NABARD SCHEME HANDOUTS

TOPIC – NAPCC (NMSA)

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1 Importance

Government of India is already promoting green agriculture by way of green/ sustainable agricultural and good agriculture practices with environment concern. It is implementing National Mission for Sustainable Agriculture (NMSA) which is one of the National Missions under National Action Plan on Climate Change (NAPCC). NMSA aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate. The various components being implemented in this regard are Rainfed Area Development (RAD), On Farm Water Management (OFWM), Soil Health Management (SHM), Soil Health Card (SHC), Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development in North Eastern Region(MOVCDNER), Submission on Agro forestry (SMAF) and Per Drop More Crop (PDMC) under Pradhan Mantri Krishi Sinhchayee Yojana (PMKSY). Rainfed Area Development under NMSA focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability. Under this system, crops/cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc.

2 About the scheme

- The **National Action Plan on Climate Change (NAPCC)** was launched in **2008** by the **Prime Minister's Council on Climate Change.**
- There are **8 national missions** forming the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-
  - **National Solar Mission**
  - **National Mission for Enhanced Energy Efficiency**
  - **National Mission on Sustainable Habitat**
  - **National Water Mission**
  - **National Mission for Sustaining the Himalayan Ecosystem**
  - **National Mission for A Green India**
  - **National Mission for Sustainable Agriculture**
  - **National Mission on Strategic Knowledge for Climate Change**

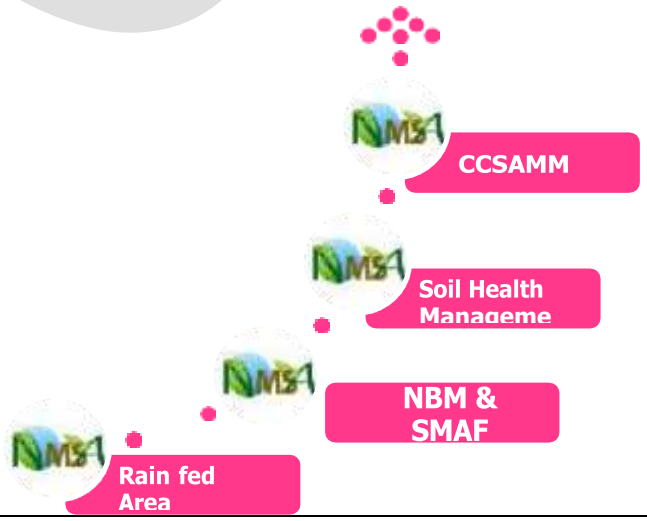
NMSA is one of the major missions of the National Action Plan on Climate Change (NAPCC). Change in agricultural practices also plays a crucial role in the mitigation of climate change effects. This mission tries to comprehensively revamp the agricultural practices so that the desired objectives of the Nationally Determined Contributions (NDC's) can be achieved. Agricultural growth can be sustained by promoting conservation and sustainable use ofthese scarce natural resources through appropriate location specific measures.

Indian agriculture remains **predominantly rain-fed covering about 60% of the country's net sown area and accounts for 40% of the total food production**.

NMSA derives its mandate from Sustainable Agriculture Mission which is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC). The strategies and programmers of actions (POA) outlined in the Mission Document, that was accorded 'in principle' approval by Prime Minister's Council on Climate Change (PMCCC) on 23.09.2010,aim at promoting sustainable agriculture through a series of adaptation measures focusing on **ten key dimensions** encompassing Indian agriculture namely 'Improved crop seeds, livestock and fish cultures', 'Water Use Efficiency', 'Pest Management', 'Improved Farm Practices', 'Nutrient Management', 'Agricultural insurance', 'Credit support', 'Markets', 'Access to Information' and 'Livelihood diversification'.

