



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
CFI's Advisory Board meeting (03-04-2025)

The Alliance of Bioversity International and CIAT



The following members participated:

1. Dr H.P Singh, Founder and Chair of Confederation of Horticulture Associations of India (CHAI) and ex-DDG (Horticulture), ICAR; Horticultural Commissioner MoA&FW
2. Dr Neelum Patel, Programme Director (Agriculture & Allied Sectors), NITI Aayog, New Delhi.
3. Dr Bharat Kakade, President and Managing Trustee, BAIF Development Research Foundation, Pune, Maharashtra.
4. Dr Dr. P.K. Joshi, Economist, President of the Agricultural Economics Research Association (India), Vice President of the National Academy of Agricultural Sciences (India).
5. Dr Ajit Bhavarlal Jain, Joint Managing Director, Jain Irrigation Systems Ltd. Jalgaon India.
6. Dr Prem Mathur, Technical Advisor (Agroecology and fruit trees) at The Alliance of Bioversity International and CIAT, New Delhi.
7. Dr J C Rana, Country Director, The Alliance of Bioversity International and CIAT, India Country Office, New Delhi
8. Dr Smitha Krishnan, Senior Scientist, The Alliance of Bioversity International and CIAT, Karnataka
9. Disha Sanwal, Programme Coordinator, Centre for Fruitful India, The Alliance of Bioversity International and CIAT, New Delhi.

Purpose of the meeting: The meeting was organised to review and discuss the outcomes of the first Scientific Committee recommendations and to provide further insight to streamline the CFI initiative and way forward for the organisation of the first national conference.

Meeting minutes:

The invited SC members were welcomed by **Jai Rana**, Country Representative, Alliance of Bioversity International and CIAT. During his welcome remarks he introduced the Alliance of Bioversity and CIAT as a part of CGIAR (Consultative Group on International Agricultural Research), which is a global partnership that unites international organizations engaged in research about food security. He gave the background of the Alliance formation in 2019, where Bioversity International and CIAT joined forces to create the Alliance of Bioversity International and the International Centre for Tropical Agriculture (CIAT), a global organization building on their complementary mandates and long collaboration, to respond to today's global challenges of climate change, biodiversity loss, environmental degradation, and malnutrition.

Chris Kettle, Dr. Chris Kettle, Principal Scientist, Alliance of Bioversity International & CIAT, formally welcomed all the members and delivered the opening remarks.

Prem Mathur, Technical Advisor (Agroecology and fruit trees) at the Alliance of Bioversity International and CIAT, introduced the Centre for Fruitful India (CFI), outlining its vision, mission, aims, and objectives. His presentation, titled “*Promoting the Cultivation of Fruits for People and the Planet*”, emphasized the importance of fruit cultivation for both human well-being and environmental sustainability. He provided a structured overview of CFI’s theoretical framework and progress, stressing the need for cross-disciplinary research to enhance fruit tree cultivation and improve food security. A summary of his presentation include:

Objectives of CFI: (i) Supporting cross-disciplinary research to address gaps in fruit tree cultivation and consumption; (ii) Promoting and disseminating research on improved fruit cultivation and consumption; and (iii) Establishing a CFI multistakeholder platform to bring together key actors in the field.

CFI Action Plan: To achieve its objectives, CFI is focused on: (i) Identifying and catalysing research to enhance nutritious fruit availability; (ii) Prioritizing thematic research areas for maximum impact; (iii) Securing and funding research efforts; (iv) Disseminating research findings to stakeholders; and (v) Raising awareness among policymakers, consumers, and funders.

Theory of Change and Targets: CFI as a research catalyst that integrates fruit tree biodiversity into government policy, civil society, and agriculture, contributing to: (i) Increased use of fruit diversity for nutrition security; (ii) Innovations in fruit cultivation to improve productivity and sustainability; (iii) Greater access to nutritious fruits, especially for low-income families; (iv) Sustainable cultivation methods that protect the environment; and (v) Conservation of fruit biodiversity, mitigating climate change and securing local and global benefits.

