

NATIONAL WORKING PLAN CODE 2023

Planning for preparation of Working Plan

Preamble

- Evaluate status of forest and other biodiversity resources
- Assess impact of past management practices
- Forecast future pressures
- Plan for sustainable management based on sound silvicultural practices
- Realise the relationship between forest land use and **water yield**, and maximise it
- Follow **landscape approach**

Preamble, contd

- Promote and monitor **Trees outside Forests**
- Create inventory on **carbon stock, sequestration, and climate change mitigation**
- Formulate **climate resilient** management strategies, with adequate adaptations
- Consider social needs and aspirations and **international conventions**
- Enhance production function of forests
- Undertake **valuation of goods and ecological services**

Why revise the code

- Working Plan preparations need to be in sync with changing requirements and technologies
- India signatory to all environment/Forests related conventions – hence, reporting requirements
- Need to have more precise estimates and projections of forest wealth
- Need to have precise estimates and projections of Carbon stock in all land uses
- Need to catch up with the World Community in climate change detection and mitigation

FSI Mandate

- Develop App for WP inventory
- Host data as nodal agency (3.1.2, code)
- Build capacity of SFDs (3.1.2, code)
- Develop additional modules for data collection (3.1.2, code)
- Supply geo-spatial data set to SFDs, *on request* (3.1.3, code)
 - Forest cover
 - Forest type
 - TOF and others

FSI mandate, contd

- Assist SFDs in calculation of coefficient of variation in calculation of sample size, *on request* (3.1.1, manual)
- Provide grid layers to SFDs, *on request* (3.1.2, manual)
- Work out Division wise sample size and grid size, *on request* (3.1.2, manual)
- Provide volume equations for Growing Stock calculation, *on request* (4.1.4, manual)
- Assist in Biomass and Carbon Stock calculations, *on request* (4.2.3, 4.2.7, manual)

Changes w.r.t. NWPC 2014

NWP Code 2014	NWP Code 2023
Focus on Sustainability and ecosystem services	Same, plus harmonising all management prescriptions, having continuous forest inventory, and use of National database. Added emphasis on water yield in catchment, international commitments
Growing stock as major means of assessment	Mention of Net Primary Productivity
Resource survey only during WP preparation, done by WP team (Although code provided linkages with National Forest Inventory)	Continuous forest inventory, to be done by Territorial team
Grid and sample size options left to WPO	Structured Grids. May be borrowed from FSI
PWPR notes to be prepared by Territorial DFO, and PWPR to be written by Territorial CF	PWPR to be drafted by Territorial DFO
Nodal officer (FC) not involved	Nodal officer (FC) made responsible for uploading draft WP on the Portal
Grids laid manually on toposheet by dividing it into 144 squares	5x5 km grids of NFI may be adopted, or laid using GIS
Square sample plot configuration	Circular sample plot configuration, split into sub plots

Changes w.r.t. NWPC 2014, contd

NWP Code 2014	NWP Code 2023
Tree enumeration plot- 0.1 ha (31.62x31.62 m)	4 sub plots totalling to 0.08 ha (8m radius, each)
Stump and dead wood plot- 50 sqm (2 sub plots, 5x5 m)	4 sub plots totalling to 98.5 sqm (2.8m radius, each)
Litter, shrubs, climbers- 18 sqm (2 sub plots of 3x3m) Tree regeneration- 36 sqm (4 sub plots of 3x3m)	4 sub plots totalling to 36.3 sqm (1.7m radius, each)
Herb, grass, seedlings- 2 sqm (2 sub plots of 1x1m)	4 sub plots totalling to 4.52 sqm (0.6m radius, each)
Soil- two sub plots of 1x1m at NE and SW corner	3 sub plots of 1x1m for green biomass Soil to be taken from any two of these
Non clump forming bamboo – left half of North quadrant (125 sqm)	Half circle of sub plot no. 2 (100.5 sqm)
General description- no boundary defined	60 m radius
No extension of WP period based on mid term review	Provision of extension for 5 years

The process

- National Portal for uploading of data
- Use of National Forest Inventory methodology
- States to take up Continuous Forest Inventory – **to be done by Territorial wing**
 - NTFP survey, Biodiversity survey, regeneration survey, soil survey, socio-economic survey, wildlife survey, wildlife survey, assessment of wildlife habitats, TOFs
- Head of WP wing to monitor quality of data
- WP wing head to direct CF to submit PWPR (28 Months prior to end of existing WP)
- **DFO Territorial to draft the PWPR within 3 Months**
- SCC to examine PWPR within 30 days and approve with or without modifications
- WPO to collect additional data and hold stakeholder consultation
- WPO to draft the Working Plan, and prepare maps on GIS

The Process, contd

- Draft WP (with supporting documents and maps) submitted to Head of WP wing
- Draft WP placed before SCC
- SCC to examine and recommend it for approval with or without modifications
- WPO to incorporate modifications and submit it to Head to WP wing
- Head of WP wing to submit the draft WP (along with recommendations of SCC) to Nodal Officer
- Nodal officer (FCA) to submit draft WP on online portal
- RO, MoEFCC to examine and approve with or without conditions, or accord in principle approval with modifications, or reject
- WP deemed to be approved after 45 days
- Mid term review by State/UT
- Plan period may be extended upto 5 years after mid term review

Data collection as per NFI

- Determination of Grid size
 - Decide optimum sample size
 - Determine size of the grid [RFA/sample size]
 - Overlay RFA boundary on the grid layer to know forested grids
 - Divide the Division into grids using GIS
 - Generate random points in the grids for centre of sample plot
 - Sample collection may be spread (say, 5, or 7 years)
 - Number the plots (1 to 5, or 1 to 7) repeatedly, start Randomly and then follow the suggested sequence

Grid size	Possible no. of grids	Sample size
5x5 km	20	1-20
2.5x2.5 km	80	21-80
1.25x1.25 km	320	81-320
1x1 km	500	321-500
.625x.625 km	1280	501-1280
.5x.5 km	2000	1281-2000
1 st year	Grid having S. No. 1	
2 nd year	Grid having S. No. 3	
3 rd year	Grid having S. No. 5	
4 th year	Grid having S. No. 2	
5 th year	Grid having S. No. 4	

Laying the sample plot

- Correct the Projection and Datum in your device
- Reach the centre of the sample plot
- Follow the instructions in the manual

Description	Area of one sub plot	Total area of plot
r=8m (4) Tree enumeration	201 sqm	804 sqm
r=2.8m (4) Deadwood collection	24.6 sqm	98.5 sqm
r=1.7m (4) Shrub, climber, sapling, litter, regeneration	9.1 sqm	36.3 sqm
r=0.6m (4) Herb, grass, seedlings	1.13 sqm	4.52 sqm
s=1x1m (3) [soil from any 2, biomass from all 3]	201 sqm	804 sqm
r=60m General description	201 sqm	804 sqm

