

Component III (New-Age Fibre)

Guidelines for New Age Fibre (NAF) for Development of Ecosystem of New Age Fibres Through Hybrid National Innovation Model.

Chapter 1

Preamble

- 1.1 The Government of India recognizes that sustainable and emerging natural fibres, hereinafter referred to as **New Age Fibres**, possess significant potential for contributing towards sustainable industrial development, rural livelihood generation, green manufacturing, import substitution and export competitiveness in the textile and allied sectors.
- 1.2 New Age Fibres including **Flax, Hemp, Banana, Pineapple Leaf Fibre (PALF), Bamboo, Milkweed, Ramie, Sisal, Kapok and Nettle** represent emerging strategic resources capable of supporting India's transition towards environmentally sustainable manufacturing systems.
- 1.3 Considering the diverse techno-commercial maturity levels, different cultivation ecosystems, extraction challenges, processing requirements, machinery gaps and varying market demand associated with each fibre.
- 1.4 Accordingly, the Ministry of Textiles proposes Component-III, a project-based funding architecture under **New Age Fibre (NAF)** through a hybrid national innovation model for development of sustainable fibre ecosystems.

Chapter 2

Background and Rationale

2.1 Background

New Age Fibres (NAFs) represent an emerging category of sustainable natural fibres with significant potential to support environmentally responsible industrial development, promote circular economy principles, enhance rural livelihoods, and reduce dependence on conventional synthetic and resource-intensive fibres. These fibres offer opportunities for diversified applications across textiles, technical textiles, composites, packaging, automotive components, construction materials, and other value-added sectors. Despite their potential, the NAF sector in India remains at a nascent stage, with varying levels of technological maturity, commercial readiness, and market development across different fibre types.

Unlike conventional fibre sectors, the value chains of identified New Age Fibres are fragmented, with significant disparities in cultivation practices, primary processing, technology availability, industrial adoption, and market linkages. Consequently, each

fibre requires customized interventions based on its stage of ecosystem development and commercial maturity.

2.2 Ecosystem Gaps and Challenges

The major challenges affecting the development and commercialization of New Age Fibres include:

- Limited cultivation ecosystem and inadequate availability of quality planting material;
- Lack of standardized agronomic practices and certified planting material;
- Absence of indigenous fibre extraction and primary processing technologies;
- Limited processing and value-addition infrastructure;
- Dependence on imported machinery and equipment;
- Absence of indigenous machinery manufacturers and automation ecosystem;
- Weak aggregation, logistics, and supply chain systems;
- Limited market awareness, buyer ecosystem, and industry acceptance;
- Inadequate commercialization pathways and weak industry participation in scaling technologies.

The nature and magnitude of these gaps differ considerably across fibre types. While certain fibres may primarily require interventions in cultivation and primary processing, others may require support for technology development, processing infrastructure, market creation, or commercialization. Therefore, the developmental needs are highly fibre-specific rather than uniform across the sector.

2.3 Rationale for Project-Based and Cluster-Driven Approach

Considering the diverse stages of development and varying ecosystem gaps across New Age Fibres, a uniform scheme-based funding architecture may not effectively address sector-specific challenges and may result in sub-optimal utilization of public resources.

Accordingly, Government support shall be provided through project-specific interventions designed to address identified gaps across the entire value chain of individual fibres. The project-based approach will enable tailored solutions encompassing cultivation, technology development, fibre extraction, processing, value addition, machinery development, skill development, market linkages, and commercialization, depending on the specific requirements of each fibre ecosystem.

Further, a cluster-driven approach shall be adopted to facilitate the integrated development of geographically suitable regions where cultivation, processing infrastructure, research institutions, industry partners, startups, farmer groups, and market stakeholders can be brought together. The cluster approach will promote economies of scale, improve supply chain efficiency, strengthen industry participation,

encourage technology adoption, and create sustainable fibre ecosystems capable of supporting long-term commercialization and employment generation.

This approach will enable targeted investments, foster innovation through industry-academia collaboration, optimize resource utilization, and accelerate the development of commercially viable and globally competitive New Age Fibre value chains in India.

Chapter 3

Objectives

The support system shall aim to:

- Promote cultivation and raw material availability
- Develop indigenous fibre extraction technologies
- Support machinery development and reverse engineering
- Build decentralized rural processing ecosystems
- Promote innovation, startups and incubation support
- Develop product commercialization pathways
- Enhance export competitiveness of fibre-based products
- Reduce import dependence in machinery and raw material ecosystems
- Promote blending of New Age Fibres.

