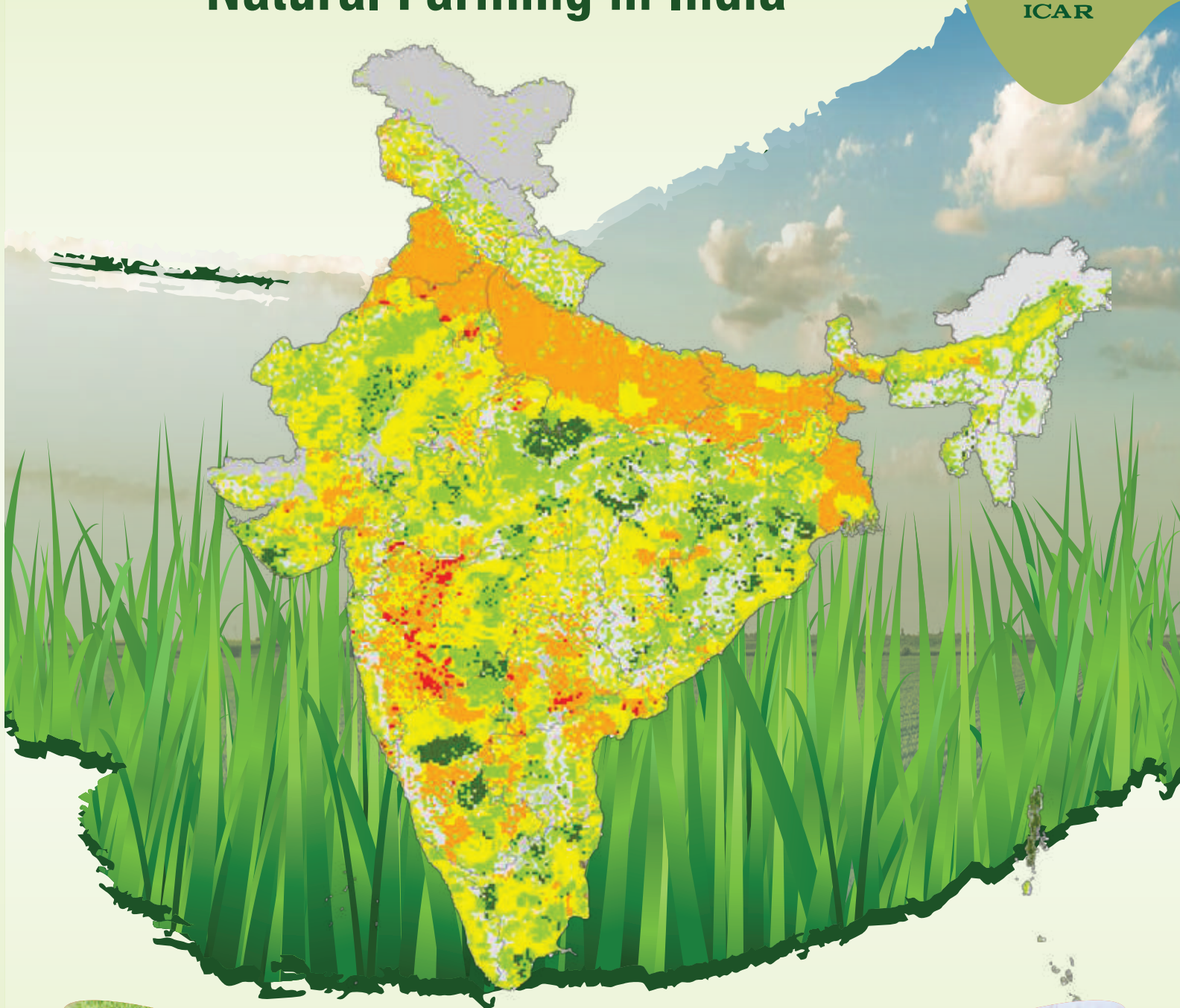


Potential Domains for Natural Farming in India



POTENTIAL DOMAINS FOR NATURAL FARMING IN INDIA

*(First Approximation Towards Strategic
Agroecological Transition)*



**Natural Resource Management Division
Indian Council of Agricultural Research**

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ग्रामीण विकास मंत्री
भारत सरकार
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संदेश

मुझे यह बताते हुए अत्यंत हर्ष हो रहा है कि भारतीय कृषि अनुसंधान परिषद द्वारा प्रकाशित "भारत में प्राकृतिक खेती के संभावित क्षेत्र" पर आई यह पुस्तक पर अपनी शुभकामनाएँ प्रेषित कर रहा हूँ। यह प्रकाशन दर्शाता है कि प्राकृतिक खेती किन क्षेत्रों में पारिस्थितिकीय, आर्थिक और सामाजिक दृष्टि से अधिकतम लाभ पहुँचा सकती है तथा यह कृषि पर्यावरणीय परिवर्तन की एक व्यावहारिक राह प्रस्तुत करता है।

प्राकृतिक खेती केवल कुछ तरीकों का संग्रह नहीं है, बल्कि यह एक सिस्टम अप्रोच है जो मिट्टी की जीवविज्ञान को पुनर्जीवित करती है, जल का संरक्षण करती है, जैव विविधता को बढ़ाती है और खेती की लागत को कम करती है। खेत पर उपलब्ध संसाधनों और जैविक इनपुट्स पर आधारित होकर किसान बाहरी रसायनों पर अपनी निर्भरता घटा सकते हैं, जलवायु संकट की परिस्थितियों में उपज को स्थिर रख सकते हैं तथा गुणवत्तापूर्ण उत्पादन और सुरक्षित भोजन की बढ़ती उपभोक्ता माँग से बेहतर आय अर्जित कर सकते हैं। यह दृष्टिकोण जलवायु लचीलापन, पोषण सुरक्षा और सतत ग्रामीण आजीविका जैसे राष्ट्रीय प्राथमिकताओं के साथ पूरी तरह से मेल खाता है।

"संभावित क्षेत्रों" की पहचान करना अत्यंत महत्वपूर्ण कदम है। हमारे देश की कृषि-पर्यावरणीय विविधता का अर्थ है कि हस्तक्षेप स्थानीय मिट्टी, फसल, जल व्यवस्था और सामुदायिक संस्थाओं के अनुरूप ही होने चाहिए। इस प्रकाशन में कृषि जलवायु एवं कृषि-पर्यावरणीय क्षेत्रों की पहचान पर दिया गया विशेष बल राज्यों, कृषि विज्ञान केंद्रों (KVKS), किसान उत्पादक संगठनों (FPOs) और पंचायतों को यह प्राथमिकता तय करने में मदद करेगा कि प्राकृतिक खेती को कहाँ सबसे शीघ्र और प्रभावी रूप से बढ़ाया जा सकता है। ऐसा लक्ष्य निर्धारण योजनाओं के बेहतर अभिसरण, क्षमता निर्माण, मूल्य श्रृंखला विकास तथा मिट्टी के स्वास्थ्य, जल उपयोग दक्षता, कार्बन अवशोषण और किसान आय में सुधार जैसे परिणामों की विश्वसनीय निगरानी सुनिश्चित करता है।

