



# Centre for Fruitful India (CFI) Initiative

## Harnessing Fruit-Tree Diversity as a Nature-Positive Solution for Food and Nutrition Security and Planetary Health

### Minutes and Action points CONSULTATION WORKSHOP (19-06-25)

"Finalizing CFI Implementation Strategies and Organizing a National Conference to Establish Research Grant Allocation Strategy"

Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)



The consultation workshop brought together experts from government, research, development, and implementation organizations to refine the Centre for Fruitful India implementation strategy. Participants agreed that CFI should prioritize quality planting material, nutrition and livelihood outcomes, inclusive partnerships, evidence-based research, and carefully selected intervention landscapes. Key proposed next steps include undertaking a baseline survey, developing a national White Paper on fruit accessibility and affordability, defining phased implementation targets, and organizing a national conference to guide research collaboration and grant allocation.

**The following members participated:**

1. Sanjay Kumar Singh, Deputy Director General (Horticulture), ICAR, New Delhi.
2. Dr H.P Singh, Founder and Chair of Confederation of Horticulture Associations of India (CHAI) and ex-DDG (Horticulture), ICAR; Horticultural Commissioner MoA&FW
3. Dr. Chris Kettle. Principal Scientist, Multifunctional Landscape, Alliance of Bioversity International and CIAT
4. Dr Bharat Kakade, President and Managing Trustee, BAIF Development Research Foundation, Pune, Maharashtra.
5. Dr P.K. Joshi, Economist, President of the Agricultural Economics Research Association, Vice President of the National Academy of Agricultural Sciences.
6. Dr Ruchi Pant, Head of Climate adaptation, NRM and Biodiversity, UNDP India office.
7. Dr V. B. Patel (Assistant Director General, Indian Council of Agricultural Research), New Delhi
8. Dr Suresh K Malhotra, Vice Chancellor Maharana Pratap Agricultural University, Karnal, Haryana
9. Dr R.R. Burman, Additional Director General (Agricultural Extension) Division of Agricultural Extension, Krishi Anusandhan Bhawan, New Delhi
10. Dr R. Uma Shaanker, Professor and Emeritus Scientist (Retd) and Co-Founder ATREE, Bangalore, Karnataka
11. Dr Rekha Warriar, Senior Principal Scientist, Institute of Forest Genetics and Tree Breeding, Coimbatore.
12. Dr Shailendra Rajan, Ex Director, ICAR-Central Institute for Subtropical Horticulture, Lucknow
13. Dr (Prof.) Feza Ahmad, Director, Seed and Farms, Bihar Agricultural University, Sabour, Bhagalpur-
14. R. Ananthan, Scientist-E Food Chemistry Division, ICMR-National Institute of Nutrition, Hyderabad-500 007, Telangana
15. Dr Krishna Solanke, Consultant (Agriculture & Allied Sectors), NITI Aayog, New Delhi.
16. Vibhupriya, Consultant Agrobiodiversity, UNDP, New Delhi.
17. Dr Prem Mathur, Technical Advisor (Agroecology and fruit trees) at the Alliance of Bioversity International and CIAT, New Delhi.
18. Dr J C Rana, Country Director, Alliance of Bioversity International and CIAT, India Country Office, New Delhi
19. Dr Smitha Krishnan, Senior Scientist, Alliance of Bioversity International and CIAT, Karnataka
20. Harinder Vishwakarma, Consultant, Alliance of Bioversity International and CIAT

21. Disha Sanwal, Programme Coordinator, Centre for Fruitful India, Alliance of Bioversity International and CIAT, New Delhi.

## 1. Introduction

The consultative workshop was convened to seek strategic guidance from leading experts, policymakers, researchers, development practitioners and partner organizations on the implementation roadmap of the Centre for Fruitful India (CFI). The workshop also aimed to shape the agenda and thematic priorities for the proposed national conference on research grant allocation and collaboration.

### Objectives

The workshop was organized with the objective of refining and aligning the implementation strategy of CFI while ensuring that its thematic priorities remain responsive to national development needs and emerging challenges in food and nutrition security. Participants sought to identify key research and implementation priorities for promoting fruit tree diversity, improving nutrition outcomes, and enhancing rural livelihoods. The discussions also aimed to develop a framework for a national conference that would guide future research grant allocation and foster evidence-based collaboration. Additionally, the workshop provided an important platform to strengthen partnerships among research institutions, government agencies, development organizations, private sector actors, and funding partners, enabling a coordinated and impactful approach to advancing fruit-based food systems in India.

## 2. Opening Session

The workshop commenced with welcome remarks by **Dr J C Rana**, Country Director, Alliance of Bioversity International and CIAT, who highlighted the role of CGIAR and the strategic importance of fruit tree diversity in addressing nutrition, livelihoods, and environmental sustainability.