- National Mission for Sustainable Agriculture (NMSA) has been made operational from the year **2014-15**
- Indian Council of Agricultural Research (ICAR) has developed 45 models for climate resilient Integrated Farming Systems (IFS) which are replicated in Krishi Vigyan Kendras (KVKs) for demonstration and extended through the Rainfed Area Development (RAD) programme.
- Climate resilient villages have been developed, one in each of 151 districts under the project National Innovations in Climate Resilient Agriculture (NICRA). This follows a multi-pronged strategy encompassing strategic research on adaptation, mitigation and demonstration of technologies on farmers' fields to create awareness, aiming mainly to evolve crop varieties tolerant to climatic stresses like floods, droughts, frost, inundation due to cyclones and heat waves.
- An **atlas on vulnerability of Indian agriculture** to climate change has been prepared by Central Research Institute of Dryland Agriculture **(CRIDA),** Hyderabad. Components of NMSA

Five major subcomponents as depicted in figure



2.1 Rainfed Area Development

This component has been formulated in a **'watershed plus framework'**, i.e., to explore potential utilization of natural resources base/assets available/created watershed development and soil conservation activities/interventions underMGNREGS, NWDPRA, RVP&FPR, RKVY, IWMP etc.

- RAD aims at promoting **integrated farming system(IFS)** with emphasis on multi-cropping, rotational cropping, inter-cropping, mixed-cropping practices with allied activities like horticulture, livestock, fishery, agroforestry, apiculture, conservation/promotion of NTFPs etc. to enable farmers not only in maximizing the farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events.
- Adoption of a cluster approach in a **village or an area of not less than 100 Ha** (contiguous or non-contiguous in difficult terrain with close proximity, in a village/adjoining villages) may be preferred for injecting investments to utilize the potential of available/created common resources.
- Selected clusters will have soil analysis/soil health card as mandatory **and at least 25% of the farming system area** will have to be covered under On Farm Water Management.
- Support to each farm family under RAD component will be restricted **to a farm size of 2 Ha** and financial assistance will be limited **to Rs. 1 lakh**. However, construction/renovation of farm ponds, storage/ processing unit and/or construction of poly house etc., are excluded from these limits.
- The **farmers' producer companies** may be set up to grow organic products. These farmers can come from a group of villages, preferably contiguous, forming a cluster and should be supported to achieve organic certification over **a period of three years**

2.2 Soil Health Management

- SHM aims at promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures and bio fertilizers for improving soil health and its productivity, strengthening of soil and fertilizer testing facilities to improve soil test based recommendations to farmers for improving soil fertility.
- This component will also provide support to reclamation of problem soils (acid/alkaline/saline). This component will be implemented by

  - National Centre of Organic Farming (NCOF)(Ghaziabad),
  - Central Fertilizer Quality Control & Training Institute (CFQC&TI)[Faridabad)

- Soil and Land Use Survey of India (SLUSI)

- One Soil Testing laboratory will adopt **10 villages.** (1:10 ratio)
- Assistance **@ Rs.15,000/Kit** for soil testing kit.
- Promotion and distribution of micronutrient 50% of cost subject to a limit of **Rs. 500/- per ha and/or Rs. 1000/- per beneficiary.**

2.3 Climate Change and Sustainable Agriculture: Monitoring, Modeling and Networking (CCSAMMN)

- CCSAMMN will provide creation and bidirectional (land/farmers to research/scientific establishments and vice versa) dissemination of climate change related information and knowledge by way of piloting climate change adaptation/mitigation research/model projects in the domain of climate smart sustainable management practices and integrated farming system suitable to local agro-climatic conditions.
- Comprehensive pilot blocks will be supported to illustrate functional mechanism for dissemination of rainfed technologies, planning, convergence and coordination with flagship schemes/Missions like MGNREGS, IWMP, Accelerated Irrigation Benefit Programme (AIBP), RKVY, NFSM, MIDH, NMA&ET etc

2.4 Sub Mission on Agro Forestry

- Sub-Mission on Agroforestry (**HarMedh Par Ped**) Scheme was launched in 2016-17 to encourage tree plantation on farm land along with crops/ cropping system to help the farmers get additional income and make their farming systems more climate resilient and adaptive. Presently, the scheme is being implemented in 23 States/UTs including Maharashtra. Under the scheme, assistance to farmers is given through State Govt. for nursery development, boundary plantation and block plantation of prominent tree species to promote, inter-alia, fruit bearing trees, tree borne oilseeds, medicinal & aromatic plants, silk & lac rearing host plants in addition to timber species, so that farmers get early returns.
- Funding pattern of **60:40 between Centre and State Govt**. for all States excepting NE & Hilly states, where it is 90:10 and 100% in case of UTs & National Level Agencies.
- At least 50% of the allocation is to be utilized for small, marginal farmers of which atleast 30% are women beneficiaries/ farmers. Further 16% & 8% of the total allocation or in proportion of SC/ST population in the district will be utilized for Special Component Plan (SCP) and Tribal Sub Plan (TSP) respectively.

