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A Groundbreaking Survey and New Typology of Community Seed Banks in India



Nuaguda Community Seed Bank | Photo: Viviana Meixner Vasquez

KEY POINTS

- Community seed banks (CSBs) in India conserve and make available a huge diversity of crops and varieties to farmers, thereby strengthening their climate resilience, food and nutrition security and seed sovereignty.
- A mapping and survey of 475 CSBs shows accelerated growth since 2020 and indicates that the total number of CSBs in India is more than 1000.
- Women play a central role in CSB management and operation, underscoring the gendered nature of agrobiodiversity stewardship.
- Government support has been provided through selected schemes, but more coherent policies and support schemes are needed to ensure long-term sustainability and scaling of effective CSB models.
- Based on management structures, six types of CSBs have been identified, highlighting institutional differences that are crucial for targeted and effective policy support.

Background

Smallholder farmers account for over 85% of India's farm holdings and are central to food production, yet remain highly vulnerable to food and nutrition insecurity (Government of India, 2016). Located within agrobiodiversity-rich and diverse agroecological settings, their production systems rely on crop genetic diversity to manage risk and maintain stability. Limited access to plant genetic resources constrains farmers' ability to sustain diversified production. They largely depend on farmer-managed seed systems (FMSS) for their seed and propagating material and thus for their seed and food security.

FMSS accounts for around 40% of total seed distribution for agriculture in India. In FMSS, farmers save, use, exchange, and sell farm-saved seed of both local unregistered varieties and varieties from modern plant breeding (Andersen, 2023). Through systematic varietal selection of seed based on specific selection criteria, they may also enhance and diversify the varieties at hand. Exchange and sale normally take place within local communities and neighbourhoods. As these systems develop from the ground, there is great variation and diversity among them.

Community seed banks (CSBs) have emerged as grassroots initiatives to strengthen FMSS by conserving, multiplying, and distributing locally adapted crop varieties in line with farmers' needs and preferences (Box 1). In India, CSBs emerged primarily through NGO-led initiatives in the early 1990s which laid the foundation for a diverse and evolving CSB landscape.

BOX 1: Community Seed Banks:

Due to the rich diversity of community seed banks in India, this analysis is based on a broad definition, so as not to exclude important initiatives. Community seed banks are understood as local formal or informal institutions or initiatives whose core functions are to conserve, manage and share seeds and propagating material of diverse local crops and varieties for local use. This definition includes institutions and initiatives that are collectively governed, as well as individual initiatives that support local communities with crop diversity (DIVERSIFARM-India, 2024).

Although no peer-reviewed studies have directly assessed the impact of CSBs on food security in India, research links CSB activities to multiple food security dimensions. Well-functioning CSBs improve food availability by facilitating access to diverse and climate-resilient crops and varieties and by serving as local seed hubs, while crop diversification supports dietary diversity (King et al., 2015; Padulosi et al., 2015; Duthie-Kannikkatt et al., 2019). CSBs have also contributed to food system stability during crises and strengthened farmers' agency, food sovereignty, and economic empowerment, particularly for women (Vernooy et al., 2021; Bhatt et al., 2023).

This policy brief presents key findings from a mapping and survey of 475 CSBs across 17 Indian states and introduces a governance-based typology derived from this mapping. By linking CSBs to FMSS, local food systems, and agrobiodiversity governance, the brief targets policymakers, implementing agencies, donors, and civil society actors working on agricultural development and seed systems, and forms part of the DIVERSIFARM-India project (Box 2).

BOX 2: DIVERSIFARM-India:

Unfolding the Potentials of Community Seed Banks for Food and Nutrition Security among Smallholder Farmers in India through the Realization of Farmers' Rights (DIVERSIFARM-India) is a project designed to identify community seed banks in India and establish a national platform for them and their supporting organisations to share experiences and develop solutions to joint challenges. The project also explores why some community seed banks are particularly successful and seeks to derive lessons for capacity-building programmes. Furthermore, DIVERSIFARM-India seeks to improve the institutional, legal, and policy environments around community seed banks to strengthen their long-term sustainability and identify possibilities for scaling out best practices.