सरकार प्राकृतिक खेती को बढ़ावा देने के लिए अनुसंधान, प्रसार तथा बाज़ार संपर्कों के माध्यम से एक सक्षम पारिस्थितिकी तंत्र तैयार करने के लिए प्रतिबद्ध है। मुझे विश्वास है कि यह प्रकाशन नीति-निर्माताओं और कार्यान्वयनकर्ताओं को स्थान-विशिष्ट मॉडल तैयार करने, अपनाने की गति बढ़ाने तथा बड़े स्तर पर ठोस प्रभाव सुनिश्चित करने में मार्गदर्शन करेगा।

आइए, हम सब मिलकर भारत को प्रकृति-सकारात्मक कृषि में विश्व का अग्रणी बनाएं-किसानों के लिए समृद्ध, उपभोक्ताओं के लिए स्वास्थ्यवर्धक और हमारी मिट्टी व पारिस्थितिकी तंत्र के लिए पुनर्जीवित करने वाली।

लेखकों, योगदानकर्ताओं और पाठकों को शुभकामनाएँ।

(शिवराज सिंह चौहान)

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Dr M. L. Jat
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Foreword

India is witnessing a crucial transformation in its agricultural landscape—a shift from input-intensive practices to nature-aligned, regenerative models. Natural Farming has emerged as a pathway that addresses environmental sustainability, reduces input dependency, and ensures safe and nutritious food. The Government of India, through the National Mission on Natural Farming (NMNF), envisions expanding this approach across agroecological zones with scientific backing and farmer-centric support.

One of the most critical needs in realizing this vision is the identification of domains where Natural Farming can be successfully implemented without compromising food security or farmer livelihoods. This publication on **“Potential Domains for Natural Farming”** is a timely and significant contribution to that end. It provides a strategic framework to identify high-potential zones for scaling Natural Farming by integrating ecological parameters and socio-economic indicators.

I commend the efforts of the team for compiling this technical resource. It will serve as a decision-support tool for planners, researchers, and policymakers for strategic agroecological transition.

I trust this publication will catalyse informed actions and promote convergence for a sustainable agricultural future.

(M. L. Jat)

Dated the 21st August, 2025
New Delhi

Secretary (DARE) & Director General, ICAR
Government of India



Preface

The agricultural future of India hinges on our ability to shift towards ecologically sustainable, economically viable, and socially inclusive farming systems. Natural Farming (NF), with its emphasis on on-farm bio-inputs, local biodiversity, and farmer knowledge, presents a viable alternative to conventional input-intensive practices.

The National Mission on Natural Farming (NMNF) emphasizes the importance of identifying and nurturing zones with high potential for Natural Farming adoption. Recognizing this, the Indian Council of Agricultural Research (ICAR), under the All-India Network Programme on Natural Farming (AINP-NF), has undertaken the development of a potentiality mapping framework. This booklet compiles the indicators, methodology, and potentiality assessment outputs across diverse agro-climatic zones, agro-ecological zones and different States of India.

The mapping exercise is aimed at enabling evidence-based planning, supporting farmer adoption, and ensuring ecological compatibility.

We hope that this publication serves as a valuable reference for policy planners, researchers, extension workers, and implementing agencies involved in the promotion of Natural Farming.

Authors

Acknowledgement

The preparation of this technical booklet titled “Potential Domains for Natural Farming in India” is the outcome of collaborative research efforts undertaken through All-India Network Programme on Natural Farming (AINP-NF). We sincerely acknowledge the valuable contributions from the network partners across 20 research centres in 16 states, including State Agricultural Universities (SAUs), ICAR Institutes, and deemed universities, who provided field-level data and expert insights. The support and guidance from the Dr M. L. Jat, Secretary (DARE) and Director General (ICAR) is immense in preparing the maps. Special thanks to Dr A.K. Nayak, Deputy Director General (NRM) for providing the platform of team to complete the mapping. Dr A. Velmurugan, Assistant Director General (SWM & AAFCC) needs special acknowledgement for discussion and developing the methodology for mapping.

We also acknowledge the contribution and sharing of data by ICAR-NBSSLUP particularly on Soil organic carbon, soil texture and soil depth.

Special thanks are due to the technical experts, GIS analysts, and policy researchers who helped to identify the parameters, data visualization, and zonal assessments. We also appreciate the efforts of the editorial team in compiling and structuring the publication to serve as a practical guide for stakeholders.

Above all, we extend our gratitude to the farming communities whose traditional wisdom and on-ground experiences continue to shape the direction of sustainable agriculture in India.

Authors

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Introduction

The Green Revolution marked a turning point in India's agricultural history. Through the adoption of high-yielding crop varieties, assured irrigation, chemical fertilizers, and plant protection measures, the country achieved self-sufficiency in food grain production. From being a food-deficit nation in the 1960s, India emerged as one of the world's largest producers of rice, wheat, and several other crops. This transformation not only ensured national food security but also boosted rural employment, improved farmer incomes, and strengthened the foundation of the country's agricultural economy.

However, the very success of the Green Revolution has brought new challenges. Continuous monocropping, indiscriminate use of fertilizers and pesticides, and excessive groundwater extraction have led to declining soil health, loss of biodiversity, and reduced factor productivity. Rising input costs and dependence on imported fertilizers further threaten the sustainability of farming systems. Climate variability, coupled with nutritional and environmental concerns, demands a shift towards ecologically resilient approaches. An agroecological transition that emphasizes natural farming practices, self-reliance (Atmanirbharta) in inputs, balanced crop production systems, and farmer-centric innovations is now imperative to secure future food, nutrition, and livelihood security in harmony with nature.

"Organic and natural farming were an important path to make India Atma Nirbhar (self-reliant) because of their potential to cut down costly fertiliser imports"

Independence Day, 2022 address by
Shri Narendra Modi
Prime Minister of India

The National Mission on Natural Farming (NMNF), launched by the Department of Agriculture and Farmers' Welfare (DA&FW), represents a significant policy shift towards sustainable and regenerative farming practices. The mission prioritizes nature-based solutions, farmer-led innovations, and scientific validation of agroecological approaches across India's diverse agro-climatic zones.

Need for Potentiality Mapping in Natural Farming: Despite increasing interest and pilot-scale adoption, Natural Farming lacks comprehensive and location-specific potentiality maps that can guide scaled implementation. Mapping the potential area using bio-physical and socio-economic factors is crucial for the following reasons:

- **Geographic Prioritization:** Identifying regions with agroecological compatibility (e.g., low external input use, high organic matter, mixed farming systems).

- **Risk Management:** Avoiding large-scale adoption in regions where abrupt withdrawal from conventional inputs could lead to productivity losses or farmer distress.
- **Scientific Planning:** Supporting ICAR, SAUs, and KVKs to align research and extension investments based on ground realities.
- **Policy Targeting:** Enabling State Governments to allocate subsidies, extension resources, and certification mechanisms efficiently.

