



A National Initiative on  
**Evolving the Seed Systems for  
Traditional Varieties (TVs)** –  
*Reviving the local agro-  
biodiversity in the farms*



# Projects of RRA Network (2017-2022)

**Tribal Areas of Rajasthan**  
(Apna Sansthan plus 6 organisations)

Proposal for undertaking policy action by working group on PMFBY (**Gujarat, Mah, MP, AP Odisha, Bihar** - 5 organization)

**Camel Milk Collection (Gujarat, Rajasthan)**

Proposal for preparing road map and laying foundation for revitalizing rainfed agriculture system in tribal junction of **Rajasthan, Madhya Pradesh & Gujarat**

Project Management and Monitoring of RRA Network: Establishing core support of the network and its program (**IST, National**)

Special Support – Finger Millet Productivity increase in Nashik (**Maharashtra**)

**Strengthening the Networking Processes and Rainfed Agriculture Policies Maharashtra**  
(YRA and 11 more organisations)

Preparation of Status Paper on Dryland Agriculture Policies (**Karnataka**)

**Networking Process in Karnataka**  
Snehkunj (with 7 more organisations)

★ HimRRA – Civil Society Collectives for Rainfed Agriculture

✦ Strengthening Science, Practice and Policy for scaling up System of Crop Intensification (SCI) (**Uttarakhand, Chhattisgarh, Rajasthan, Bihar** (5 organizations))

SCI – (Uttarakhand, Chhattisgarh, Odisha)

Proposal on strategic areas of policy engagement on Rain fed agenda (**Jharkhand**)

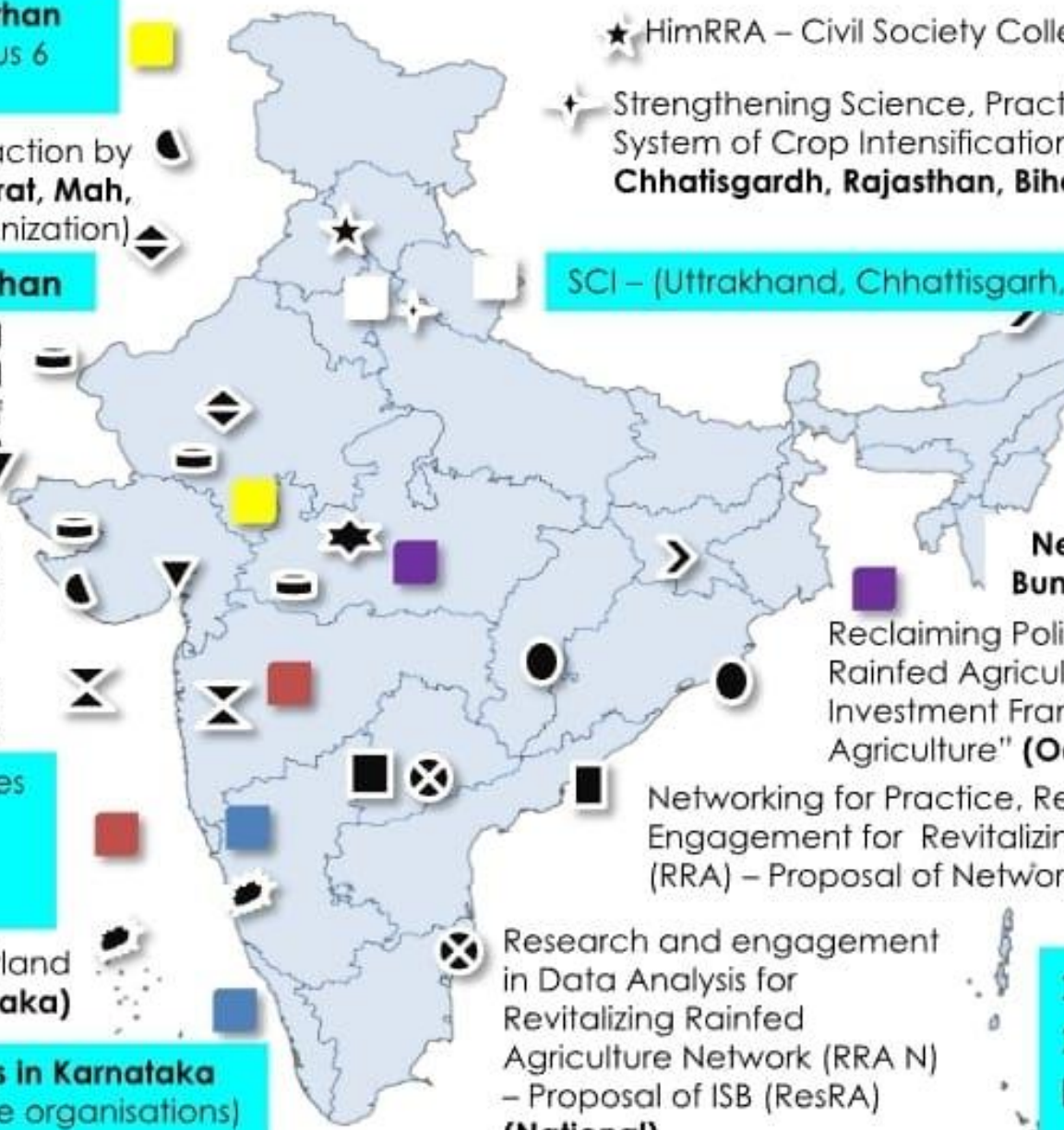
**Networking and Policy Process in Bundelkhand (MP) DA / PSI / INTAC**