DIVERSIFARM-India is led by the Fridtjof Nansen Institute (FNI), Norway and M.S. Swaminathan Research Foundation, Chennai, India. DIVERSIFARM-India is funded by the Royal Norwegian Embassy in New Delhi.

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Welcome to our website and platform for CSBs in India
https://www.communityseedbanks.in

Existing typologies of CSBs

While several typologies have been proposed to capture the institutional and functional diversity of CSBs, no comprehensive typology-based analysis has been systematically applied in the Indian context. Existing studies classify CSBs based on storage and exchange practices (Lewis & Mulvany, 1997), conservation and sovereignty roles (Vernooy et al., 2015), or higher-level management arrangements, including community-managed, NGO-supported, and hybrid models (Ceccarelli & Grando, 2020). Context-specific typologies have also emerged in countries such as Nepal, China, and Malawi. Given the large number of CSBs governing FMSS in India and an emerging supportive policy environment on farmers' rights, adopting a comprehensive typology is important to enable more targeted and effective interventions.

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Mapping CSBs in India

This policy brief draws on a national-level online mapping and survey conducted in 2024–2025. The mapping began with consultations with 100 CSB-promoting organizations across 23 states and a desk review of secondary literature, identifying over 900 active CSBs nationwide. This was followed by a detailed online survey with 475 individual CSBs operating in 17 states. Over 65% of the CSBs mapped are located in Odisha (the focus state for DIVERSIFARM-India); however, the mapping and survey are ongoing, and greater geographical balance is expected in subsequent analyses. Survey data and narrative profiles of individual CSBs are available at the Atlas of Community Seed Banks in India. Highlights from the study are presented in this policy brief.

Rapid growth of CSBs in India

Data from the 475 mapped CSBs show a marked increase in establishment since 2011 (Figure 1), with particularly rapid growth after 2020 (Figures 1 and 2). While only a few of the mapped CSBs were founded before 2010 (12 in total), 41% were established between 2011 and 2020 and 57% after 2020. Fewer numbers for 2024 and 2025 should be interpreted cautiously, as many CSBs may still be in the process of establishment. The mapping also highlights the long-term viability of CSBs: the oldest CSB in our data, founded in 1997, and all the other CSBs established before 2010 are still active. This long-term continuity underscores the potential for CSBs to serve as community institutions in shaping FMSS when well-managed and supported.

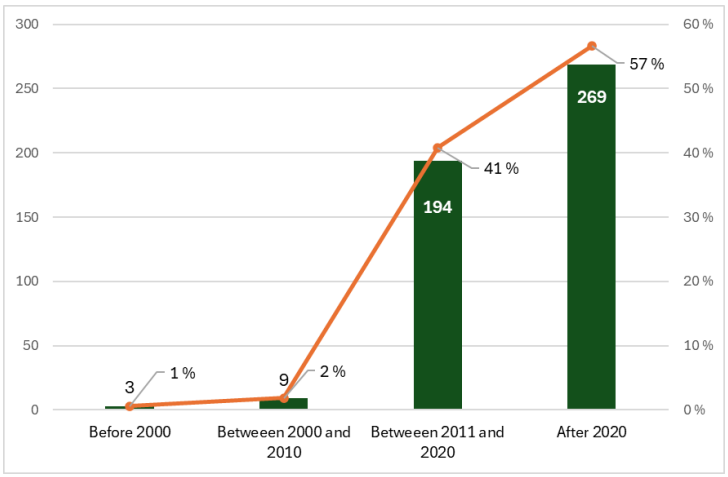


Figure 1: Growth of CSBs in India

Notable increases in CSB establishment align with key initiatives established at the national and state levels. The introduction of the Plant Genome Saviour Community Award in 2010 corresponds with an increase in CSB establishment observed from around 2015 onwards (Figure 2). A subsequent and more sustained growth phase coincides with the launch of the Odisha Millet Mission (OMM - Later renamed as SAA - Shree Anna Abhiyan) in 2017 and its progressive expansion from 2018–2020. A further acceleration is evident from 2022 onwards, which coincides with the scaling-up of millet-focused policy efforts and heightened global recognition following the UN's designation of 2023 as the International Year of Millets (Figure 2). Collectively, these patterns suggest an association between periods of increased public and policy recognition and targeted government programmes and higher rates of CSB establishment.