A potentiality mapping framework can help identify “low-hanging fruits”—regions and cropping systems where transition to NF can be seamless, safe, and socio-economically rewarding.

National Commitment: Recognizing the need to balance sustainability and food security, NITI Aayog in its report on “From Green Revolution to Amrit Kaal (Ramesh Chand & Jaspal Singh, 2023), has proposed that 20% of India’s cultivated area can be brought under Organic and Natural Farming (ONF) by 2030. This transition target considers:

- The projected 3.5% growth in food output and 2.8% rise in food demand annually.

This vision provides the strategic anchor for potentiality mapping and scaling efforts, aligning ecological, nutritional, and economic sustainability with national agricultural growth.

Institutional Framework: The Indian Council of Agricultural Research (ICAR), has initiated a Network Research Programme on Natural Farming since Kharif 2020. With experiments conducted across 20 locations in 16 States, the program focuses on:

- Characterization of bio-inputs like Beejamrit, Jeevamrit, Ghanajeevamrit, Neemastra, Brahmastra, and Agniastra.
- Multi-location assessment of NF practices across 8 major cropping systems.
- Development of Generic and Location-specific Protocols for NF.

Under, NMNF, setting up 400 Model Farms and a robust Monitoring, Verification, and Reporting (MVR) system via the NMNF Research Portal is being undertaken besides capacity building through 530 KVKs, community resource persons, and researchers under NMNF by Agricultural Extension division.

Given the Government of India’s structured push and the scientific momentum created by ICAR and SAUs, the time is ripe for a national-level geospatial and decision-support tool to guide Natural Farming transitions. The Potential Natural Farming Areas for India will serve as an evidence-based tool to:

- Identify states with high readiness for promotion of natural farming.
- Support strategic investment under NMNF through convergence of schemes.
- Guide farmer outreach, training, and certification efforts.
- Monitor adoption and impact over time.

In the chapters that follow, this technical booklet provides the methodology, parameters used, state-level, agro-climatic zone and agro-ecological zone level mapping outputs for enabling informed and phased adoption of Natural Farming in India.

Methodology

Natural farming, as an ecologically sustainable approach to agriculture, relies on minimal external inputs and emphasizes the use of natural resources to maintain soil fertility, crop health, and biodiversity. The identification of potential areas for natural farming involves a systematic geospatial analysis that integrates multiple biophysical and socio-economic factors. In this first approximation, a Geographic Information System (GIS)-based multi-criteria evaluation (MCE) approach was employed to delineate zones with varying levels of suitability for natural farming.

The process began with the identification and preparation of controlling factors influencing the potentiality of natural farming. Based on literature review and expert consultation, seven major factors were selected: NPK (Nitrogen, Phosphorus, and Potassium) consumption, organic carbon content (OC), first and second major cropping systems, soil depth, soil texture, and low productive aspirational areas and expert opinion. Each factor was processed into thematic layers within the GIS environment.

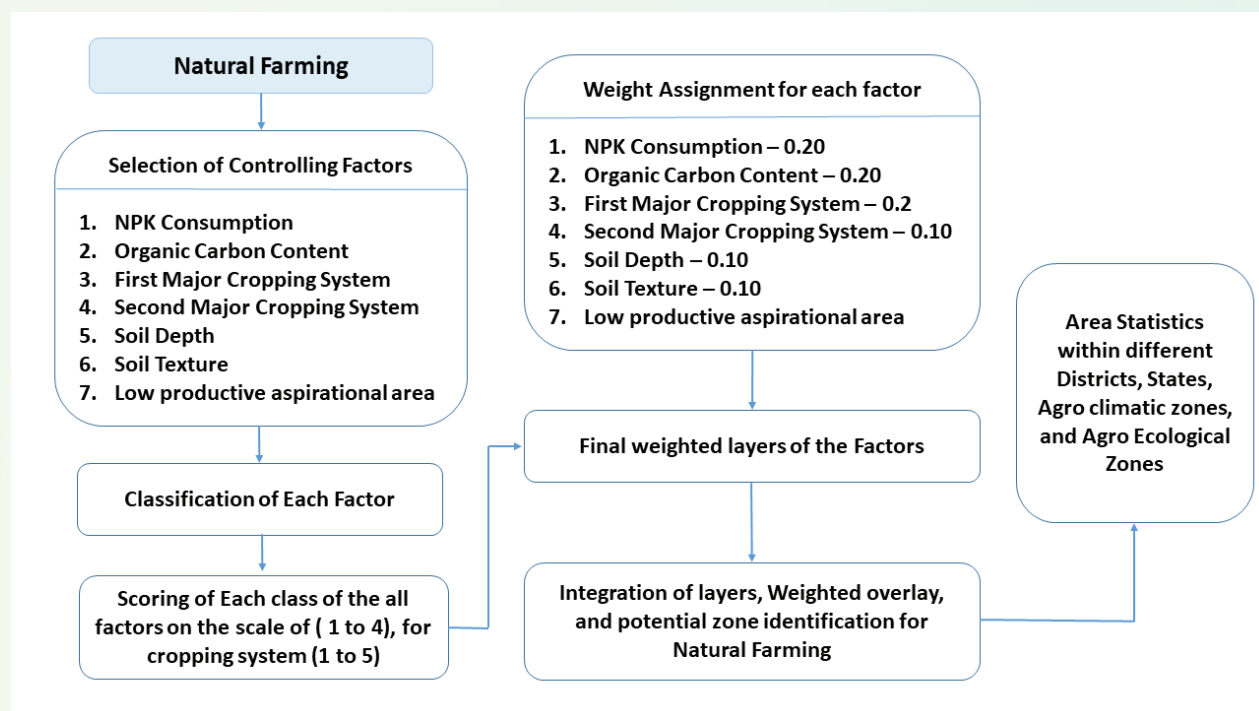
To standardize the evaluation, each factor was classified into distinct classes, and a scoring system was applied to represent their relative suitability for natural farming. The scoring ranged from 1 to 4, where 4 indicated the most suitable conditions and 1 the least suitable. For example, NPK consumption was classified into four categories: low, moderate, high, and very high consumption. High NPK consumption areas, being more chemically dependent, were assigned a low score of 1, whereas low consumption areas, more compatible with natural farming practices, received the highest score of 4. Similarly, organic carbon (OC) content was classified into suitability ranges. The highest score of 3 was assigned to areas with OC levels between 20–30%, reflecting optimal conditions for natural farming. Areas with OC above 30%—often forested or reserved lands not available for cultivation—were assigned a lower scoring of 2 despite their high organic matter content.

Cropping system suitability was assessed based on the prevalence of pulses and leguminous crops, given their nitrogen-fixing ability and compatibility with natural farming. Cereal–pulse and pulse–cereal systems received higher ratings, with maize–pulse and millet–pulse combinations rated the highest (5) due to their strong soil health benefits. Soil depth and soil texture were also critical considerations. Deep soils, which provide better root penetration and moisture retention, received higher ratings, while shallow soils received lower scores. In terms of soil texture, loamy soils were rated highest, followed by clayey and gravelly-clayey soils, with sandy soils rated lowest due to poor nutrient and water retention capacity.

