, biodiversity assessments and habitat quality
- Forest disturbance alerts (fires, logging, encroachment, pests, invasives)
- Soil data and land suitability information
- Hydrology, watershed and water quality data
- Climate and meteorological records
- Ecosystem services valuation
- Forest tenure, cadastral and land registry data
- Environmental compliance reports and EIAs
- Logging permits, concessions, harvesting plans and forest infrastructure maps
- Patrol and enforcement records
- Community forestry and PFM data
- Socio-economic data on forest resource use and value chains
- Human–wildlife conflict and wildlife migration data
- Agroforestry and sustainable land-use datasets
- High-resolution satellite imagery, aerial photography and LiDAR data
- Fire detection and historical burn scar maps

7) Data Submission Requirements

Participating institutions shall:

- Use standardized FIP templates developed by the NFMS/FIP stakeholder technical working group.
- Submit datasets accompanied by complete metadata documentation.
- Adhere to approved coordinate reference systems (including WGS84), file formats and naming conventions.
- Follow agreed data submission schedules (quarterly, biannually, or as generated/required).
- Conduct preliminary data validation and cleaning prior to submission.

Participating institutions shall further:

- ensure that datasets are submitted using approved data exchange mechanisms and interoperable formats adopted by the NFMS/FIP;
- support electronic data exchange through secure web services, application programming interfaces (APIs), file transfer services or other approved mechanisms where technically feasible;
- comply with nationally approved interoperability standards and relevant

e-Government information exchange frameworks to facilitate seamless integration across participating institutions.

8) Validation and Approval Workflow

1. Submission: Data Providers submit datasets to the FIP Staging Area.
2. Review: Relevant TWGs (primarily Forest Monitoring and MRV WG) checks completeness, accuracy and conformity to FIP standards.
3. Endorsement: TWGs recommends approval or rejection. Safeguards Information System, Communication and Stakeholder Engagement WG ensures metadata compliance.
4. Authorization: NFMS/FIP Secretariat at Kenya Forest Service (KFS) uploads approved datasets to the live platform.
5. Escalation: Disputes or unresolved issues are referred to the REDD+ Coordination Unit; persistent disputes are elevated to the National REDD+ Advisory Board/Steering Committee.

All actions and decisions are logged for auditability.

9) Access Rights and Use

Data access shall be granted according to institutional roles and approved access categories under this Protocol and shall be administered by the Kenya Forest Service (KFS) as the NFMS/FIP platform custodian.

Access shall be categorized into three tiers:

- **Public Access:** Open datasets available without restriction.
- **Internal Access:** Datasets accessible to authorized government institutions and approved partners.
- **Restricted Access:** Sensitive datasets requiring prior authorization by KFS, with oversight by the REDD+ Coordination Unit.

The platform custodian shall approve user registration, assign and periodically review access privileges, modify or revoke access where necessary and maintain audit records of user access and system activities.

Datasets shall be used only for authorized purposes, including monitoring, planning, research and reporting and any applicable use restrictions shall be specified in the accompanying metadata.

10) Data Security and Integrity

The NFMS/FIP platform shall be managed in accordance with applicable national cybersecurity policies and internationally recognized information security standards, including the principles of the Kenya National Cybersecurity Strategy. The Kenya Forest Service (KFS), as the platform custodian, shall implement and maintain appropriate technical and administrative safeguards, including role-based access controls, secure authentication mechanisms, regular system backups, disaster recovery arrangements, periodic security audits and documented procedures for the identification, reporting, investigation and management of information security incidents.

Participating institutions shall promptly report any suspected security breaches, unauthorized access, data corruption or system failures that may compromise the confidentiality, integrity or availability of shared data. The Kenya Forest Service (KFS)

shall coordinate appropriate corrective and recovery measures to restore services, protect affected information and minimize the risk of recurrence.

11) Data Correction and Withdrawal Rights

Data providers may request correction of erroneous datasets or withdrawal of datasets where justified, subject to technical review and governance approval.

12) Institutional Liability

Each participating institution shall remain responsible for the accuracy, legality and integrity of datasets submitted under this Protocol.

The Ministry and platform custodian shall not be liable for inaccuracies arising from third-party data submissions.

13) Intellectual Property and Acknowledgement

- Data ownership shall remain vested in the originating institution unless otherwise provided through applicable legislation or supplementary institutional agreements.
- The Kenya Forest Service (KFS) shall act as the custodian of datasets hosted within the NFMS/FIP and shall not assume ownership of contributed data.
- Participating institutions shall remain responsible for the accuracy, completeness, legality and currency of datasets submitted to the platform.
- Data Users of NFMS/FIP datasets shall acknowledge the originating institution in publications, reports, maps and other derivative products in accordance with the applicable metadata and attribution requirements.
- Third-party use of datasets shall comply with any licensing, access restrictions or usage conditions specified by the originating institution.

14) Dispute Resolution

- Technical disputes shall be addressed by Technical Working Groups (TWGs).
- Unresolved matters shall be escalated to the REDD+ Coordination Unit.
- Final arbitration shall be undertaken by the National REDD+ Advisory Board/Steering Committee.

15) Monitoring, Compliance and Reporting

The Kenya Forest Service (KFS) , through the NFMS/FIP Secretariat and in collaboration with the REDD+ Coordination Unit, shall monitor implementation of this Protocol to ensure effective institutional participation and continuous improvement of the platform.

Monitoring activities may include assessment of:

- timeliness of data submission;
- completeness of accompanying metadata;
- adherence to agreed submission schedules;
- participation in technical validation processes;
- implementation of agreed corrective actions; and
- overall institutional compliance with this Protocol.

An implementation status report may be prepared annually and presented to the REDD+ Coordination Unit and the National REDD+ Advisory Board for review.

15.1 Corrective Actions

Where non-compliance with this Protocol is identified, the NFMS/FIP Secretariat shall engage the concerned institution to determine appropriate corrective measures.

Corrective actions may include:

- notification of identified gaps
- provision of technical assistance
- agreement on corrective action plans and implementation timelines; and
- referral of unresolved institutional matters to the REDD+ Coordination Unit and, where necessary, the National REDD+ Advisory Board.

16) Document Control

Document Information	Description
Document Title	NFMS/FIP Data Sharing Protocol
Version	1.0
Effective Date	Upon Approval
Approved By	Principal Secretary, State Department for Forestry
Next Scheduled Review	Three (3) years from the date of approval or earlier where necessary
Revision History	Amendments approved by the National REDD+ Advisory Board shall be recorded in this section.