Chapter 4

Guiding principles

The schemes shall operate on the following principles:

- 4.1. Industry-driven and market-linked implementation architecture.
- 4.2. Fibre-specific and value-chain intervention approach.
- 4.3. Project-based support with milestone-based disbursement linked to achievement of approved project deliverables and outcomes.
- 4.4. Technology and innovation-led ecosystem development.
- 4.5. Participation of technical institutions wherever required by the industry.
- 4.6. Commercial viability as mandatory evaluation parameter.
- 4.7. Promotion of indigenous technology and machinery development.

Chapter 5

Project Structure

The New Age Fibre Mission shall be implemented through 10 (at least 1 project for each) to 30 (approx..) major projects developed across the identified New Age Fibres.

Each major project shall address one or more critical gaps within the fibre ecosystem and may comprise several fibre-specific and value chain-based sub-components/ projects covering cultivation, primary processing, technology development, machinery, value addition, commercialization, market development, skill development and other interventions, as applicable.

Financial assistance under the four Strategic Intervention Windows shall be provided to these major projects depending upon the approved project components. ***Four strategic intervention windows***

5.0 Flexibility in Eligible Activities

The eligible activities indicated under the Strategic Intervention Windows are illustrative and not exhaustive. Depending upon the specific requirements of the identified New Age Fibre, value chain gaps, technological maturity, commercial potential and project objectives, additional activities may be considered by the Project Evaluation and Monitoring Committee (PEMC) and approved by the Apex Committee, provided such activities are consistent with the objectives of the New Age Fibre Mission.

5.1. Krishi Sutra (A Scheme for Utilizing Technology and Research in Agronomy)

Objective

Development of cultivation ecosystem and strengthening upstream raw material availability through the engagement of Nodal Institutes/ extension centres of CoEs (ICAR – CRIJAF, Other ICAR / CSIR Institutes or Agri Universities, Textile Institutes, etc.) for development of SoP on New Age Fibres and ensuring availability of seeds, planting materials and other required resources for cultivation.

Indicative Eligible activities

- Planting material multiplication
- Agronomy package development
- Demonstration plots
- Farmer training
- Cultivation mechanization
- Crop economics studies
- Fibre pricing studies
- Extension activities

5.2. Gram Setu (Scheme for Extending Technological Upgradation)

Objective

Creation of decentralized rural infrastructure and primary fibre ecosystem.

Indicative Eligible activities

- Village collection centres
- Aggregation infrastructure

- Fibre extraction hubs
- Rural processing centres
- Cluster development
- Training & Skill upgradation
- Supply chain development
- Supplier reporting tools & self-assessment including traceability
- Storage infrastructure
- Biomass utilization infrastructure

5.3. Infinity (Innovation Framework for New Age Fibre Technology and Yield)

Objective

Promotion of deep-tech innovation and indigenous technology development.

Indicative Eligible activities

- Basic research
- Seed development
- Applied research
- Machinery development
- Reverse engineering
- Prototype development
- Automation systems
- AI-based process development
- Indigenous decorticator development
- Startup incubation
- Studies on Compliances
- Intellectual property support
- Vendor ecosystem development

5.4. GMPS (Global Market Promotion Support)

Objective

Commercialization and global market development of New Age Fibre products.

Indicative Eligible activities

- Branding support
- Standards development
- Buyer linkage
- International exhibitions
- Trade promotion
- Export facilitation
- Product commercialization
- Promotional campaigns
- Digital market development

The above indicative eligible activities under 5.1-5.4 are illustrative and not exhaustive. Additional activities relating to cultivation, agronomy, planting material, mechanization, farmer capacity building or other upstream interventions may be supported based on fibre-specific requirements and approval of the competent authority.

5.5. Financial Outlay

	MM-III Components	Financial Targets (₹crore)					Total cost (₹crore)
		2026-27	2027-28	2028-29	2029-30	2030-31	
I	KRISHI-SUTRA- A Scheme for Utilising Technology and Research in Agronomy	6.7	4.705	5.205	4.1	1.59	22.3
II	GRAM-SETU (Infrastructure for Local Growth) – A scheme for extending technological upgradation to the decentralised sectors	23.375	32.975	33.375	36.375		126.1
III	INFINITY- Scheme for Innovation Framework for New Age Fibre Technology and Yield	8.4	14.6	15.6	17.4		56
IV	GMPS - Global Marketing and Promotion Scheme of New Age Fibre Blends	7.05	20.65	31.65	33.25		92.6
V	Administrative/ Miscellaneous	0.75	0.75	0.75	0.75	0	3
Total		46.275	73.68	86.58	91.875	1.59	300