Low productive aspirational areas with tribal and indigenous farming systems was included as a socio-economic factor, acknowledging the traditional knowledge and practices aligned with natural farming.

After scoring each class within the factors, **a weighted overlay analysis** was conducted. Factor weights were determined based on expert opinion, ensuring the sum of all weights equalled 1. NPK consumption, organic carbon, and first major cropping system each received the highest weight (0.20), while second major cropping system, soil depth, soil texture, and low productive aspirational areas each received a weight of 0.10. Each class rating was multiplied by its respective factor weight to generate weighted factor layers. These weighted layers were then integrated through summation in the GIS environment, producing a composite suitability map. The final output was classified into five potential categories: **highly potential, medium potential, marginally potential, low potential and no potential** for natural farming.

The final output map was masked, and areas not available for cultivation—such as reserve forests, glaciers, snow-covered rocky mountains, rock outcrops, mines, the Rann of Kachchh, urban settlements, swamps, marshy lands, and water bodies—were removed. The total area was normalized to Net cultivated area. Afterwards, the areas under highly and medium potential classes were quantified for different administrative and agro-environmental units, including districts, states, agro-climatic zones, and agro-ecological zones. This spatial assessment not only identifies priority regions for natural farming promotion but also serves as a decision-support tool for policymakers, planners, and development agencies aiming to enhance sustainable agricultural practices in India.