Reclaiming Policy and Budgetary Priorities for Rainfed Agriculture in India – “Risk Proofing Investment Framework for Rainfed Agriculture” (**Odisha**)

Networking for Practice, Research and Policy Engagement for Revitalizing Rainfed Agriculture (RRA) – Proposal of Network Hub (**National**)

Research and engagement in Data Analysis for Revitalizing Rainfed Agriculture Network (RRA N) – Proposal of ISB (ResRA) (**National**)

**11 States**  
**187 CSOs & Knowledge Institutions**



# Working Group on Seed Systems for Rainfed Areas (WGoSS), RRA Network - Structure

## Working Group Members

- Dr.B Rajendra Prasad, Former VC, UAS-B
- Dr RB Deshmukh, Former VC, MPKV
- Ms. Kavitha Kuruganti, Founder, Alliance for Sustainable and Holistic Agriculture (ASHA)
- Dr. GV Ramanjaneyulu, Executive Director, Centre for Sustainable Agriculture (CSA)
- Mr. Chakradhar Panda, ADA, DoA&FE, Odisha
- Dr. SR Dhua, Principal Scientist (Retd.), ICAR-CRRI
- Mr. Krishna Prasad, Director, Sahaja Samrudha
- Shailesh Vyas, SATVIK
- Sanjay Patil, BAIF
- Ravindra A, Director, WASSAN - invitee
- Ms. Bhagya Lakshmi, Associate Director, WASSAN (Convenor of the WGoSS)

Host organization: **Sahaja Samrudha**

Core members: **Dr K.S. Varaprasad. Former Director, ICAR-IIOR**

**Convener:**

**Bhagya Laxmi**

**WGoSS coordinator;**

**M Leelavathi**

**Collaborations/ closely working with:**

- **MANAGE**
- **ICAR-NBPGR**
- **ICAR-IIRR**
- **ICAR- CTCRI**
- **ICAR-IIMR**
- **NRAA**
- **UAS- Dharwad**
- **BCKV, West Bengal**
- **ICRISAT**
- **State Biodiversity Board, Telangana**
- **VNMKV, Maharashtra**

# Key Initiatives Taken Up By The Working Group

**Mainstreaming Landraces at least one selected state and strengthening entire supply chain.**

**A Series of Capacity Building trainings and webinars to various Stake Holders**

**Repatriation of crop germplasm from National Gene-banks (ICAR-NBPGR) to the local communities**

**Potential landraces relevant to rainfed agriculture identified/ recognised for at least two of the hotspots identified**



**Engagement with Joint Secretary (Seeds), MoA&FW, GoI to evolve “Seed System for Climate Resilient Rainfed Agriculture” – along with NRAA & MANAGE**

**Networks of champion farmers / farmers organisation exchange the germplasm by providing the proper info through IT platform**

**Seed system for landraces pilot tested and adapted as a policy in rainfed regions of at least 2 states to ensure sustainable quality seed access to the needy farmers and encourage rural innovations**