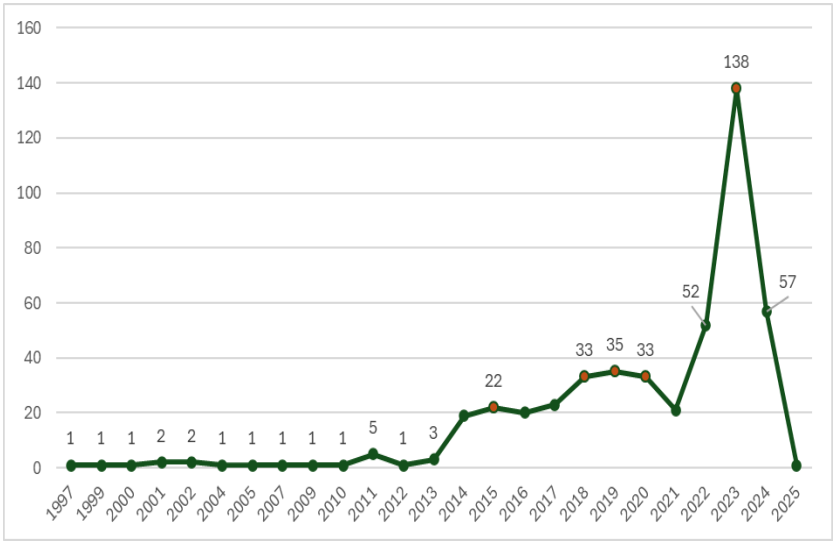


Figure 2: Trends in the CSB growth in India

A typology of CSBs in India

The analysis of the 475 CSBs indicates that governance and management arrangements offer the most consistent basis for typological comparison, as they directly shape how CSBs organize, make decisions, coordinate operations, and pursue long-term sustainability. Other variables—such as scale, crop focus, or external support—remain analytically relevant, but they tend to vary within governance categories and therefore serve better as secondary differentiating variables. Based on the mapping data, six main types of CSBs have been identified: 1. CSBs managed by individual custodian seed savers, 'seed mothers', and family seed banks; 2. CSBs managed by traditional village councils; 3. CSBs managed directly by their members or users through an elected committee; 4. CSBs managed by Self-Help Groups (SHGs); 5. CSBs managed by civil society-based registered organizations; and 6. CSBs managed by business-oriented organizations.