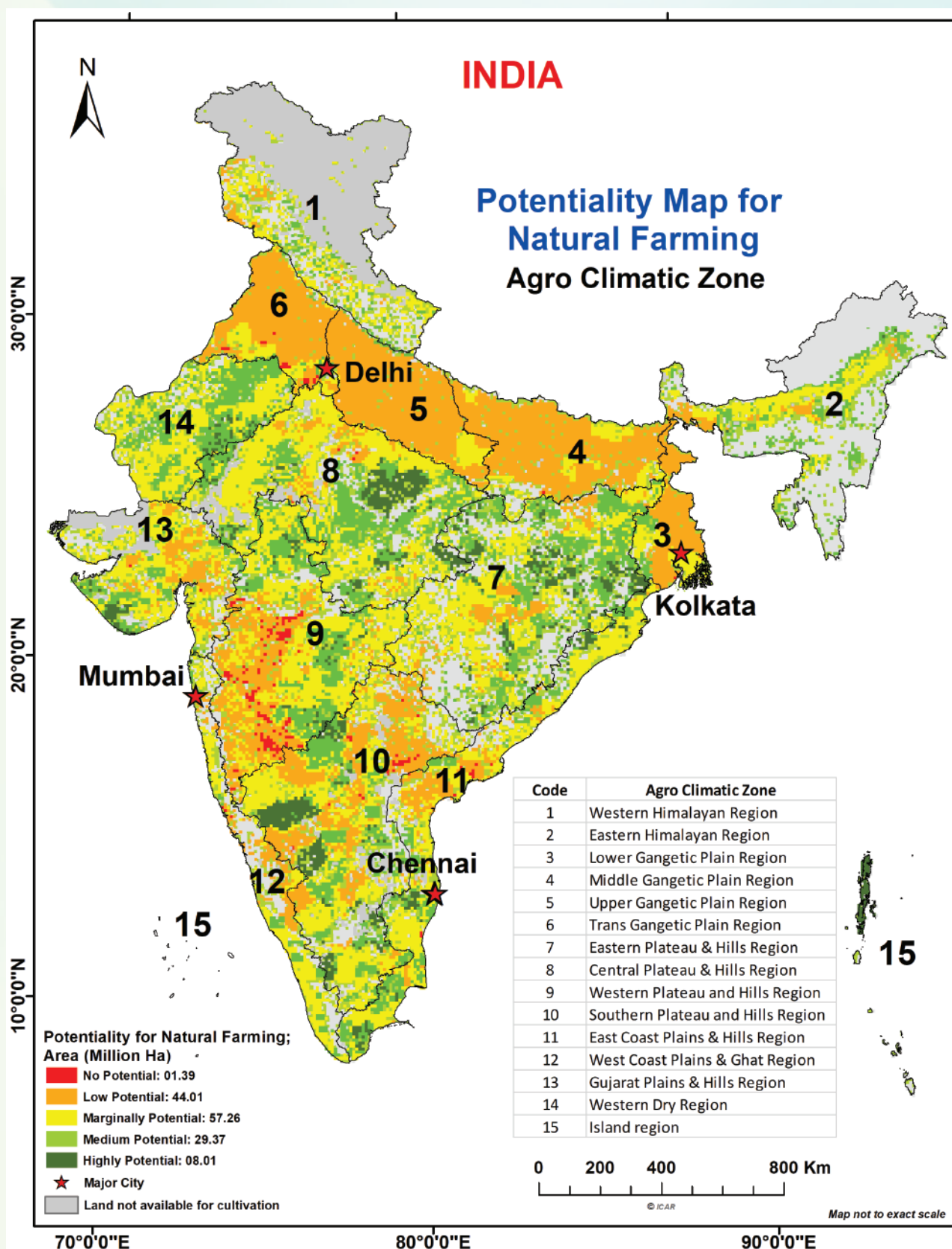


Methodology summary



Potential Domains

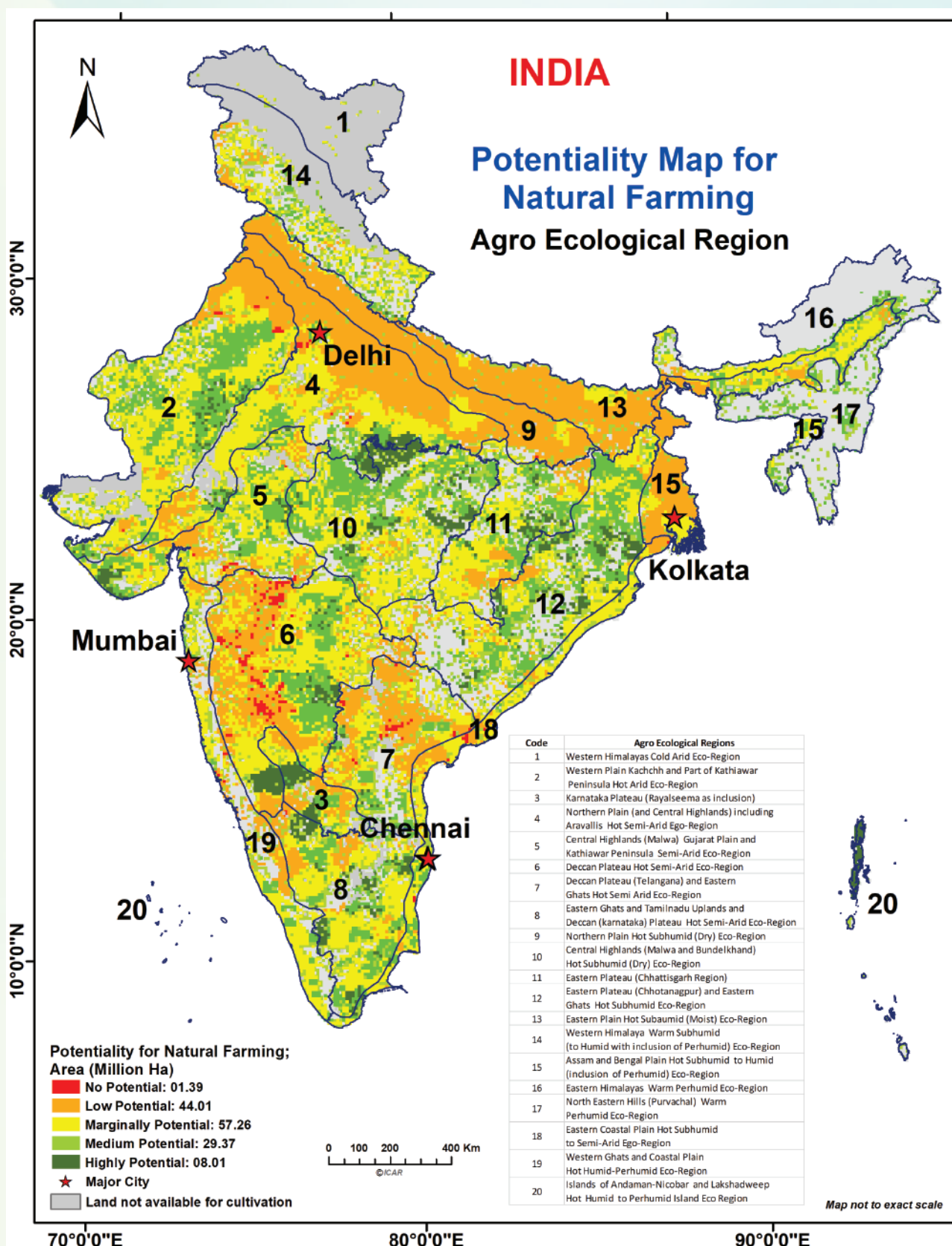
Agro-Climatic zone-wise potentiality mapping for Natural farming



Potentiality for Natural Farming in different Agro Climatic Region

S.No.	Agroclimatic Zone	Area (Million Hectare)	
		Highly Potential	Medium Potential
1.	Western Himalayan Region	0.11	0.98
2.	Eastern Himalayan Region	0.11	2.48
3.	Lower Gangetic Plain Region	0.01	0.34
4.	Middle Gangetic Plain Region	0.01	0.10
5.	Upper Gangetic Plain Region	0.01	0.12
6.	Trans Gangetic Plain Region	0.00	0.19
7.	Western Plateau and Hills Region	0.36	3.50
8.	Central Plateau & Hills Region	1.99	5.03
9.	Eastern Plateau & Hills Region	1.74	5.49
10.	Southern Plateau and Hills Region	2.08	3.14
11.	West Coast Plains & Ghat Region	0.04	0.55
12.	East Coast Plains & Hills Region	0.66	2.22
13.	Western Dry Region	0.25	3.89
14.	Gujarat Plains & Hills Region	0.35	1.33
15.	Islands Region Andaman & Nicobar Islands, Lakshadweep	0.29	0.00
Total Area (Million Hectare)		8.01	29.37
% of Net Cultivated Area		5.70	20.10

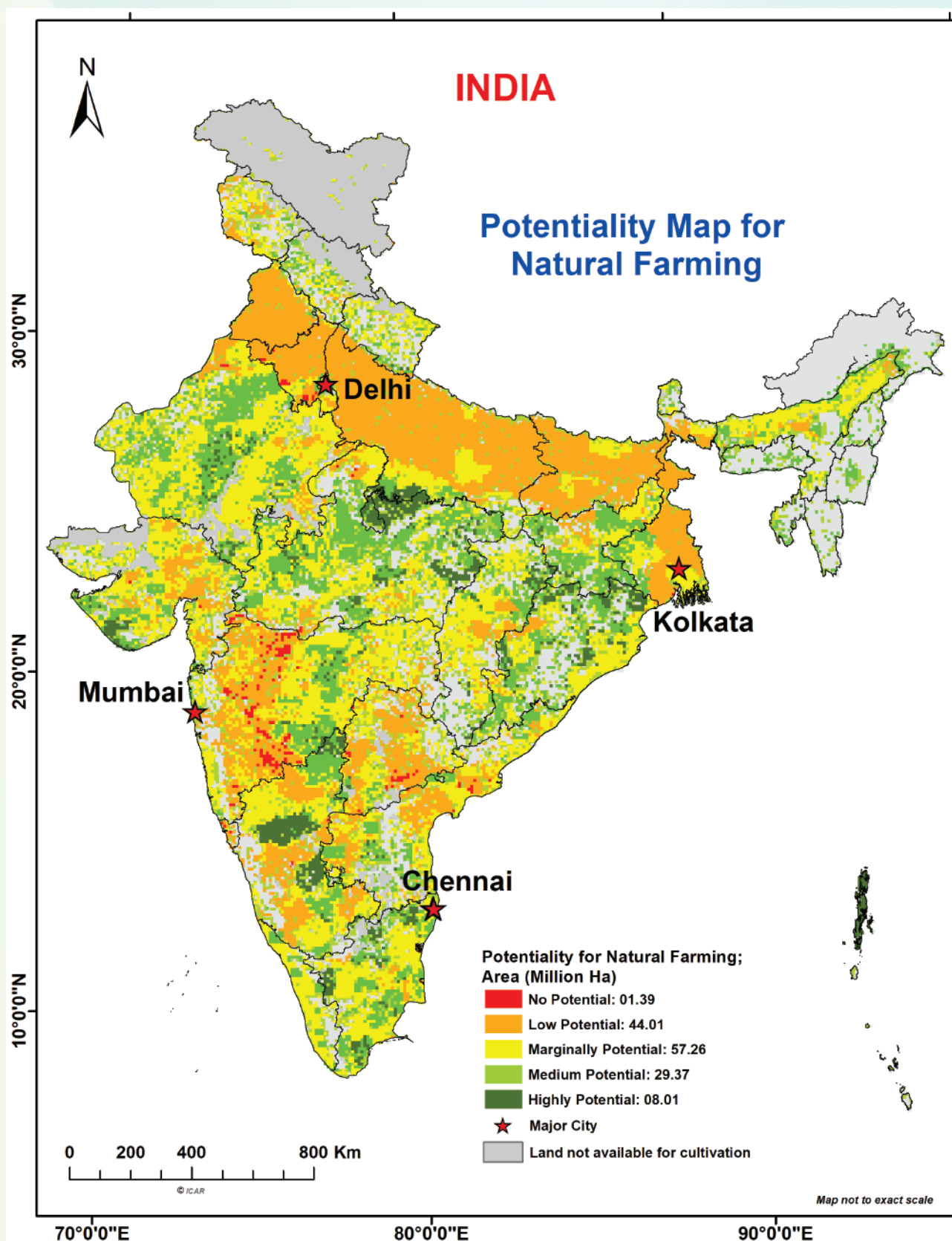
Agro-Ecological zone-wise potentiality mapping for Natural farming