**Dr Chris Kettle**, Principal Scientist, Alliance of Bioversity International and CIAT, presented the genesis and vision of the Centre for Fruitful India and emphasized the need for multidisciplinary approaches to improve fruit production, accessibility, and consumption

**Dr Prem Mathur**, Technical Advisor, presented the vision, objectives, conceptual framework, ongoing activities, and emerging partnerships of CFI, setting the stage for discussions on implementation and research priorities.

## 3. Technical Presentation

Dr Sanjay Kumar Singh, Deputy Director General (Horticulture), ICAR, delivered a keynote presentation titled “Promoting Nutritious Underutilized Fruit Cultivation to Improve Accessibility and Affordability for Low-Income Families: Research Priorities and Synergies with ICAR.” The presentation highlighted the significant nutritional and medicinal value of indigenous and underutilized fruit species and their potential contribution to improving dietary diversity and public health. It underscored the role of these fruit crops in enhancing climate resilience, supporting sustainable livelihoods, and reducing vulnerability among smallholder farmers, particularly in rainfed and resource-constrained regions. The presentation also explored opportunities for integrating fruit trees into multi-tier and diversified farming systems to improve productivity, resource use efficiency, and income generation. In addition, emphasis was placed on the conservation and sustainable utilization of fruit genetic resources, along with the promotion of value-added products to enhance market opportunities and farmer returns. The speaker further identified several areas of synergy between CFI and ICAR programmes, highlighting opportunities for

collaborative research, capacity building, quality planting material development, and scaling of fruit-based interventions to address nutrition, livelihoods, and environmental sustainability goals.

## 4. Key Recommendations

**4.1 CFI Implementation Strategy:** Participants recommended that CFI adopt a comprehensive and phased implementation approach that expands interventions across diverse agroecological regions while clearly defining priority fruit crops, annual activities, capacity-building plans, and expected outcomes. The workshop emphasized the importance of establishing strong partnerships with local institutions, nurseries, Krishi Vigyan Kendras (KVKs), and community-based organizations to support effective implementation. Participants further stressed the need to integrate research objectives with on-ground activities through measurable deliverables and impact indicators. In addition, a phased implementation strategy with short-, medium-, and long-term goals was recommended, supported by baseline assessments to inform intervention design, target setting, and monitoring of project outcomes.

**4.2 Nutrition, Livelihoods and Social Inclusion:** Members emphasized that nutrition and livelihoods should remain at the core of CFI's mandate and implementation strategy. The discussions highlighted the need to position nutrition as a central thematic focus, ensuring that fruit-based interventions contribute meaningfully to improved dietary diversity and health outcomes. Participants stressed the importance of promoting women's empowerment, social inclusion, and the active engagement of tribal and marginalized communities in programme activities. Recommendations also focused on improving the accessibility and affordability of fruits for low-income households through community-driven approaches and farmer-led value chains. Furthermore, members underscored the need to foster community ownership and develop interventions that simultaneously increase fruit production and encourage greater household consumption, thereby strengthening both livelihood opportunities and nutrition security.

**4.3 Planting Material and Nursery Systems:** A recurring concern raised during the workshop was the limited availability of quality planting material, which was recognized as a critical constraint to scaling fruit tree-based interventions. Participants emphasized the need to strengthen local nursery networks to ensure a reliable supply of healthy and regionally adapted planting materials. Recommendations included establishing women-led community nurseries to generate livelihood opportunities while supporting local production systems, leveraging ICAR's Clean Plant Programme to improve plant health and quality standards, and promoting graft banks, clean plant systems, and indigenous fruit propagation initiatives. Members also stressed the importance of developing efficient sourcing, certification, and distribution mechanisms to ensure timely access to quality planting material for farmers and implementing partners across target landscapes.

**4.4 Research Priorities:** The workshop identified a number of priority research areas that are critical for advancing fruit-based nutrition, livelihoods, and sustainable food systems in India. Participants emphasized the need for research on the nutritional composition and health benefits of indigenous and underutilized fruit species, alongside studies examining fruit accessibility, affordability, and consumer food environments, particularly among vulnerable populations. The discussions also highlighted the importance of developing climate-resilient and locally adapted planting material systems to support productivity under changing environmental conditions. Additional priorities included promoting fruit diversification within agroecological production systems, strengthening market access, value addition, and supply chains, and exploring policy mechanisms and institutional innovations that can support the development of fruit-based nutrition systems. Participants further

recommended spatial targeting and suitability assessments to identify high-potential geographies and guide the effective scaling of interventions across diverse agroecological landscapes.