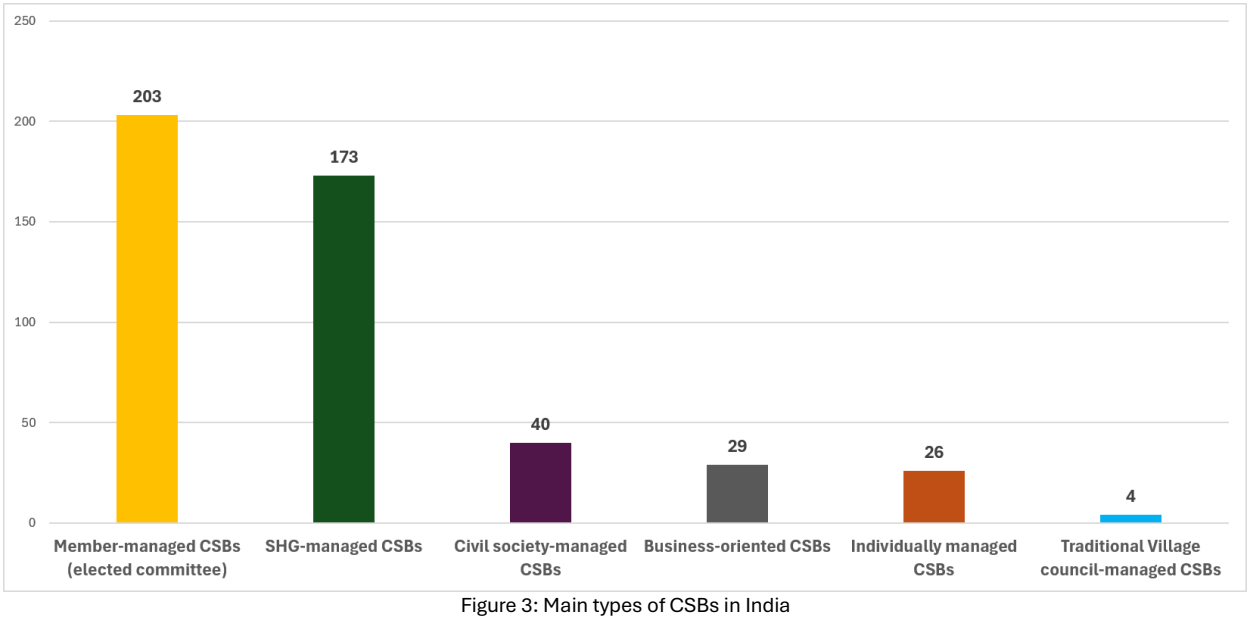


Figure 3: Main types of CSBs in India

The predominant governance forms are member-managed CSBs (203) and SHG-managed CSBs (173), together accounting for the majority of mapped CSBs (Figure 3). Smaller numbers of CSBs are managed by civil society-based registered organizations (40), business-oriented organizations (29), and individual custodians and family seed banks (26), while only 4 CSBs are managed by traditional village councils. This distribution indicates that high levels of formalization are not prerequisites for CSB establishment or operation, and that locally embedded, collective governance remains central to CSB operation.