Potential areas for Natural Farming

S.No.	Agroecological region	Area (Million Hectare)	
		Highly Potential	Medium Potential
1	Western Himalayas Cold Arid Eco-Region	0.00	0.01
2	Western Plain Kachchh and Part of Kathiawar Peninsula Hot Arid Eco-Region	0.42	4.86
3	Karnataka Plateau (Rayalseema as Inclusion)	0.50	0.37
4	Northern Plain (and Central Highlands) Including Aravallis Hot Semi-Arid Eco-Region	0.66	1.56
5	Central Highlands (Malwa) Gujarat Plain and Kathiawar Peninsula Semi-Arid Eco-Region	0.45	2.09
6	Deccan Plateau Hot Semi-Arid Eco-Region	0.93	2.73
7	Deccan Plateau (Telangana) and Eastern Ghats Hot Semi Arid Eco-Region	0.11	0.99
8	Eastern Ghats and Tamil Nadu Uplands and Deccan (Karnataka) Plateau Hot Semi-Arid Eco-Region	1.08	2.13
9	Northern Plain Hot Subhumid (Dry) Eco-Region	0.00	0.06
10	Central Highlands (Malwa and Bundelkhand) Hot Subhumid (Dry) Eco-Region	1.45	4.10
11	Eastern Plateau (Chhattisgarh Region)	0.42	1.49
12	Eastern Plateau (Chhotanagpur) and Eastern Ghats Hot Subhumid Eco-Region	1.34	4.28
13	Eastern Plain Hot Sub humid (Moist) Eco-Region	0.00	0.02
14	Western Himalaya Warm Subhumid (To Humid With Inclusion of Perhumid) Eco-Region	0.13	1.01
15	Assam and Bengal Plain Hot Subhumid to Humid (Inclusion of Perhumid) Eco-Region	0.02	0.70
16	Eastern Himalayas Warm Perhumid Eco-Region	0.01	0.81
17	North Eastern Hills (Purvachal) Warm Perhumid Eco-Region	0.08	1.06
18	Eastern Coastal Plain Hot Subhumid to Semi-Arid Eco-Region	0.09	0.54
19	Western Ghats and Coastal Plain Hot Humid-Perhumid Eco-Region	0.03	0.56
20	Islands Region Andaman & Nicobar Islands, Lakshadweep	0.29	0.00
Total Area (Million Hectare)		8.01	29.37

Potentiality for Natural Farming in different State



State-wise Potential area for Natural Farming

#	State	Highly Potential (Million Hectare)	Medium Potential (Million Hectare)
1.	Andaman & Nicobar	0.28	
2.	Andhra Pradesh	0.07	1.52
3.	Arunachal Pradesh	-	0.68
4.	Assam	0.01	0.84
5.	Bihar	-	0.02
6.	Chhattisgarh	0.39	0.99
7.	Gujarat	0.35	1.36
8.	Haryana	-	0.09
9.	Himachal Pradesh	0.13	0.52
10.	Jammu & Kashmir	-	0.13
11.	Jharkhand	0.15	1.88
12.	Karnataka	1.54	1.52
13.	Kerala	0.01	0.40
14.	Ladakh	-	0.01
15.	Madhya Pradesh	1.55	5.33
16.	Maharashtra	0.23	2.12
17.	Manipur	-	0.20
18.	Meghalaya	0.01	0.31
19.	Mizoram	0.01	0.10
20.	Nagaland	-	0.14
21.	Odisha	1.28	2.07
22.	Puducherry	-	0.01
23.	Punjab	-	0.03
24.	Rajasthan	0.53	5.36
25.	Sikkim	-	0.07
26.	Tamil Nadu	0.80	1.91
27.	Telangana	0.04	0.22
28.	Tripura	0.04	0.09
29.	Uttar Pradesh	0.55	0.46
30.	Uttarakhand	0.02	0.36
31.	West Bengal	0.01	0.62
Total (Million ha)		8.01	29.37

Conclusion and Way forward

The mapping of potentiality for Natural Farming (NF) across agro-climatic and agro-ecological regions of India reveals a significant opportunity for expansion, with a combined highly potential area of 8.07 million hectares and medium potential area of 29.37 million hectares. This represents approximately 5.7% and 20.1% of the net sown area, respectively. The data highlights a wide geographic spread, covering diverse regions such as the Western Dry Region, Southern Plateau & Hills, Central Plateau & Hills, and Eastern Plateau & Hills.

State-wise analysis shows that Madhya Pradesh, Rajasthan, Odisha, Karnataka, Himachal Pradesh, Tamil Nadu have some of the largest contiguous areas suitable for NF, with a variety of existing cropping systems such as soybean-wheat, rice-fallow, pulses-fallow, groundnut-wheat, and cotton-based rotations. These systems present a strong base for conversion to natural farming due to their adaptability to low-input sustainable practices. The mapping also emphasizes the prevalence of rice-based systems in eastern and northeastern states, which hold potential for NF adoption due to their high cropping intensity with legumes and diverse seasonal combinations.

Importantly, the data underscores that NF adoption potential is not limited to rainfed regions but extends to irrigated areas where diversification and reduction of chemical inputs are priorities. The inclusion of crop-livestock integration in several districts further strengthens the viability of NF models, particularly in regions like Chhattisgarh, Jharkhand, and parts of Maharashtra.

The regional variation in potentiality suggests that NF promotion strategies need to be tailored to local agro-ecological conditions, market linkages, and farmer capacity. For example, hot arid and semi-arid eco-regions such as parts of Gujarat, Rajasthan, and Karnataka will require water-efficient NF models, while humid, sub-humid zones like the Western Ghats will benefit from biodiversity-based approaches.

Key Facts from the Mapping

- Total highly potential area: 8.07 million hectares (5.7% of net sown area).
- Total medium potential area: 29.37 million hectares (20.10% of net sown area).
- Top regions in highly potential category include: Southern Plateau & Hills (2.08 Mha), Central Plateau & Hills (1.99 Mha), Eastern Plateau & Hills (1.74 Mha).

- States with largest highly potential area: Madhya Pradesh, Rajasthan, Odisha, Karnataka, Tamil Nadu.
- Dominant existing cropping systems in potential zones: Rice-fallow, Soybean-wheat, Groundnut-wheat/fallow, Cotton-fallow, Pulses-based rotations.
- Several districts show strong livestock integration, providing opportunities for on-farm input production like jeevamrit and compost.
- Eastern and northeastern states have high NF potential in rice-based and mixed cropping systems.