## Results and Discussion

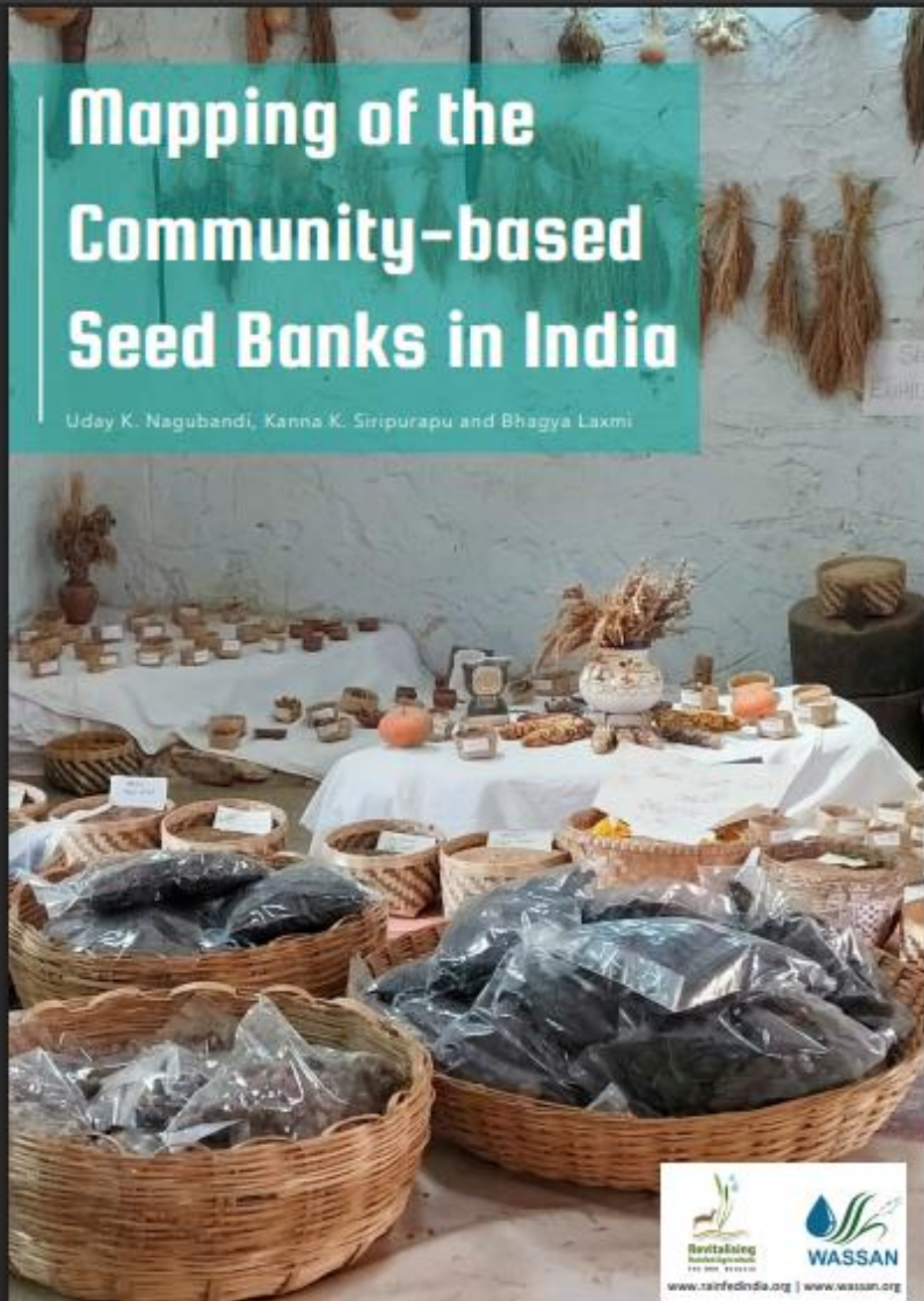
Out of the **250 organizations** approached only **97 (38%)**, mostly non-for-profit organizations / civil society organizations from **15 Indian states** responded to the survey (**Map 1**).



The respondent organizations are spread across **15 Indian states** and are involved in assisting / managing the CBSBs in their respective states. Out of the total respondent organizations majority of them are found in Andhra Pradesh and Telangana, followed by Gujarat and Madhya Pradesh, and Odisha (*Table - 1*)

Table 1. Number of Community-based Seed Banks Located in Each Responding State of the Present Study

Name of the State	Number of CBSBs
Andhra Pradesh	20
Assam	4
Chhattisgarh	3
Himachal Pradesh	1
Gujarat	11
Jharkhand	1
Karnataka	1
Madhya Pradesh	11
Maharashtra	5
Mizoram	1
Odisha	9
Rajasthan	3
Telangana	20
Tripura	3
Uttar Pradesh	4
<b>TOTAL</b>	<b>97</b>



# Documentation of Model Case Studies

- Lead By: Kavitha Kuruganti
- Team: Bhagya Laxmi, Uday Kumar N
- Folk Rice from West Bengal
- Kalachampa from Odisha
- Registration and TL seed from Gujarath
- Community Managed Seed Systems from Andhra Pradesh
- MP Federation – Madhya Pradesh

# Study in Sundarbans

- Study to understand the source of the seed for farmers of Sundarbans and provision of seeds through Government channels.