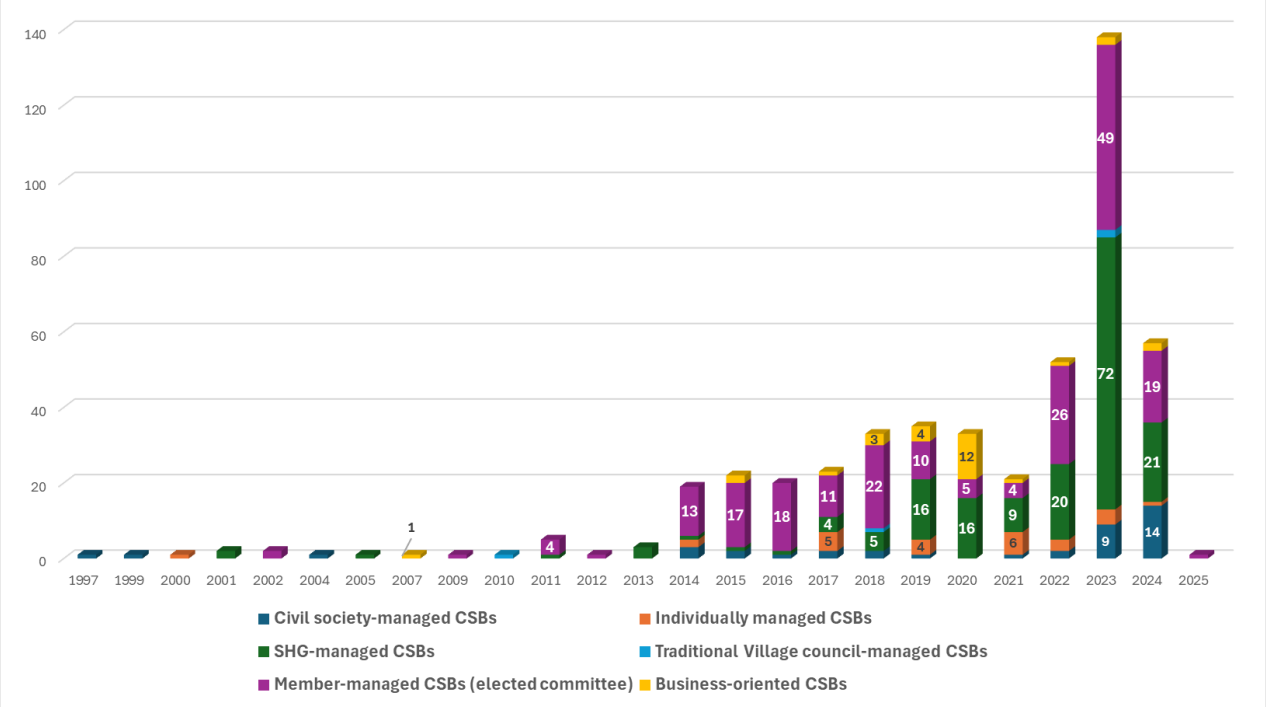


Figure 4: Types of CSBs

While member-managed CSBs represent a substantial share overall, the temporal distribution of newly established CSBs points to a strengthening of the SHG-managed model in recent years (Figure 4). Up to 2022, SHG-managed CSBs were established in relatively modest numbers. This pattern changed notably in 2023, when 72 CSBs managed by SHGs were established, compared to 49 managed directly by farmers. Data from 2024 reinforce this shift, with 21 SHG-managed CSBs and 19 member-managed CSBs, indicating that SHG-based governance is approaching parity with, and in some years surpassing, member-managed CSBs.

CSBs managed by business-oriented organizations are comparable in number to those managed by individual custodians (29 and 26 cases, respectively) (Figure 3). Most business-oriented CSBs are managed by Farmer Producer Organizations (FPOs) (farmer collectives), with the earliest established in 2007 (Figure 4). Despite their small number, business-oriented CSBs warrant closer attention, as they appear to shape commercialization pathways for local crop varieties and to structure external support mechanisms to sustain CSB activities. Overall, the diversification of CSB management models reflects an evolving institutional landscape. Further analysis and evidence gathering will be key to understanding how these evolving models shape/govern the sustainability of CSBs.

Dynamic nature of CSB types

Data from the mapping shows that CSB types are dynamic and evolve over time as they adapt to changing institutional, financial, and social conditions. CSBs initially managed by individual custodians have transitioned to being managed by traditional village councils, elected committees, SHGs, and civil society or business-oriented organizations. However, reverse transitions have also occurred when funding ended or collective arrangements dissolved. These patterns indicate that CSB types capture prevailing governance arrangements at a given point in time.

Conservation of crop diversity and access to seed are core objectives

Conservation of crop genetic diversity is the most frequently cited primary objective for CSB establishment, reported by 245 CSBs (52%) (Figure 5). While most prominent among SHG- and member-managed CSBs, conservation also remains central for civil society and business-oriented CSBs, indicating a shared foundation despite organizational diversification. Conservation objectives are closely linked to improving access to crop diversity and broader food and nutrition security goals, particularly among collectively managed CSBs. This pattern suggests that CSBs view biodiversity not only as a cultural and ecological asset, but also as a strategic resource for strengthening household- and community-level food and nutrition security.

Other objectives display more type-specific patterns: enhancement of local varieties is emphasized mostly by SHG-managed CSBs and civil society-based CSBs, while capacity building is most prominent among individually managed CSBs. Although rarely cited as a primary objective among other types of CSBs, capacity building emerges as a core activity across all types of CSBs. Commercialization plays a limited role in CSBs: most do not prioritize seed sales as an objective or routine activity. Instead, CSBs emphasize non-commercial seed sharing mechanisms, which constitute important spaces for exchange, learning, and access.