Stakeholder Involvement: Achieving these targets requires collaboration among key stakeholders, including: (i) *NGOs and civil society* – Advocacy and community engagement; (ii) *Private sector* – Investment in research and production; (iii) *Farmers* – On-ground implementation and adoption of best practices; (iv) *Academia* – Scientific research and innovation; and (v) *Government agencies* – Policy support and funding.

CFI Governance Structure: Dr. Mathur outlined the committees managing the CFI initiative and include: (i) *Executive Management Committee* – Oversees governance, provides strategic direction, and ensures external expertise input; (ii) *Advisory Board* – Guides the long-term vision and policy direction, mobilizes resources, and supports national priorities; and (iii) *Scientific Committee* – Ensures scientific rigor, contributes to planning, evaluates project strategies, and reviews research.

Summary of Insights from his presentation:

1. Fruit cultivation is vital for food security and environmental sustainability.
2. Key challenges include accessibility, affordability, and food security.
3. CFI works to improve fruit availability through research, collaboration, and policy.
4. Cross-disciplinary research and multistakeholder platforms are essential for CFI’s goals.
5. CFI's Theory of Change emphasizes biodiversity, innovation, and better fruit access for low-income families.

6. Committees within CFI ensure governance, scientific guidance, and policy advocacy.

His presentation sets the foundation for discussion for advancing fruit cultivation as a nature-positive solution to benefit both people and the planet.

Disha Sanwal, Programme Coordinator CFI, Alliance of Bioversity International and CIAT, outlined the social media strategy for CFI and its communication channels. She provided an overview of the CFI India website, which is currently under development. The website will feature several key sections, including: (i) Partner Us" Section: This may later be renamed "Partners" and will provide details on collaborations; (ii) Resource Hub: A dropdown menu will offer access to publications, databases, blogs, videos, research articles, podcasts, and other relevant materials; (iii) Gallery and Social Media Integration: The site will showcase images and provide links to social media platforms; and (iv) Promoters of Fruit Diversity Page: This section highlights CFI's mission and role in promoting fruit diversity for improved food and nutrition security. Additionally, she presented CFI's social media and Communication Strategy, which aims to engage various stakeholders through platforms like LinkedIn, YouTube and Twitter. The strategy includes: (i) Sharing thought leadership content, partnership updates, success stories, and educational materials; (ii) Localized campaigns and live-streamed events to boost outreach; and (iii) Encouraging active engagement with research content, articles, and interviews on LinkedIn.

Summary of Insights from her presentation:

1. *CFI Website Development*: The site will serve as a central hub for information, partnerships, and resources on fruit diversity.
2. *Resource Hub & Social Media Strategy*: The platform will offer educational content, research materials, and updates to engage stakeholders.
3. *Promotion of Fruit Diversity*: CFI is positioning itself as a leader in promoting diverse fruit cultivation to enhance nutrition security.
4. *LinkedIn and Twitter Engagement*: These platforms will be used to share research, events, and success stories, while encouraging public participation.
5. *Encouraging Collaboration*: The website and social media channels aim to bring together policymakers, researchers, NGOs, and the public to support CFI's mission.

Key points discussed include:

1. **Building Partnerships**: Collaborations with academia, government institutions, NGOs, civil societies, farmers, and the private sector are crucial for resource mobilization, knowledge sharing, policy support, community engagement, and market access.
2. **Integrating Fruit Trees into Agroecological Systems**: Implementing agroforestry systems, selecting suitable species, diversifying fruit tree species, and adopting proper soil and water management practices are essential for sustainability.
3. **Developing Precision Management Technologies**: Enhancing water and nutrient use efficiency through advanced tools and techniques can make fruit cultivation more affordable, sustainable, and profitable for smallholder farmers.
4. **Climate Resilience and Mitigation**: Developing climate-smart technologies and resilient fruit varieties can help farmers sustain fruit production, ensuring long-term

sustainability, better access to nutritious fruits, environmental protection, economic stability, and climate change mitigation.