- Districts: North & South 24-Parganas
- Blocks: 13
- Villages: 25 - (2 villages /block)
- NGOs involved: 10

## Key findings of the study

- Large diversity of crops are being grown including fruits (15), vegetables (29), cereals ( 2), pulses ( 5)
- Farmers grow both traditional and HYV
- Around 40-60% of seed is farmer-saved seed
- Farmers state that HYV shows yield advantage in normal times and farmers' varieties when the area is affected by cyclones and floods
- The government is providing HYV and farmers' varieties through its programs



- **Objective** –To understand the area under the different green gram varieties and farmers’ varietal choices & reasons in Western Odisha

- **Study area**

- No. of Districts: 5
- Burgarh. Sambalpur. Nauapada. Balngir, Boudh
- No. of Block: 10 ( two blocks per district)
- Turekela, Khaprakhol, Padampur, Gaisilet, Jujomura, Naktideul ,Boudh, Kantamala, Sinapali, Boden
- Gram Panchayats: 50 ( 5 GPs Per Block)
- Villages: 50 (1 per GP)
- Total are considering all districts

<b>District</b>	<b>Block</b>	<b>TVs name with More area</b>	<b>Area (Ac)</b>
Balangir	1) Turekela	Jhain	485
	2)Khaprakhol	Kali	405
		Kharsel	219
		Chikni kali	178
BARGARH	1) PADAMPUR	Chikini Kali	689
	2) GAISILET	Kharsel	528
Sambalpur	Jujomura	Chaiti	267
	Naktideul	Jhain	60
Boudh	Boudh	Chaiti	2175
	Kantamal	Tula	95
Nuapada	Sinapali	Kala	239
	Boden	Jhain	122

### District wise TVs with More area

District	TV name
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Burgarh, Bolangir	Kharsel
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Burgarh, Bolangir	Chikni Kali
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Balangir , sambalpur, Nauapada	Jhain
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Balangir , Nuapada	Kali /kala
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- **Findings**

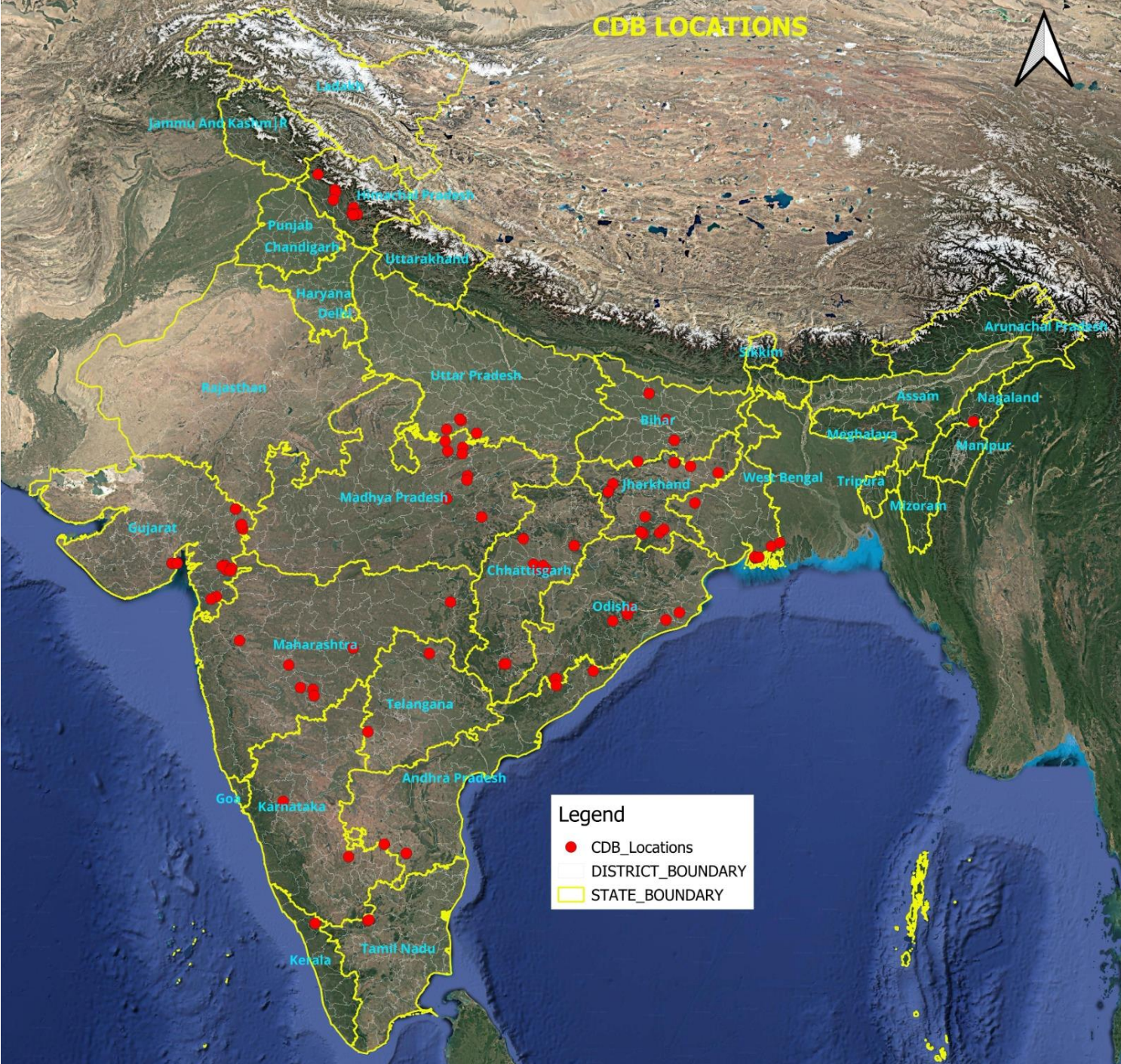
- Total area under TVs- 6780 acres including Kharif & Rabi
- Total area under HYV’s-287 ac (Virat-180;Sikha-107acres)