Way Forward

1. **Research and Validation:** Develop and promote NF models aligned with local cropping patterns, climate, and resource availability. For instance, water-efficient NF practices for arid/semi-arid zones and integrated pest-nutrient management for humid areas. Undertake long term trials in identified high and medium potential districts to assess yield stability, economic returns, and environmental benefits of NF.
2. **Capacity Building:** Strengthen farmer training through Krishi Vigyan Kendras (KVKs), Farmer Field Schools (FFS), and participatory learning models focusing on NF protocols, indigenous seed use, and soil health management.
3. **Market Linkages:** Establish dedicated NF produce markets and certification systems to ensure premium pricing and consumer trust, particularly for rice, pulses, and oilseeds from high-potential districts.
4. **Policy Support:** Incentivize NF adoption through input subsidies reorientation, NF-specific crop insurance, and inclusion in state agriculture roadmaps.
5. **Water and Soil Management:** Integrate NF with water budgeting, soil moisture conservation, and organic matter enhancement to increase resilience in climate-vulnerable areas.
6. **Convergence of Schemes:** Align NF promotion under NMNF with ongoing government schemes like PMKSY, RKVY, PKVY, and watershed programmes for holistic resource management in the potential areas.
7. **Monitoring, Evaluation, Learning and Impact Assessment:** Develop a geospatial and digital NF monitoring system to track adoption, productivity changes, and ecosystem services improvement.

Phased Build-On Approach for Natural Farming Promotion

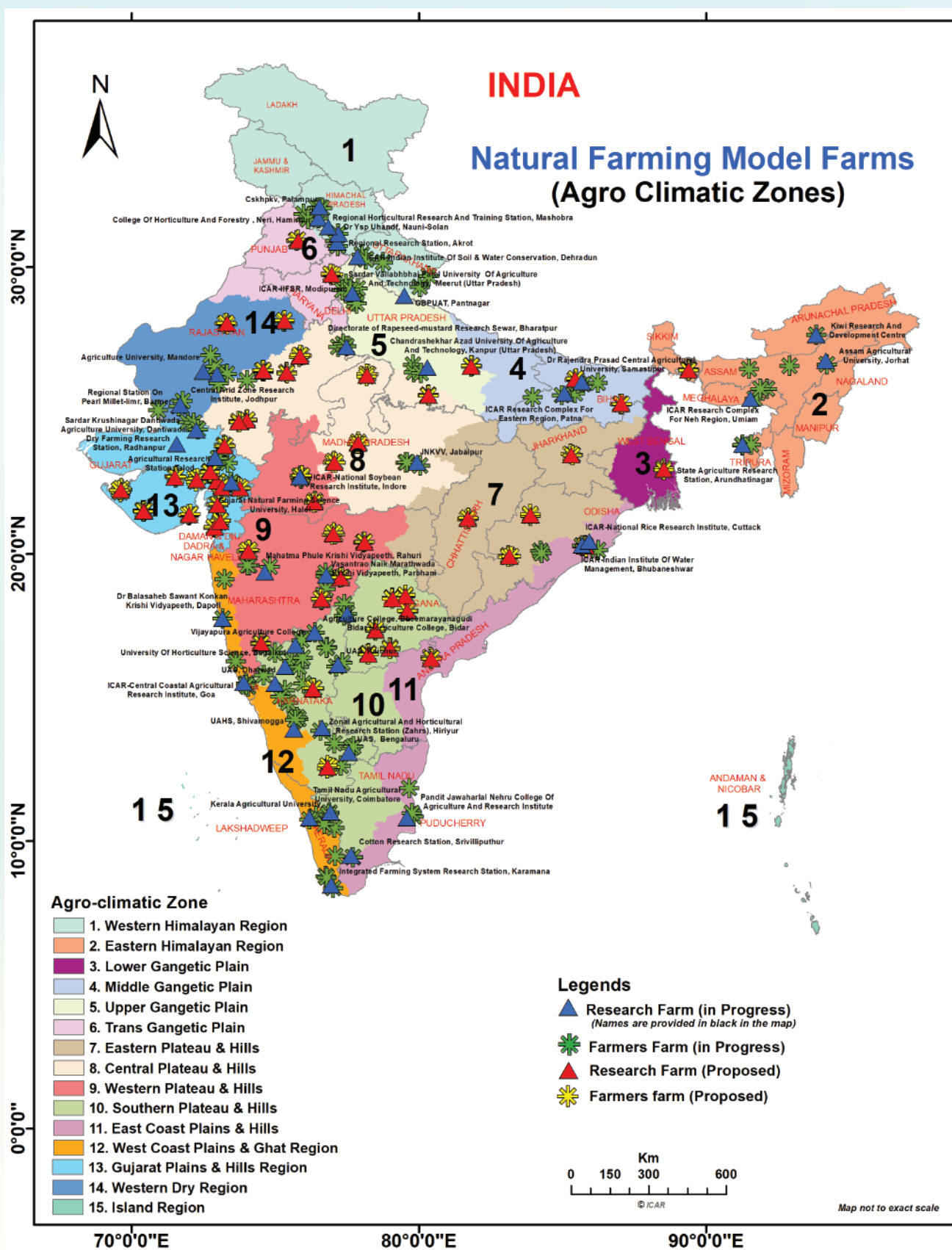
Phase I (Years 1-5)

Highly Potential Areas (8.01 m ha)
Focused Research, Model Farms & Demonstrations Cropping Systems involving Legumes, Pulses, Millets Focus on suitable areas of Central Plateau and Hills, Southern Plateau and Hills, Eastern Plateau & Hills, Eastern and Western Himalayas, Islands
Research and Capacity Building Institutions, NF Clusters, Specialized FPO Formation, Market & certification
Target: Yield stability + 20-25% cost reduction

Phase II (Years 6-10)

Medium Potential Areas
Scaling Up & Area Development (use the experiences in Phase I) - Eastern belts with cereal-pulse cropping systems -Semi-arid millet belts
Market & Certification, Research & Digital Tools - Carbon credits, AI-IoT
Target: ~15 m ha

Natural Farming Model Farms-Research locations



Annexure-1 : Potential districts and existing cropping systems

Sl. No.	State	Potentiality for Natural Farming (Area in Million Hectare)						
		Highly Potential			Medium Potential			
		No. of Districts	Name of Districts	Total Area	Existing cropping System	No. of Districts	Name of Districts	Total Area
1.	ANDAMAN & NICOBAR	3	North & Middle Andaman, South Andaman, Nicobars	0.28				
2.	ANDHRA PRADESH	1	Kadapa	0.07	Fallow-Gram, Groundnut-Fallow, Rice Fallow	4	Krishna, Koraput, Kurnool, Kadapa, Nellore	1.52
3.	ARUNACHAL PRADESH					7	Anjaw, Changlang, East Siang, Namsai, Longding, Dibang Valley, Lower Dibang Valley	0.68
4.	ASSAM	1	Dhubri	0.01	Rice-rice, Rice-Mustard	7	Dhemaji, Lakhimpur, Sonitpur, Kokrajhar, Bongaigaon, Goalpara, Karbi Anglong	0.84
5.	BIHAR					1	Jamui	0.02
6.	CHHATTISGARH	2	Jashpur, Nuapada,	0.39	Rice-fallow Rice-niger Kodokuttki-fallow	5	Dantewada, Korba, Bijapur, Raigarh, Sukhma, Jashpur	0.99
7.	GUJARAT	2	Gir Somnath Junagadh	0.35	Groundnut-wheat/fallow Groundnut-fallow Cotton-gram/fallow Cotton-fallow	8	Gir Somnath, Devbhumi Dwarka, Rajkot, Surendranagar, Patan, Aravalli, Mahisagar, Dahod	1.36
8.	HARYANA					1	Charki Dadri	0.09
								Pearlmillet-Mustard, Cotton-wheat