Chapter 6

Eligible entities

The following entities shall be eligible:

- Private industry
- MSMEs
- Startups
- Farmer producer organizations / companies (FPOs & FPCs)
- Textile research associations
- Universities (Government & Pvt)
- Engineering institutions (Government & Pvt)
- Technical institutions (Government & Pvt)
- Research organizations (Government & Pvt)

Chapter 7

Eligibility and Selection criteria

7.1. Other than basic research activities and the Nodal Institutes/extension centres under CoEs engaged in SoP / agronomy package development as mentioned in 5.1, funding shall not be provided to standalone applicants.

7.2. Every project proposal must mandatorily include consortium participation.

The consortium should include a combination of one or more among the following categories of legal entities where one must be a Private Industry /MSME /Startup. The entities should have minimum 2 years operational history requirement. Startups are exempted from this requirement of the operational history.

- Registered Company
- LLP
- MSME
- DPIIT Recognized Startup
- Registered FPO/ FPC
- Cooperative Society
- Research Institution
- Textile Research Association
- University
- Engineering Institution

7.3. All applicants shall undergo mandatory Pre-Qualification Screening prior to entering the formal project approval process

7.4. The consortium shall ensure technical feasibility, commercial accountability and execution capability.

Basic Legal Eligibility Conditions

Applicants shall belong to one of the legally recognized entities along with the eligibility mentioned in section 7.2.

Minimum Financial Eligibility

Applicants must demonstrate financial capacity proportional to project size. Startups are exempted from this requirement of Financial Eligibility.

Project Size	Minimum Net Worth Requirement
Up to ₹50 lakh	No minimum
> ₹50 lakh	Minimum 20% of project cost

Projects failing financial capacity requirements shall not qualify.

Economic Viability Requirement

Projects above ₹2 crore shall submit economic viability assessment.

Assessment shall include:

- Production economics
- Expected revenue
- Break-even period
- Operating cost
- Commercialization strategy

Chapter 8

8.1. Project Approval Process

The process of Project Approval shall undergo Two stage application architecture

Stage I

Concept note and Detailed DPR submission

Project proposals shall be submitted as Major Projects, each comprising one or more fibre-specific sub-components addressing identified ecosystem gaps under the relevant Strategic Intervention Window(s) Applicants shall submit preliminary concept note covering:

- Fibre selected
- Problem statement
- Ecosystem gap
- Proposed intervention
- Applicable intervention window

- Estimated project cost
- Preliminary market opportunity

And DPR covering

- Technical proposal
- Machinery design
- Process flow
- Technology readiness level
- Financial requirement
- Commercial viability
- Buyer ecosystem
- Market demand
- Milestone plan
- Risk assessment

After submission of the requisite proposal, the Project Evaluation and Monitoring committee will evaluate and undertake the Pre-qualification Screening followed by forwarding the proposal for Stage II.

Stage II

Apex committee approval

Projects recommended after technical evaluation shall be placed before the Apex committee.

Purpose:

Final approval and sanction.

Chapter 9

The following committees would be constituted under the NAFM MM-III

9.1. Apex Committee

Composition

The Apex Committee shall comprise:

- Secretary, Ministry of Textiles - Chairperson
- Joint Secretary (Fibre), Ministry of Textiles
- Jute Commissioner
- Director / DS (Fibre), MoT
- Secretary, National Jute Board - Convenor
- Financial Representative, Ministry of Textiles
- Technical Experts from IITs, Centres of Excellence (CoEs), or other reputed institutions

- Technical Head, NJB / Marketing Head, NJB /Mission Management Team, NJB

Terms of Reference

The Apex Committee shall be the final approving authority under the New Age Fibre Mission. The Committee shall:

- Examine the project proposals recommended by the PEMC.
- Approve or reject project proposals for financial assistance under the Mission.
- Accord sanction for release of funds for approved projects.
- Review the progress of approved projects based on the recommendations of the PEMC.
- Provide overall policy guidance and strategic oversight for effective implementation of the schemes under New Age Fibre Mission.
- Periodically review the overall physical and financial progress of the Mission and issue necessary directions for its effective implementation.
- As deemed necessary, relax, amend, delete, or modify any provision of these guidelines on the recommendations of PEMC, to ensure effective and smooth implementation of various sub-components.