# BROAD OBJECTIVE OF THE PROGRAM

- Enhance the capacities of Individuals, Farmers collectives, CSOs, and KVKs who are into working with diverse crops & traditional varieties (TVs) in terms of bringing scientific and technical elements into their work, extending season-long support to build the in-house capacities
- Develop a dedicated pool of resource persons for technical data collection and documentation in Crop Diversity blocks; backup expert and farmer resource person support, and integrate the relevant database into the seed portal and develop it into a digital repository and virtual seed bank
- Making knowledge related to diverse TVs available to farmers for use in the natural farming systems to revive the diversity

## CDB LOCATIONS



**16**  
No of  
States

**66**  
No of  
partners  
involved

**61**  
No of  
Districts

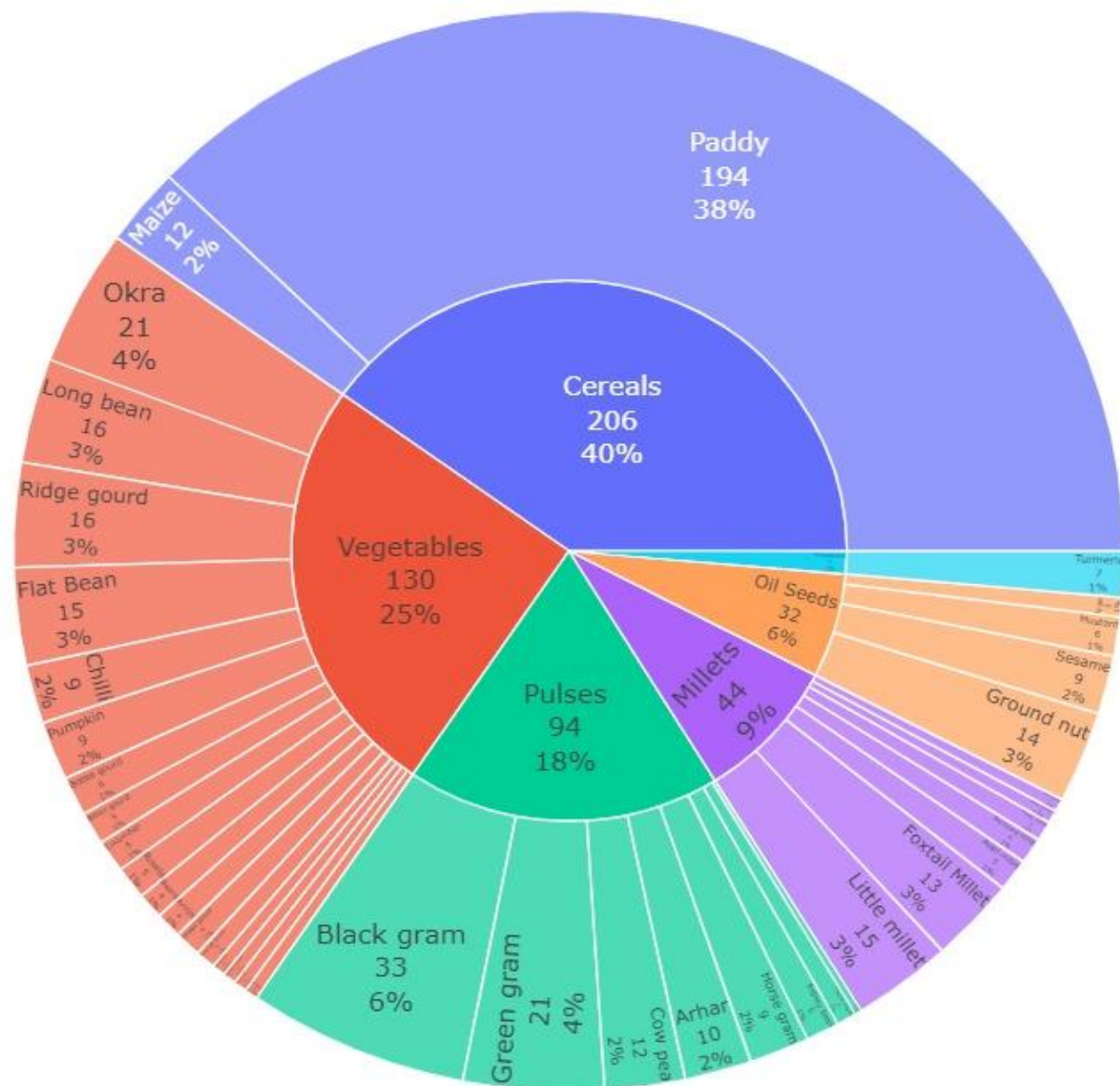
**77**  
No. of  
Blocks /  
Mandals

**261**  
No. of CDBs  
planned

**158**  
No. of CDBs  
established

**141**  
No of  
CDBs that  
survived

# CROPS AND VARIETAL DIVERSITY IN THE CDBs



**43**  
Crops

**636**  
Varieties

Characterization data of **383**  
**TVs** and passport data of **433**  
**TVs**  
was received.

# Participatory varietal Selection

40 Organizations  
organized 55 PVS in  
| 13 states and  
identification of 149  
preferred TVs.

A- with good crop condition, land choice, and natural farming practices, 3 replications, check varieties

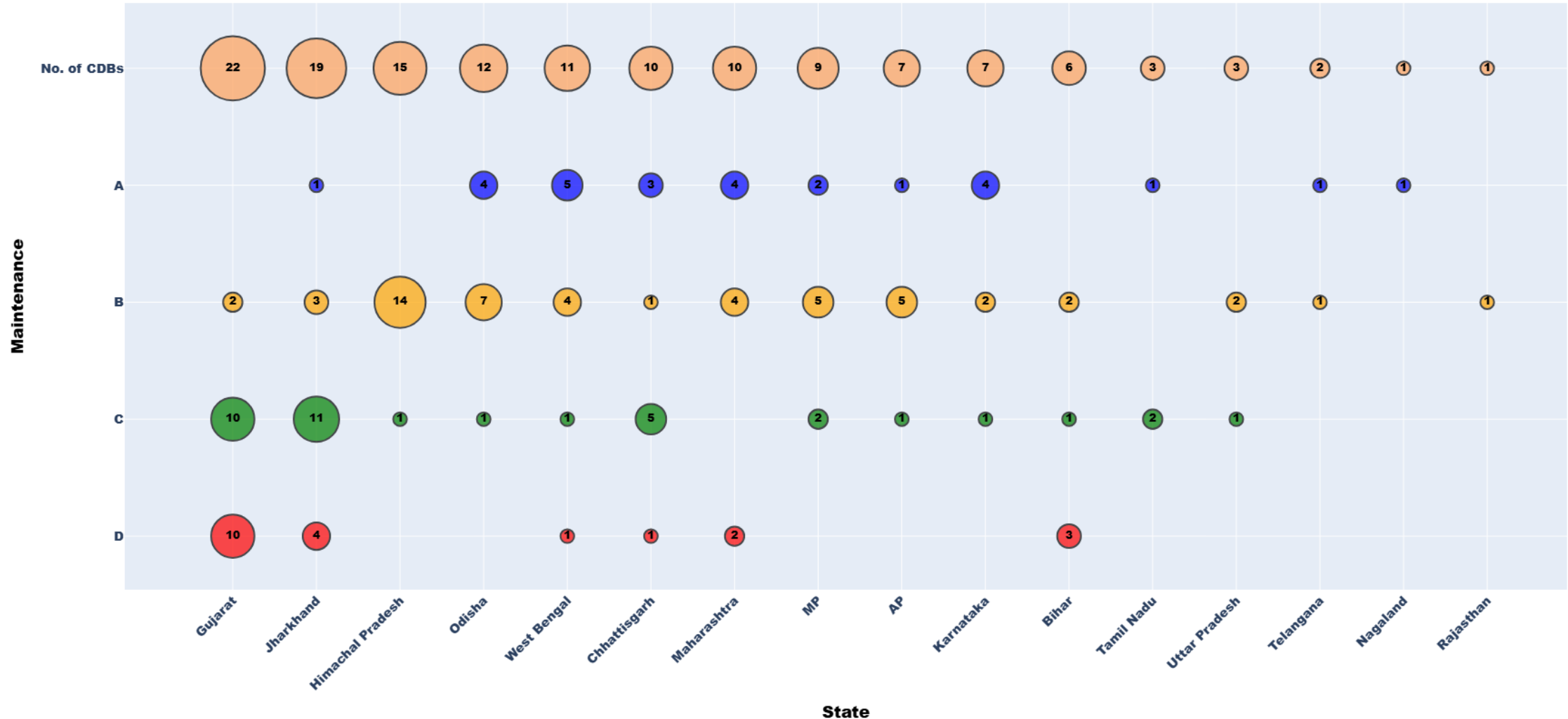
B- with 2 replications, check variety, good germination, fair crop growth, and less than 12 varieties