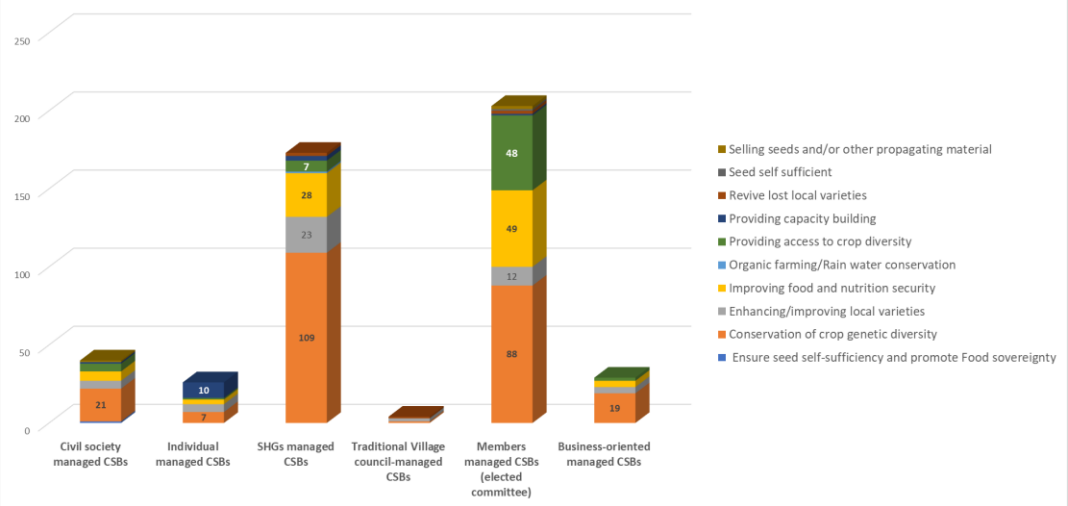


Figure 5: Main objectives for establishing CSBs

Women have a central role in CSBs

Data from 77% of the mapped CSBs indicate strong involvement of women in management and operations. Among CSBs reporting gender-disaggregated data, most are managed jointly by women and men (53%), while nearly a quarter are managed exclusively by women; only 8 CSBs reported being managed solely by men. Women's leadership is most pronounced in SHG-managed CSBs, which account for most women-only initiatives, while other governance types—particularly member-managed and business-oriented CSBs—are predominantly characterized by mixed-gender management. Further research is needed to examine how decision-making authority is distributed within mixed-gender management structures and to assess whether women and men exercise comparable influence in practice.

Crop prioritization patterns reflect differences in governance and gender dynamics. Among SHG-managed CSBs there is an almost equal emphasis on millets (72 cases) and legumes and vegetables combined (71 cases: 37 legumes and 34 vegetables), indicating a strong nutrition-oriented strategy. Millets also feature prominently across other governance types, particularly among member-managed (62 cases) and business-oriented CSBs (22 cases), reflecting their central role in community seed systems and alignment with government millet-promotion programmes. By contrast, rice is especially prominent among member-managed CSBs (93 cases), as well as among civil society-managed (23 cases) and individually managed CSBs (13 cases), underscoring its enduring agronomic and cultural importance. Overall, the data indicate that while millets emerge as a cross-cutting priority, governance structure—and associated gender composition—shapes how CSBs balance nutrition, resilience, and staple food security.

A plural support landscape: Facilitating and sustaining CSBs in India

Almost all mapped CSBs reported that they had external facilitation, with only four out of 475 CSBs not reporting a main facilitating organization. Non-governmental organizations (NGOs) dominate as primary facilitators, supporting 442 CSBs, far exceeding other actors such as FPOs (23 cases) and philanthropic trusts (6 cases). Some NGOs—including Caritas India, Living Farms, MSSRF, Prastutee, and Agragamee—account for a substantial share of the CSBs mapped. All supporting organizations associated with the 475 mapped CSBs are documented in the Atlas of Community Seed Banks in India.

Across governance types, the most frequently reported form of support sought is capacity building, followed by seed provision, while infrastructure and storage support are cited less often. Information on additional supporting organizations is available for 352 CSBs, indicating that around 123 CSBs rely primarily on their main facilitator without further external support. Where secondary support exists, government agencies are most prominent (160 cases), particularly for member- and SHG-managed CSBs.

FPOs occupy a distinctive position, appearing both as supporting actors and as the dominant organizational form within business-oriented CSBs, suggesting an emerging dual role in governance and operational support. Overall, the findings point to a layered support environment in which NGOs provide foundational facilitation, government programmes offer complementary interventions with policy support, and emerging actors such as trusts and FPOs contribute in more specialized ways, alongside continued reliance on local capacity and self-organization.

CSBs are often small but may have wide outreach

Membership scale varies across CSB governance types, reflecting differences in organizational capacity. Member-managed and SHG-managed CSBs are predominantly small to medium in size, most commonly comprising 11–30 members (122 member-managed and 91 SHG-managed CSBs). Very small groups (1–10 members) are also observed, representing 33 member-managed and 55 SHG-managed CSBs. Civil society–managed and business-oriented CSBs display more heterogeneous membership sizes, including groups with 50–100 members and very large CSBs with over 500 members (seven cases in each category). Individually managed CSBs and those governed by traditional village councils operate almost exclusively at small scales. Across all types, membership-based models predominate, with only 15 CSBs operating without a formal membership structure. Overall, the data point to a CSB landscape dominated by small, community-anchored initiatives, alongside a minority of larger-scale CSBs linked to more formal organizational arrangements.