9.2. Project Evaluation and Monitoring Committee (PEMC)

Composition

The Project Evaluation and Monitoring Committee (PEMC) shall comprise:

- Joint Secretary (Fibre) / Jute Commissioner - Chairperson
- Secretary, National Jute Board (NJB)
- Director/DS (Fibre), Ministry of Textiles
- Representative from Textile Commissioner
- Technical Experts from (CoEs / IITs / NITs/ ICAR-NINFET, Agricultural University) and other domain experts as required
- NJB (Technical Head/ Marketing Head/ Mission Management team)

Terms of Reference

The Project Evaluation and Monitoring Committee (PEMC) shall be responsible for the technical appraisal and monitoring of projects under the New Age Fibre Mission. The Committee shall:

- Scrutinize and evaluate project proposals received under the Mission.

- Assess the technical merit, feasibility, relevance, and expected outcomes of the proposals.
- Recommend modifications or seek additional information from the applicant, wherever necessary.
- Reject proposals that do not meet the objectives or eligibility criteria of the Mission.
- Recommend suitable project proposals to the Apex Committee for approval and release of funds.
- Periodically review the technical and financial progress of approved projects.
- Recommend continuation, release of subsequent instalments, restructuring, extension, or closure of projects based on the progress achieved.
- Recommend release of subsequent instalments based on milestone achievement, utilization of previous releases and overall project progress in accordance with the Fund Release Mechanism prescribed under these Guidelines.
- Recommend, may as deemed necessary to relax, amend, delete, or modify any provision of these guidelines to the Apex Committee.

9.3. Meeting Frequency

- *Project Evaluation and Monitoring Committee (PEMC)*: Shall meet as often as necessary, preferably once every quarter or more frequently depending upon the number of proposals and project review requirements.
- *Apex Committee*: Shall meet at least twice in a financial year or as and when required for project approvals and strategic review.

Chapter 10.

10.1. Technical evaluation framework

Technical evaluation may be undertaken by reputed institutions including:

- IITs/ IISC/ NITs/ IIMs
- CSIR laboratories
- Engineering Colleges
- Textile Research Associations
- Independent Industry Experts
- Professional agencies

Evaluation parameters:

Parameters	Weightage (%)
Technical Innovation (Technological potential for mechanization and Improvement in Agronomy, cultivation and Fibre Extraction, Processing,	40

Value-addition of Fibres, Resource efficiency, Product development)	
Impact on Farmers (Farmer's Income, reduced drudgery, rural development & Training)	20
Commercial viability (Commercialization potential, Market Demand, Scalability, Export Potential)	40

Commercial Readiness Requirement

All applicants shall demonstrate commercial viability.

Applicant shall provide at least one of the following options:

- **Option A – Buyer Commitment**
 - Letter of Intent from buyer OR
 - Purchase commitment document
- **Option B – Demand Evidence**
 - Import dependency data OR
 - Existing domestic market demand evidence
- **Option C – Commercialization Pathway**
 - Identified route to market OR
 - Identified industrial application

Projects lacking commercial viability shall not qualify.

Technology Readiness Level Requirement

Technology intensive projects under INFINITY shall meet minimum TRL requirement.

Minimum requirement: TRL 2 or above

Purely speculative concepts shall not be eligible.

Machinery Development Eligibility

Projects involving machinery development shall submit:

- Engineering Drawings
- Component Architecture
- Prototype Development Plan
- Vendor Sourcing Plan
- Indigenous Manufacturing Roadmap
- Technology Gap Assessment

Generic proposals without engineering preparedness shall be rejected.

Economic Viability Requirement

Projects above ₹2 crore shall submit economic viability assessment.

Assessment shall include:

- Production Economics
- Expected Revenue
- Break-Even Period
- Operating Cost
- Commercialization Strategy

Research Project Filter

NJB shall not support purely academic research.

Research projects shall qualify only if:

- Prototype Development included OR
- Commercialization Pathway identified OR
- Industrial Partner actively participating

Publication-oriented research shall not be eligible.

10.2. Project Risk Assessment Framework

Each application other than basic and applied research after Technical Evaluation shall undergo risk evaluation by the above-mentioned Institutions under 9.1 as per below.

Parameter	Marks
Technical Risk	20
Financial Risk	20
Market Risk	20
Execution Risk	20
Supply Chain Risk	20

High risk projects may be rejected.

Chapter 11

11.1. Funding architecture

Proposed Funding Ceiling with Project Categories and Caps

It is proposed that Government assistance under NAFM shall be limited to a maximum of 75% of eligible project cost, subject to an upper ceiling of ₹10 crore per end-to-end ecosystem development project.