C- One replication, poor crop growth but recovery possible, good germination, and less than 5 varieties

D- Poor land choice, germination, crop management, late sowing and fewer than 5 varieties

### Status of CDBs - 2024

● No. of CDBs ● A ● B ● C ● D



# Traditional Seed Information & Exchange Portal

<https://seedportalapp.wassan.org/>

Working Group on Seed Systems for Rainfed Areas, RRA  
Network  
Hosted WASSAN

# Community Managed Seed Systems

Team

<https://seedportalapp.wassan.org/>

- Pool of Experts
- Pool of CMSS Fellows
- Pool of FRPs

Seed portal

CMSS Desk



Data collection, documentation &

1. Registration + Teaming up

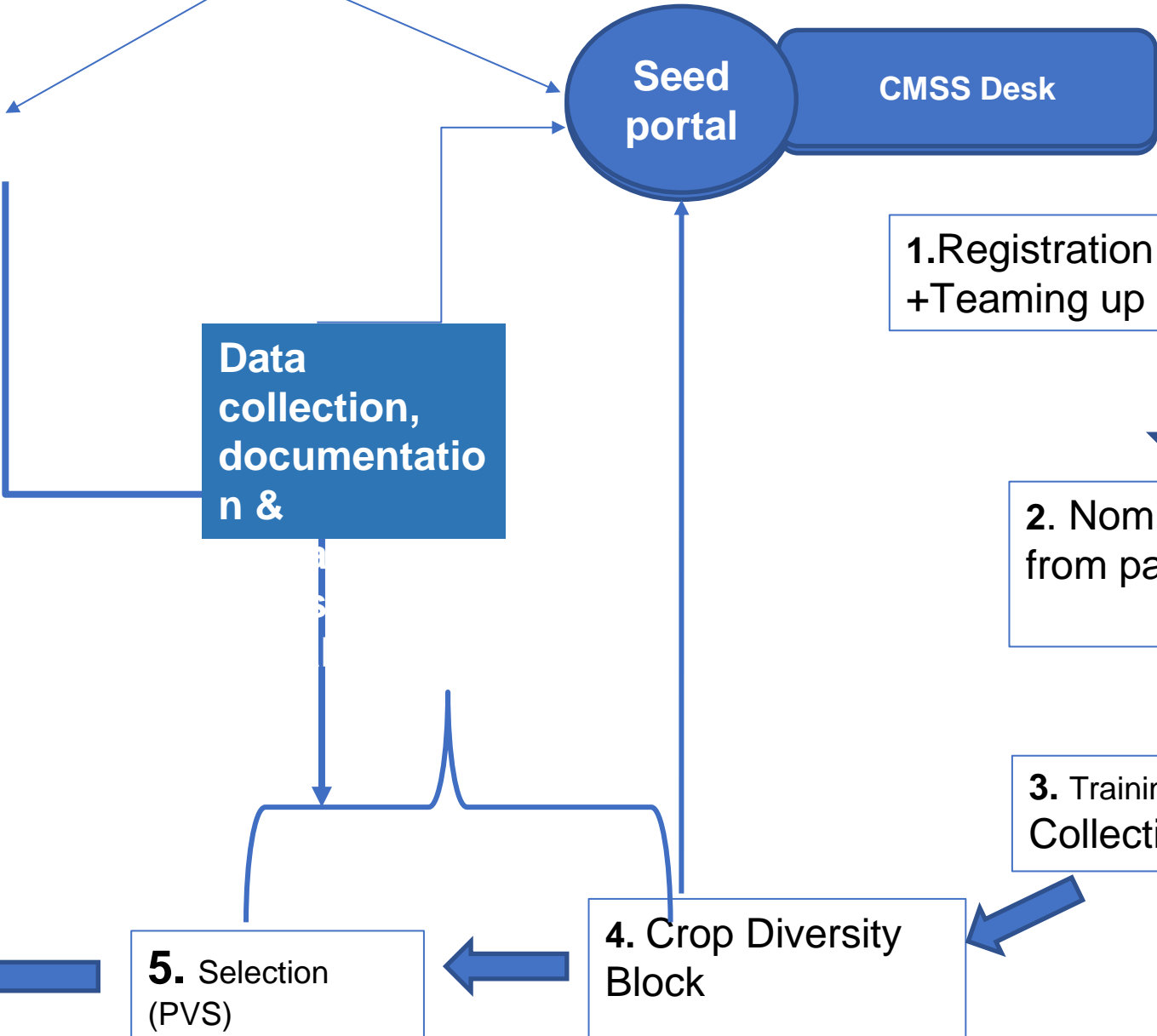
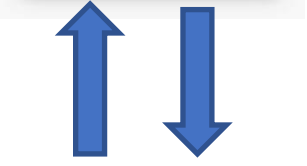
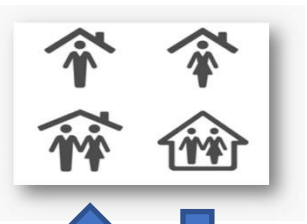
2. Nomination Letter from partners