**4.5 White Paper on Fruit Accessibility:** Several participants proposed the development of a national White Paper to generate robust evidence and inform policy action on fruit-based nutrition systems in India. The proposed White Paper would examine the accessibility and affordability of nutritious fruits across different socio-economic groups, identify key barriers to fruit consumption among vulnerable populations, and assess factors influencing dietary choices and nutrition outcomes. Members recommended that the document also explore policy and programmatic options for promoting fruit consumption and improving access to nutritious foods. Furthermore, it was suggested that the White Paper serve as a strategic resource for policymakers, researchers, donors, and development practitioners by providing evidence-based recommendations to guide future investments, research priorities, and large-scale interventions aimed at strengthening nutrition security through fruit-based food systems

**5. Partnership Opportunities:** Following Potential collaboration opportunities were identified with:

- ICAR
- NITI Aayog
- UNDP
- GIZ
- BAIF Development Research Foundation
- NABARD
- Confederation of Horticulture Associations of India (CHAI)
- Ministry of Tribal Affairs
- State governments and local institutions
- CGIAR partners and research organizations

Interest was expressed in leveraging ongoing initiatives focused on agroecology, climate resilience, nutrition gardens, biodiversity conservation, tribal development, and natural farming.

**6. Agreed Research and Implementation Themes:** Following deliberations, participants broadly converged around four thematic areas:

1. Production of Nutritionally Dense Fruit through Quality Planting Material Systems
2. Improving Access and Affordability of Fruits
3. Nutrition, Health and Consumer Behaviour
4. Partnerships, Policy Innovation and Scaling Pathways

Members emphasized that future research calls should be framed around clearly defined problem statements and measurable impact pathways.

## **7. Proposed Intervention Landscapes**

The workshop endorsed a diverse set of implementation and research landscapes across multiple agroecological zones, including sites in Bihar, Chhattisgarh, Delhi, Madhya Pradesh, Maharashtra, Telangana, Gujarat, and Himachal Pradesh through partnerships with NITI Aayog, UNDP, GIZ and CGIAR initiatives.

8. **National Conference Planning:** Participants agreed that the proposed national conference should serve as a collaborative platform bringing together researchers, policymakers, development agencies, donors, private sector representatives, and implementing institutions to address key challenges related to fruit-based nutrition systems. The conference should be solution-oriented, focusing on identifying practical and scalable responses to priority problem statements emerging from research and implementation experiences. Members emphasized that it should provide a structured mechanism for presenting, reviewing, and prioritizing research proposals aligned with national and regional needs. Furthermore, the conference should facilitate stronger alignment between ongoing development initiatives, policy priorities, and future funding opportunities, fostering partnerships that can accelerate innovation, evidence generation, and large-scale impact in improving fruit accessibility, nutrition security, and sustainable livelihoods. Following conference themes were proposed: The following conference structure and themes were suggested:

#### **Proposed Conference Structure**

- Plenary sessions on major challenges and opportunities in fruit-based nutrition systems.
- Thematic discussions and knowledge-sharing sessions.
- Technical review of research proposals.
- Engagement with donors and development partners to explore collaborative funding opportunities.

#### **Suggested Conference Themes**

- Challenges and Opportunities in Fruit Tree Cultivation
- Underutilized and Nutritionally Rich Fruit Species in India
- Strengthening Partnerships for Scalable Implementation
- Policy Innovation and Research for Fruit-Based Nutrition Systems

## **9. Baseline Survey**

The workshop endorsed the need for a comprehensive baseline survey to establish a robust evidence base for planning, implementation, monitoring, and impact assessment of CFI interventions. Participants emphasized that the survey should assess the nutritional status of target populations, with particular attention to women and children who are most vulnerable to malnutrition and micronutrient deficiencies. The baseline assessment should also identify priority districts and communities facing high levels of food and nutrition insecurity, enabling targeted interventions in areas of greatest need. In addition, members recommended mapping fruit diversity, existing production systems, consumption patterns, accessibility, and affordability of fruits to better understand local opportunities and constraints. The survey should further document the presence of institutional partners, government programmes, community organizations, and research institutions operating within proposed intervention landscapes to facilitate collaboration and avoid duplication of efforts. The findings would serve as a foundation for setting benchmarks, refining implementation strategies, and measuring the long-term impact of CFI's initiatives on nutrition, livelihoods, and sustainable food systems.

## **10. Conclusions and Way Forward**

The Scientific Committee agreed that CFI should focus on developing targeted solutions to clearly defined challenges related to fruit production, accessibility, affordability, and consumption. Emphasis was placed on strengthening partnerships, conducting robust baseline assessments, developing evidence-based interventions, and leveraging ongoing national initiatives to maximize impact. The

meeting also highlighted the importance of developing a national White Paper and launching targeted research calls that can catalyze transformational change in fruit-based food systems. The meeting concluded with closing remarks from Dr H.P. Singh, Dr Chris Kettle, and Dr Sanjay Kumar Singh, followed by a vote of thanks delivered by Disha Sanwal.