When combined with beneficiary data, this variation in membership scale translates into markedly different levels of outreach. Across all 475 CSBs, a total of 80,136 beneficiaries is reported, with SHG-managed CSBs (31,543) and member-managed CSBs (25,750) accounting for the largest shares, followed by civil society-managed CSBs (14,724) and business-oriented CSBs (7,246). Although fewer in number, CSBs embedded in more formal organizational structures tend to reach substantially larger beneficiary populations, reinforcing the distinction between locally bounded seed initiatives and CSBs operating with broader organizational reach.

Emerging trends among CSBs in India

While NGOs have been the main supporters of CSBs in India, their support is usually project-based and time-limited. In response, many CSBs have adopted adaptive strategies shaped by changing policy contexts and development interventions. During the mapping we identified four key trends: (1) Networking among CSBs: CSBs are increasingly networking with one another, moving from stand-alone initiatives to interconnected systems that enable shared infrastructure, coordination on seed access, capacity building, market engagement, and knowledge exchange; (2) Professionalization of some CSBs: CSBs show growing professionalization, with a shift from universal seed loan schemes toward designated, trained seed producers who are compensated monetarily to ensure seed quality; (3) Commercialization within CSBs: Some CSBs have adopted commercialization strategies to address financial sustainability, with FPOs increasingly acting as umbrella entities that facilitate marketing under common brands; (4) Government support for CSBs: While CSBs are primarily NGO-initiated and facilitated, emerging government programmes reflect efforts to provide more durable, long-term support.

Implications of the typology

The governance-based typology developed in this study is intended as a strategic tool for policy engagement. This does not imply fixed or exclusive pathways: CSBs may reconfigure their functions, priorities, and modes of engagement over time in response to changing institutional policy, ecological, and economic conditions. As such, the typology offers a dynamic perspective on how CSBs operate within FMSS and local food systems.

From a policy perspective, this diversity has important implications. The typology provides a basis for differentiated policy engagement, enabling public agencies, donors, and implementing organizations to align support instruments with the specific roles CSBs play at a given moment. Rather than promoting a single model, policies can recognize and accommodate multiple CSB governance models. Adopting this dynamic perspective also foregrounds governance choices, while integrating gender-responsive governance considerations into policies supporting CSBs can help ensure that institutional change builds on women's contributions and supports equitable participation and benefit-sharing as CSBs diversify and scale. In this context, targeted and stage-

appropriate interventions are essential to support the long-term sustainability of CSBs and their continued contributions to crop diversity conservation, food and nutrition security, and women's leadership within FMSS.

TYPOLOGY OF COMMUNITY SEED BANKS IN INDIA

1. ***CSBs managed by individual custodian seed savers, 'seed mothers', and family seed banks.***
CSBs aimed at serving communities that have been initiated by an individual or family and are managed by them or the people they appoint. These CSBs may be parts of registered organisations or registered themselves.

2. ***CSBs managed by traditional village councils***
CSBs that may or may not be member-based. They are managed by traditional village councils either directly or by people they appoint.

3. ***CSBs managed directly by their members or users through elected committees***
CSBs, with members or users from one or more villages, who jointly and directly nominate/elect their management committees. Membership-based CSBs have registered members. User-based CSBs are informal networks of farmers; the management committees are nominated by the users.

4. ***CSBs managed by Self-Help Groups (SHGs)***
CSBs that may be member-based, but the management committees are either run by one or more SHG(s) or they are composed of representatives nominated and elected by and/or from one or more SHG(s). The committee members are the connecting points between the SHG(s) and the CSBs and may facilitate seed exchange as well as support from the SHG.

5. ***CSBs managed by civil society-based registered organizations***
CSBs which may or may not be member-based, and where civil society-based organizations, e.g. NGOs, are responsible for the management either directly or via people they appoint. All CSBs falling under this definition are included regardless of whether they receive facilitating services from NGOs, as NGOs may be involved in different types of CSBs and provide varying forms of support.

6. ***CSBs manged by business-oriented organizations***
CSBs that are member-based and where business-oriented registered farmer-producer federations, e.g. farmer-producer organizations (FPOs), farmer-producer companies (FPCs), or farmer cooperatives, are responsible for the management, either directly or via people they appoint.

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