2.4.1 Assistance under SMAF

Sl No.	Component/Activities/Sub Component	Cost Norms (Rs in lakh)	Pattern of Assistance
1.	Nursery Development		100% for Government Agencies and 50% for farmers/private agencies.
(a)	Small Nurseries	Rs 10 lakh per nursery	
(b)	Big Nurseries	Rs 16 lakh per nursery	
(c)	Hi –Tech Nurseries	Rs 40 lakh per nursery	
2.	Peripheral/Boundary Plantation	Rs 70 /plant	100% for Government Agencies and 50% for farmers/private agencies in four years in the ratio of 40:20:20:20
3.	Low Density Plantation (100-500 Ha)	Rs 28,000/Ha	
4.	High Density Block Plantation		
(a)	500 to 1000 plants/Ha	Rs 30,000/Ha	
(b)	1000 to 1200 plants/Ha	Rs 35,000/Ha	
(c)	1200 to 1500 plants/Ha	Rs 45,000/Ha	
(d)	> 1500 plants/Ha	Rs 50,000/Ha	
5.	Capacity Building and Training	Upto 5% of total allocation to the States	

Field crop based cropping system	50% of input cost limited to Rs. 10,000/- per ha.Maximum permissible assistance will be restricted to 2 ha per beneficiary.
Horticulture Based farming system	50% of input costs limited to Rs. 25000/- per ha.Maximum permissible assistance will be restricted to 2 ha per beneficiary.
Forestry based farming system	50% of input costs limited to Rs. 15000/- per ha.Maximum permissible assistance will be restricted to 2 ha per beneficiary.
Live Stock Based farming system	50% of input costs of cropping system including cost of animals with one year concentrated food limited to Rs. 40,000/- per ha) Maximum permissible assistance will be restricted to 2 ha per beneficiary
Poultry Based farming system	50% of input costs of cropping system including cost of animals with one year concentrated food limited to Rs. 25,000/- per ha Maximum permissible assistance will be restricted to 2 ha per beneficiary
Fishery Based Farming system	50% of input cost of cropping/vegetablesystem including cost of fish farming limited toRs. 25,000/- per ha. Maximum permissible assistance will be restricted to 2 ha per beneficiary.
Silage making	100% assistance for silage making unit

Water Harvesting and Management	50% of cost (Construction cost - Rs. 125 for plain/ Rs. 150 per cum for hilly areas) limited toRs. 75000 for plain areas and Rs. 90000 for hilly areas including lining.
Micro Irrigation	35% of cost of installation for small & marginalfarmers and 25% of cost of installation for others in non-DPAP/DDP/ NE&H regions. 50% ofcost of installation for small & marginal farmers and 35% of cost of installation for others inDPAP/DDP areas and NE & H States.
Climate Change Adaptation and Mitigation	Rs. 10 crore/Block (Rs. 3.0 crore for facilitation and Rs. 7.0 crore for innovative and gap filling activities)
% is almost same in all just amount varies	

- The Scheme promotes the plantation of trees only for land holding farmers.
- Upto 5% of allocated funds is utilized for capacity building and training activities like training of farmers/field workers, skill development, awareness campaign, publications, seminars/workshops, conference etc. to raise awareness of the scheme among the farmers.

2.4.2 Components of SMAF

Sl no.	Component
1	Nursery Development for quality planting material (NDQPM)
2	Peripheral and Boundary Plantation(PBP)
3	Low Density Plantation on Farm Lands(LDPFL)
4	High Density Block Plantation (HDBP)
5	Capacity Building & Demonstration

- To promote agroforestry, a dedicated National Agroforestry Policy was approved by Government in 2014.