5. **Expanding Horizons in Fruit Cultivation:** Approaches such as rooftop gardens, vertical gardens, community gardens, agroforestry systems, home gardens, roadside plantations, orchards, cluster farming, and forest fringes can enhance fruit availability and accessibility while fostering community engagement and environmental conservation.
6. **Supporting National Policy Frameworks:** Collaborating with policymakers to advocate for supportive policies and engaging local communities and stakeholders to ensure initiatives meet community needs.
7. **Strategic Selection of Fruit Species:** Growing indigenous fruits like Mango, Guava, Custard Apple, Lemon, Jackfruit, Bael, and Tamarind, etc. as well as exotic fruits like Avocado, Blueberry, Dragon Fruit, Fig, Kiwi, Mangosteen, Passion Fruit, Rambutan, and Strawberry, etc. can enhance nutrition security, environmental sustainability, and economic stability.
8. **CFI's Agroecological Priorities:** Focusing on diverse agroecological zones such as Eastern and Western Himalayas, Indo-Gangetic Plains, Black Soil Regions, Deccan Plateau, Eastern Ghats, Western Ghats, and Arid and Semi-Arid Zones, where health related issues for poor people are severe, can address malnutrition and promote sustainable fruit cultivation.
9. **Fruit Diversity Promotion:** CFI's communication and media strategy comprises a website as an information hub, social media interaction, and the organization of national conferences and workshops to involve stakeholders and promote fruit diversity.
10. **Consumer Behaviour and Awareness:** Understanding consumer behaviour in rural and low-income households for promoting healthier dietary choices. Awareness programs focused on women as the target audience.

The following recommendation were made following in depth discussion:

1. It was suggested that before hosting the conference, it is necessary to prepare baseline information targeting the following:
 - Status of malnutrition in the country, with focus on children under the age of 5 years and lactating mothers.
 - Identification of priority target states/districts facing severe malnutrition.
 - Overlay these target states/districts with agroclimatic conditions.
 - Identify priority nutritious fruit species under cultivation across the target states/districts based on their adaptation to local conditions.
 - Identify major issues/problems associated with ease of cultivation, accessibility and affordability by low-income families.
 - Identify key research and development organisations/agencies in target states/districts who can be invited for the conference as research catalyst partners.

2. To identify priority states/districts/blocks, it was suggested that NITI Aayog selected 112 Aspirational Districts under its Aspirational Districts Programme (ADP). These districts were chosen based on indicators like health, education, agriculture, financial inclusion, skill development, and infrastructure. The aim is to boost development outcomes by aligning government programs, fostering collaboration, and encouraging competition among districts. More recently, The Aspirational Blocks Programme (ABP), launched in January 2023, aims to enhance governance and service delivery at the block level, particularly in less developed regions. It has identified 500 Aspirational Blocks situated in 329 districts across 27 states and 4 Union Territories. The programme focuses on improving various aspects of development to uplift these regions.
3. In view of the above, it was suggested that CFI should select some of these Districts/Block as target region to focus its activities on a phased manner.
4. These selected districts/blocks should be overlay with agroecological zones of India. India has been divided into 20 Agro-Ecological Zones (AEZs) by the National Bureau of Soil Survey and Land Use Planning (NBSS&LUP) under the Indian Council of Agricultural Research (ICAR). These zones are classified based on a combination of agro-climatic factors (temperature, rainfall, humidity), soil types, physiography (landforms), and the length of the growing period (LGP). This classification framework aims to facilitate region-specific agricultural planning, sustainable land use, and the promotion of agroecological practices tailored to local conditions.
5. Dr. Neelam Patel, shared in brief about the NITI Aayog's existing plans and how CFI mission could gain strength and synergy by collaborating with NITI Aayog, as NITI Aayog works closely with the respective line Ministries and various development partners to fast-track progress at the district level. Since the districts are also encouraged to develop and replicate best practices that drive improvement across the socio-economic themes of the low-income people, linking CFI initiative with NITI Aayog will be an added advantage and will match country priority. She suggested to explore the possibility of developing a MoU between CFI and NITI Aayog.
6. The members emphasise that the proposed CFI thematic areas should be further reframed as there is overlap across the proposed themes. Emphasis should be to conduct cross - disciplinary research using "family-type model for fruit cultivation".
7. The "family-type model for fruit cultivation" is a small-scale, low-cost, and sustainable approach designed to help low-income or marginal farming families grow fruit trees for nutrition security, income generation, and climate resilience - particularly in rural or semi-arid regions. This model promotes the cultivation of a mix of fruit trees (short, medium, and long-duration fruits) in small patches of land to ensures year-round harvest and nutrition, integrating with other components like vegetables, poultry, or beekeeping. Key features include multi-species fruit planting, low water and input requirements, synergy with nutrition gardens, income generation through surplus fruit sales, and enhanced climate resilience and soil health. Benefits for low-income families include food and nutritional security, low investment and labour requirements, improved resilience to climate shocks, and empowerment of women and youth.