3. Trainings & Seed Collection

4. Crop Diversity Block

5. Selection (PVS)

6. Multiplication



# CAPACITY BUILDING TRAININGS

- **Organized 23 Region wise Physical trainings, 523 participants attended**
  - Phase 1 Seed Mapping exercise
  - Phase 2: Establishment and maintenance of a CDB
  - Phase 3: Field-based data collection during the vegetative growth stage.
  - Phase 4: Data collection at maturity stages
- 60 CMSS fellows were trained
- Experts like Soumik Banerjee Krishna Prasad, Sanjay Patil, and Dr. Shakeel-ur-Rahman led the training
- three-day workshop was conducted with 43 Farmer resource persons (FRPs) from 8 states and identified farmer wise capacities in CDB grounding and facilitating PVS.
- Training on *“Participatory development of on Seed quality standards for Traditional Varieties”* were organized at Karnataka, Odisha, West Bengal and developed the seed quality standards for Ragi, Okra, Green gram, Bitter gourd, Amaranths, Bottle gourd, Ridge gourd and Spinach based on Farmers perceptive. The details are given. These training helped the farmers in quality seed production.



# TRAINING ON SEED MAPPING AND SOURCING INCLUDING PASSPORT DATA COLLECTION AND FIELD EXECUTION BY PARTNERS



# TRAINING ON LAYOUT PREPARATION AND SOWING, ALONG WITH THEIR IMPLEMENTATION BY PARTNERS



# TRAINING ON CHARACTERIZATION DATA COLLECTION (PHASE 1) AND ITS FIELD EXECUTION BY PARTNERS



# TRAINING ON CHARACTERIZATION DATA COLLECTION (PHASE 2), PVS AND ITS FIELD EXECUTION BY PARTNERS



# Engagement with State and Govt of India

## States like

- Karnataka
- West Bengal
- Odisha
- Maharashtra
- Assam
- Madhya Pradesh

## Govt of India

- Seeds Division – MoA&FW
- INM Division – MoA&FW
- NRAA



# Challenges & Opportunities

- Opportunities
- Agroecology / Natural Farming – widely discussed subject in the world
- National Mission Natural Farming
- International year of Millets
- Challenges
- NGOs struggling to support the CSBs due to issues with budgets
- So far, formal institutions are into Chemical farming
- Change in the champions within the systems due to transfers
- Govt & Non-Govt
- Schemes, programs and Policies
- R &D

# Government Investments...

- Investments are needed for the systematic exploration of traditional cropping systems in different Agro-ecologies
- Making the diverse crop seeds available – Invest on
  - Mapping and documentation of Traditional varieties by community
  - Establishment of Crop Diversity Blocks & and champion farmers' time
  - Field day and Participatory Varietal Selection (PVS)
  - Seed processing. storage infrastructure support to CSBs/ FPOs, working capital support
- To enhance the Research & Development support – conduct the trials in the farmers fields
- Institutionalization of germplasm exchange among NGB, NBPGR and Farmers organisations
- Policy – alternate seed systems for Traditional varieties by state and central





**Thank you**