In exceptional cases involving strategic national importance, indigenous machinery development, import substitution, or large-scale multi-stakeholder ecosystem creation, assistance beyond ₹10 crore and up to ₹15 crore may be considered only with specific approval of the Apex Committee, subject to recorded justification and availability of funds.

Proposed Project Categories and Caps

Project Category	Nature of Project	Maximum Government Support
Category A	Feasibility studies, SoP development, pilot cultivation, market studies, fibre economics	Up to ₹50 lakh
Category B	Cluster infrastructure, aggregation, extraction units, small CFCs, rural primary processing	Up to ₹2 crore
Category C	Machinery development, reverse engineering, prototype development and pilot validation	Up to ₹5 crore
Category D	End-to-end ecosystem development covering cultivation, extraction, processing and market linkage	Up to ₹10 crore
Category E	Strategic national projects involving high import substitution, indigenous machinery or multi-state ecosystem creation	Up to ₹15 crore with Apex Committee approval

- No project shall be approved in a manner that results in disproportionate concentration of Mission funds in favour of a single entity, fibre or geography.
- Projects may receive blended support across multiple intervention windows.

Example:

Flax machinery project

- Infinity → reverse engineering
 - Gram Setu → pilot extraction cluster
 - GMPS → commercialization support
- No fixed subsidy norms shall apply uniformly.
 - Release of the Government of India share shall be governed by the Fund Release Mechanism prescribed under Chapter 13.
 - Funding quantum shall depend upon:
 - Technical merit
 - Commercial viability
 - National impact
 - Ecosystem development requirement

Chapter 12

Online Project Submission and Process Flow

The Lead Applicant will submit the initial required documents like POI, POA and other minimum eligible criteria as mentioned above (chapter 7) through NJB MIS portal. A unique ID will be generated against the applicant after the preliminary scrutiny by the system. Thereafter applicant will be able to submit the concept note and DPR through online.

Chapter 13

Fund release mechanism

- Funds shall be released by NJB to the beneficiaries in milestone basis as per guidelines/terms as may be specified from time to time on the basis of the achievement of approved milestones, submission of prescribed documents, and recommendations of the Project Evaluation and Monitoring Committee (PEMC).
- The final instalment shall not exceed 20% of the approved Government of India assistance and shall be released only after satisfactory completion of project activities and acceptance of the final project deliverables.

Indicative structure:

Instalment	Maximum Release	Basis
1 st	As approved	Project sanction and fulfilment of pre-release conditions
2 nd	As approved	Achievement of agreed milestones and utilization of previous instalment
3 rd	As approved	Satisfactory physical and financial progress
4 th (Final)	Maximum 20%	Completion of project, submission of Ucs, final report and acceptance of deliverables

- No advance bulk release shall be permitted.
- The beneficiary units shall:
 - Maintain separate accounts for the scheme funds
 - Ensure utilization of funds strictly as per the guidelines and approved individual proposals
 - Submit utilization certificates (Ucs)

Chapter 14

Monitoring framework

Projects shall be monitored based on:

- Technical deliverables
- Commercial outcomes
- Ecosystem development indicators
- Farmer income enhancement
- Indigenous technology development
- Startup creation
- Employment generation
- Import substitution
- Export development

Third party evaluation may be conducted as per requirement.

Chapter 15

General conditions

- Government reserves right to modify funding architecture.
- Projects failing milestone achievement may face suspension.
- All beneficiaries shall submit technical and financial reports.
- Intellectual property developed under supported projects shall follow Government IP guidelines.
- The NJB / Mission Management Unit may prescribe additional operational guidelines.

Chapter 16

Grievance Redressal Mechanism

Level	Authority	Timeline
Initial	Mission Management Team (NJB)- Technical Head/ Marketing Head	30 days
First Appeal	Secretary (NJB)	30 days
Final Authority	Joint Secretary (Fibre), MoT	Final

- All disputes shall fall under jurisdiction of Kolkata.

Force Majeure

In the event of circumstances beyond the reasonable control of an applicant, including but not limited to natural disasters, war, pandemics, or regulatory restrictions, the affected entity shall promptly notify the Ministry/NJB within a reasonable timeframe. During the continuance of such force majeure event, the obligations of the affected entity shall be suspended without any liability or penalty for the duration of the event.

Compliance & Audit

- Mandatory compliance with:
 - CVC guidelines
 - Audit by authorized agency/agencies, as may be specified as per Government guidelines.

Conclusion

The New Age Fibre Mission aims to adopt a project-based, technology-enabled and innovation-driven framework for development of sustainable fibre ecosystems in India.