8. It was also suggested that involvement of local fruit nurseries is missing in the program and should be included as possible partners as they are sources from where the elite planting material is made available to undertake research and development initiatives under CFI.
9. Another advantage working in partnership with NITI Aayog is establishing networking with development partners in Aspirational Districts, which is a strategic initiative led by NITI Aayog to accelerate progress in underdeveloped regions by leveraging the expertise, innovation, and resources of various stakeholders - including NGOs, foundations, CSR wings of corporates, and international agencies.
10. Dr Patel also suggested to link CFI initiative to the **Pradhan Mantri Dhan Dhanya Krishi Yojana (PMDDKY)**, which is a comprehensive agricultural initiative launched by the Government of India in the Union Budget 2025–26. It aims to enhance rural prosperity by focusing on 100 districts identified for their low agricultural productivity, moderate crop intensity, and limited access to credit.
11. For urban areas Municipal and local development body should be part of CFI for implementation.
12. Dr. Patel also suggested that working closely with NITI Aayog will assist in developing linkages with development partners like Anand Mahindra, who are working with NITI Aayog. Therefore, once the target districts are selected, NITI Aayog will assist in developing linkages with development partners engaged in those districts. She further suggested to organise a meeting between CFI team and Dr. O.P. Agarwal, who is currently working as Distinguished Fellow at NITI Aayog and leading the development partner network with NITI Aayog.
13. Dr. H. P. Singh suggested that the CFI initiative should focus on upscaling best practices, identifying specific blocks and agroclimatic zones to work in, and prioritizing nutritious fruits suitable for cultivation under local conditions. He emphasized the importance of improved irrigation systems, which enhance fruit productivity in low rainfall areas and reduce disease incidence due to low humidity. Therefore, developing irrigation technology should be a key focus to promote fruit cultivation for small and marginal farming families.
14. Mr. Ajit Jain emphasized the importance of selecting short-duration fruit crops to achieve impactful results during the project phase. He advised against major focusing on exotic fruits like Avocado, which is grown in Tamil Nadu as butter fruit and is abundantly available but local low-income communities may have low preferences, rather CFI should prioritize local fruits, especially while targeting the rural communities. Instead of processing, he recommended marketing ready fruits to nearby markets. He also proposed tying up with NGOs for sustainable promotion of fruit cultivation and educating local communities about the importance of fruit cultivation. Involve with companies, engaged in developing and provide elite quality planting materials and buyback of surplus fruits through contract farming for ensure returns. He also suggested conducting a baseline survey and holding a workshop before the conference to identify specific target areas and fruit species. Mr Jain agreed to provide all support for the advance of CFI initiative by Jain Irrigation System Ltd.
15. Dr. P.K. Joshi highlighted the high potential for fruit cultivation in Eastern India and suggested developing a network of people and institutes involved in the fruit cultivation process. He recommended superimposing aspirational blocks and leveraging the success

story of the Centre of Excellence. Dr. Joshi emphasized the importance of upscaling programs, thinking about impact from the beginning, conducting a baseline survey, and holding a workshop to identify target areas and fruit trees based on regions priority.