Sl. No.	State	Potentiality for Natural Farming (Area in Million Hectare)						
		Highly Potential			Medium Potential			
		No. of Districts	Name of Districts	Total Area	Existing cropping System	No. of Districts	Name of Districts	Total Area
9.	HIMACHAL PRADESH	2	Lahaul & Spiti Kinnaur	0.13	Fallow-Pea Fallow- Barley Pulses- pulses	1	Lahaul & Spiti	0.52
10.	JAMMU & KASHMIR					2	Kishtwar, Reasi	0.13
11.	JHARKHAND	4	Palamu, West Singbhum, Simdega, East Singbhum	0.15	Rice-rabi pulses, Rice-Fallow, Rice- Rice, Maize-Rice	10	Pakur, Giridih, Palamu, Garhwa, Jamtara, Gumla, Khunti, Saraikela Kharsawan, East Singbhum, West Singbhum	1.88
12.	KARNATAKA	5	Bidar, Koppal Gadag, Dharwad Chitradurga	1.54	Arhar-fallow/rabi sorghum Maize/ Green gram-Chick Pea Maize-gram/ fallow Kharif pulses-gram Pearlmillet-pulses Ground Nut-Rabi Sorghum Chilli- cotton Groundnut- fallow	4	Gulbarga, Raichur, Chamarajanagar, Tumkur	1.52
13.	KERALA	1	Palakkad	0.01	Rice-rice-Fallow, Fallow-rice- vegetable	4	Kannur, Malapuram, Palakkad, Kollam	0.40
14.	LADAKH					1	Ladakh	0.01
								Plantation crops

Sl. No.	State	Potentiality for Natural Farming (Area in Million Hectare)						
		Highly Potential			Medium Potential			
		No. of Districts	Name of Districts	Total Area	Existing cropping System	No. of Districts	Name of Districts	Total Area
15.	MADHYA PRADESH	9	Tikamgarh, Sidhi, Shahdol, Ujjain, Anuppur, Dindori, Narsinghpur, Chhatarpur, Betul	1.55	Kharif pulses-wheat Rice-wheat Soybean-gram Rice-fallow Rice-pulses Kharif pulses-gram Soybean-wheat Fallow-gram Rice-fallow Sugarcane/ratoon-wheat Sesamum-wheat	21	Shivpuri, Neemuch, Rewa, Satna, Guna, Ashoknagar, Singrauli, Sidhi, Sagar, Damoh, Vidisha, Rajgarh, Shahdol, Ujjain, Dewas, Narsinghpur, Dhar, Khargone, Agar Malwa, Panna, Betul	5.33
16.	MAHARASHTRA	2	Washim, Latur	0.23	Soybean-gram/fallow Pigeon pea-fallow	8	Buldana, Akola, Washim, Hingoli, Bid, Latur, Osmanabad, Amravati	2.12
17.	MANIPUR					3	Senapati, Imphal West, Imphal East	0.20
18.	MEGHALAYA	2	East Khasi Hills, South west Khasi Hill	0.01	Rice-Fallow, Rice-Potato, Maize-Vegetable/Fallow, Maize-Fallow	4	West Khasi Hills, East Khasi Hills, South Garo Hills, West Garo Hills	0.31
19.	MIZORAM	1	Dalai	0.01	Rice-pulses, maize-fallow	1	Lunglei	0.10
20.	NAGALAND					3	Kohima, Mokochung, Longding	0.14

Sl. No.	State	Potentiality for Natural Farming (Area in Million Hectare)						
		Highly Potential			Medium Potential			
		No. of Districts	Name of Districts	Total Area	Existing cropping System	No. of Districts	Name of Districts	Total Area
21.	ODISHA	6	Nuapada , Nayagarh , Kendrapara , Kendujhar, Mayurbhanj , Sundargarh	1.28	Rice-Green gram , Rice-fallow , Rice-black gram , Rice-horse gram/ oilseeds , Rice- pulses	11	Bhadrak, Subarnapur, Kandhamal, Kalahandi, Puri, Rayagada, Malkangiri, Anugul, Ganjam, Gajapati, Kendujhar	2.07
22.	PUDUCHERRY					1	Puducherry	0.01
23.	PUNJAB					1	SAS Nagar	0.03
24.	RAJASTHAN	4	Nagaur , Pali , Bundi , Dungarpur	0.53	Green gram- fallow , Black gram-wheat , Pearlmillet-fallow , Sorghum-fallow , Rice-wheat	12	Churu, Jaisalmer, Jodhpur, Nagaur, Barmer, Tonk, Pali, Bhilwara, Jalore, Bundi, Dungarpur, Bikaner	5.36
25.	SIKKIM					1	North Sikkim	0.07

Sl. No.	State	Potentiality for Natural Farming (Area in Million Hectare)						
		Highly Potential			Medium Potential			
		No. of Districts	Name of Districts	Total Area	Existing cropping System	No. of Districts	Name of Districts	Total Area
26.	TAMIL NADU	5	Krishnagiri, Salem, Coimbatore, Thoothukudi, Vellore	0.80	Ragi-pulses/fallow, Maize-pulses/ Groundnut, Kharif Sorghum-Pulses/ groundnut/ vegetable, Maize-rabi pulses, Groundnut-pulses, Pulses-vegetable/ groundnut, Sorghum-sorghum, Maize/ kharif pulses-rabi sorghum, Cotton-rabi sorghum, Rice-rice	12	Dharmapuri, Salem, Ariyalur, Karur, Madurai, Thoothukudi, Pudukkottai, Sivaganga, Nagapattinam, Tirunelveli, Vellore, Kanchipuram	1.91
27.	TELANGANA	1	Narayanapet	0.04	Pigeon pea-fallow, Cotton-Fallow	1	Nagarkurnool	0.22
28.	TRIPURA	1	North Tripura	0.04	Rice-pulses, Rice-oilseeds	3	Sepahijala, Gomati, South Tripura	0.09
29.	UTTAR PRADESH	3	Jhansi, Lalitpur, Mahoba	0.55	Kharif pulses-wheat, Black gram-wheat, Pulses-Wheat/fallow, Sesamum-pulses, Sesamum-lentil/pea	2	Jhansi, Chitrakoot	0.46
30.	UTTARAKHAND	2	Nainital, Almora	0.02		3	Haridwar, Nainital, Udham Singh Nagar	0.36
31.	WEST BENGAL	1	Jhargram	0.01	Rice-fallow-fallow, rice-vegetable-summer rice	4	Purulia, Paschim Bardhaman, Jhargram	0.62
				8.01				29.37

**Potentiality Map for
Natural Farming**
Agro Climatic Region