3 Structure

- NMSA will have **following three tier structure** for planning, implementation and monitoring of various components.
- National + State + District Level Architecture

4 Mission Implementation Plan

States will prepare Mission Implementation Plan (MIP) indicating action plan and strategies for sustainable agriculture development with a horizon of 5-7 years which will emanate from District Agriculture Plans (DAPs) and State Agriculture Plan (SAP)prioritizing the interventions from climate change point of view.

5 Other Components

5.1 National Bamboo Mission

- The National Bamboo Mission (NBM) was launched as a Centrally Sponsored Scheme**in 2006-07** and was subsumed under Mission for Integrated Development of Horticulture (MIDH) during 2014-15 and continued till 2015-16.
- Keeping in consideration the importance of bamboo, the Indian Forest Act 1927 was amended in the **year 2017** to remove bamboo for the category of trees.
- The **restructured National Bamboo Mission was launched in 2018-19** for holistic development of the complete value chain of the sector. The Mission is being implemented in a hub (industry) and spoke model.
- The restructured NBM will aim to support the development of the entire value chain of the bamboo sector starting from planting material, plantation, creation of facilitiesfor collection, aggregation, processing marketing, micro, small & medium enterprises,skill development and brand building initiative in a cluster approach mode. This will contribute to doubling of farmers' income and also generate more employment opportunities for skilled and unskilled workers, especially youths in rural areas.
- **Shri Sai Ram Goudi Edigi of Telengana** was selected from 2033 entries received onMyGov platform from across the country. The logo portrays a bamboo culm in thecenter of a circle composed of half an industrial wheel and half farmers, depictingthe objectives of NBM appropriately. **The green and yellow colour of the logo symbolise bamboo often termed as green gold**.

- India is the **world's second largest cultivator** of bamboo after China

5.2 NICRA

- National Innovations on Climate Resilient Agriculture (NICRA) was launched during **February 2011 by Indian Council of Agricultural Research (ICAR)** with the funding fromMinistry of Agriculture, Government of India.
- The mega project has three major objectives of strategic research, technology demonstrations and capacity building. Assessment of the impact of climate changesimultaneous with formulation of adaptive strategies is the prime approach understrategic research across all sectors of agriculture, dairying and fisheries.

6 National Mission for Green India

- National Mission for a Green India (GIM) is one of the eight Missions under the National Action Plan on Climate Change. It aims at protecting, restoring and enhancing India's forest cover and responding to Climate Change. The target under the Mission is 10 m ha on forest and non-forest lands for increasing the forest/tree cover and to improve the quality of existing forest.
- The Development Monitoring and Evaluation Office (DMEO), NITI Aayog, Government of India, has conducted the Evaluation of National Mission for a Green India in 2020-21 on aspects such as Relevance, Effectiveness, Efficiency, Sustainability, Impacts and Equity within the scheme and has further recommended the continuation of scheme.

7 Others associated things

7.1 Green Agriculture Project

- The government has launched a **Global Environment Facility (GEF)** assisted project namely, "Green – Ag: Transforming Indian Agriculture for global environment benefits and the conservation of critical biodiversity and forest landscapes" in collaboration with the Food and Agriculture Organisation (FAO) during September, 2018 in high-conservation-value landscapes of five States namely

(i) Madhya Pradesh : Chambal Landscape,
(ii) Mizoram: Dampa Landscape,
(iii) Odisha: Similipal Landscape,
(iv) Rajasthan: Desert National Park Landscape and
(v) Uttarakhand: Corbett-Rajaji Landscape.

- The project seeks to mainstream biodiversity, climate change and sustainable land management objectives and practices into Indian agriculture. The overall objective of the project is to catalyze transformative change of India's agricultural sector to support achievement of national and global environmental benefits and conservation of critical biodiversity and forest landscapes. The project will support harmonization between India's agricultural and environmental sector priorities and investments so that the achievement of national and global environmental benefits can be fully realized without compromising India's ability to strengthen rural livelihoods and meet its food and nutrition security.