16. Dr. P.K. Joshi also suggested organizing the CFI conference into following six thematic sessions to cover various aspects of fruit cultivation and its impact. These sessions aim to provide a comprehensive understanding of the fruit cultivation landscape and promote best practices for sustainable development. The proposed sessions are:

- *Status of Malnutrition*: Discussing the current state of malnutrition and how fruit cultivation can address nutritional deficiencies.
- *Production and Consumption of Fruits*: Exploring the cultivation levels and consumption behaviour patterns of fruits in different regions.
- *Global and National Best Practices*: Sharing successful fruit cultivation practices from around the world and within India.
- *Constraints and Opportunities in Fruit Tree Cultivation*: Identifying challenges and opportunities in fruit tree cultivation.
- *Success Stories on Value Chains*: Highlighting successful value chains in fruit cultivation.
- *Government Policies on State and National Levels*: Reviewing policies that support fruit cultivation at both state and national levels.

17. Dr. Bharat Kakade emphasized the importance of identifying and studying local value chains, such as developed for custard apple, to bring them to market. He suggested targeting agro-ecological approaches to reduce chemical incidence in final products, selecting target project sites based on biodiversity hotspots, and studying the impact of these programs on the nutritional intake of smallholder farmers and low-income groups. Additionally, he recommended studying crop density and carbon sequestration in various fruit crops.

18. Recognizing the role of women as primary caregivers and meal providers, highlights the need to educate them about nutrition and the benefits of consuming fruits. Additionally, understanding consumer behaviour in rural and low-income households is essential for developing strategies that promote healthier dietary choices."

Overall suggestion and follow up actions:

- It was suggested to use "The Champions of Change (CoC) Dashboard" which is an interactive platform developed by NITI Aayog to monitor and accelerate the progress of India's Aspirational Districts Programme (ADP). Launched in April 2018, this dashboard enables District Magistrates (DMs) to regularly upload data on key performance indicators across various developmental sectors. By facilitating regular data uploads and real-time monitoring, the CoC Dashboard plays a pivotal role in driving the objectives of the Aspirational Districts Programme, aiming to uplift underdeveloped regions through targeted interventions and collaborative efforts.
- Dr Neelam Patel suggested that CFI team should visit NITI Aayog to meet various officials to access information and providing support developing linkages and

partnership, once the Districts/blocks are identified. She also suggested possible MoU between NITI Aayog and CFI to strengthen partnership.

- The conference needs proper planning and the proposed time for June is not ideal. Suggestions were made to organise this during September 2025. However, before the conference it will be useful if a pre-conference workshop inviting key players to discuss the planning of the conference will be useful. The pre-conference workshop can be held during the week of 16 June as planned for the conference.
- Prepare the baseline status report before the workshop for discussion.
- It was also proposed that CFI should consider incorporating "Consumer Behaviour" as one of its focus areas within its outreach approach. Special attention should be given to women, who play a crucial role in managing household nutrition.
- Possible Co-sponsors for the conference include: ICAR, NITI Aayog, Ministry of Agriculture and Farmers Welfare (MoA&FW), Ministry of Environment, Forest and Climate Change (MoEF&CC), UNDP, CHAI, Jain Irrigation, NAAS, TAAS, Private partners (to be explored).
- Mr Ajit Jain has kindly agreed for any kind of support needed for establishing strong collaboration with CFI.
- Both Jain Irrigation and BAIF offered hosting any of CFI meeting at their respective campus.

The meeting ended with a vote of thanks to all members for their time and significant contributions.