



COLLECTIVE ACTION ON FORGOTTEN FOODS

Forgotten No More: Farmer-led co-innovation
for transforming agri-food and research systems



The Concept Note was developed by a Task Force composed of members and partners of the Global Forum on Agricultural Research (GFAR): the Alliance of Bioversity-CIAT (ABC), Asian Farmers' Association for Sustainable Rural Development (AFA), Asia Pacific Association of Agricultural Research Institutions (APAARI), Self Employed Women's Association (SEWA), and M. S. Swaminathan Research Foundation (MSSRF), following the local level consultations in 4 districts in India, and a Partners' Workshop in Ahmedabad, Gujarat, India, held May 2023.

The TF appreciates the valuable inputs and facilitation of GFAR's Executive Secretary, Dr. Hildegard Lingnau, Senior Advisor, Mr. Alessandro Meschinelli, and its Resource and Mobilization Officer Mr. Tommaso Teti. The co-design process and the development of the concept note are activities supported under a Letter of Agreement between the UN Food and Agriculture Organization (FAO) for the GFAR, through AFA as the Service Provider with the financial support of the European Union (EU).

The concept note can be adapted by any organisation interested in initiating and implementing research and development programmes in partnership with custodian farmers and their organisation on forgotten foods, using farmer-centered and farmer-led research approaches. Interested entities are expected to design specific implementation models in alignment with the overall purpose, value, and ambition as stated in the Concept Note.

Salient features of the proposed collective action

The Collective Action (CA) on Forgotten Food is a response to the global call to rescue the Sustainable Development Goals (SDGs) and to recommit to a more inclusive process that “leaves no one behind”. It is envisioned that capitalizing on the untapped potential of science, technology, and innovation, while putting farmers, especially women, in the driving seat of the Action, can potentially result in multiple impacts beyond this initiative.

i) Co-creation: A co-designed action, allowing thousands of stakeholders (including farmers, researchers, industry, and governments) representing different views and knowledge systems, to collaborate, and mobilize their resources and ingenuity. Building on the initial work in India, the CA will mobilize stakeholders in at least 7 countries of 5 regions.

ii) A new approach to forgotten foods and neglected underutilised species (FF/NUS): Valorising the contributions of forgotten foods and NUS towards resilience, food security, and improved nutrition. Showcasing pathways for supporting food systems and agroecology transition, building on local knowledge and capacities. A pathway to strengthen farmer-managed seed systems leading to agrobiodiversity conservation and climate adaptation.

iii) Game changer of agricultural innovation and research systems: Mainstreaming and scaling out farmer-led innovation that will lead to a transformation of research governance and approaches, spearheading new replicable models of partnerships and inclusive processes.

iv) Pro-poor value chain development: Ensuring that throughout the generation of value, poor smallholder farmers, particularly women, remain in control of the benefits from the development of new business models (e.g. public-private - producer partnership) and incentive mechanisms (financial or non-financial), the creation of new enterprises, and mainstreaming of FF/NUS.

Box 1. Features of the proposed initiative

I. The Challenge We Face

The global food system has received increasing attention due to its direct and indirect contributions to many of today's sustainability challenges, especially to climate change, species and biodiversity loss, ecosystem degradation, malnutrition, hunger, and poverty (Benton et al., 2021; Braun et al., 2021; IPES-Food, 2016; UNEP, 2021).

Modern agriculture, in addition to other major social changes, has contributed to the practice of monocropping and intensive farming resulting in agricultural landscape simplification and reliance on a few staple crops that are produced with heavy external inputs including chemical fertilizers and pesticides (CBD, 2008; IPES-Food, 2016; Raven et al., 2021; Pagliarino et al., 2020). These crops and associated practices are innovated mainly by mainstream science, with farmers placed in the role of mere recipients of technologies conceived on their behalf. This has increased farmers' dependence on others, especially from mainstream research and development, including from big agriculture companies. Moreover, technology development like mechanization has catered to this type of farming system.

The replacement of local varieties has led to the steady and significant genetic erosion of crops (FAO, 2004), including those that were being used both as food and medicine by farming and indigenous communities, especially their women. Loss of species and agrobiodiversity along with its associated knowledge and system can adversely affect the resources linked to the livelihoods of small-scale farmers and Indigenous Peoples, resilience of farms, and the agri-food production in general (UNEP, 2021).

While the production and productivity of major staple crops increased significantly due to the advancement of science-based agriculture and dominance of industrial agriculture, the negative impact on health, climate, and environment has been significantly ignored.

Box 2. Impacts of Industrial Agriculture

KEY FACTS: IMPACTS OF INDUSTRIAL AGRICULTURE

80% of deforestation	threat to 86% of the 28,000 species currently at risk of extinction	up to 37% of global greenhouse gas emissions (GHGE)
use of 70% of global water resources	accelerated land degradation and land-use change	significant loss of crop and genetic diversity

Source: Fadda, C. and Nikiema, J. (2021)

Sustained focus on a limited number of crops and their outputs poses a risk of permanent loss of crop varieties in the farmers' field as well as indigenous and local agri-food systems (Bioversity International, 2019; FAO, 1999). This can make agriculture and farms more vulnerable to climate and price shocks, and less able to provide healthy food for the

world's growing population. Globally, malnutrition affects millions of people, especially those in developing countries where agriculture is a major economic sector. The 2020 SOFI Report estimated that 9.7 percent of the world population suffered from severe levels of food insecurity, with healthy diets unaffordable to many (FAO, IFAD, UNICEF, WFP, WHO, 2020). Multiple burdens of malnutrition are associated with poor diet (Hunter et al., 2019). There is a need to increase the consumption of fruits, vegetables, nuts, and legumes while reducing the consumption of certain foods such as red meat and sugar to achieve healthy diets (Willet et al., 2019). It is essential to move away from just producing enough calories and reorient agriculture and fisheries to produce diverse nutritious food that nurtures both human health and that of the environment (ibid).

Forgotten Foods or Neglected Underutilised Species, a component of agrobiodiversity, can play a role in addressing such challenges. They are still grown by Indigenous Peoples and local communities, albeit on a small scale, mainly for self-consumption and the local market. There are numerous approaches, tools, and methodologies developed by agricultural research that are yet to be fully maximized to support and validate indigenous and traditional systems. Several technologies in the digital agriculture domain (for example digital platforms, remote sensing, and soil monitoring) can support smallholder farmers managing complex systems provided that these are designed inclusively with farmers, taking into consideration their realities.

II. The Promise of the “Forgotten Foods”

Within the global scenario where current agri-food systems are insufficiently contributing to nutrition outcomes and are responsible for environmental degradation, promoting the production and consumption of nutritionally-dense FF/NUS can contribute to the transformation to more sustainable and equitable food systems and at the same time to improving the livelihoods of poor farmers, a measure which has been neglected by a number of food systems transformation approaches (Davis et al., 2022). The potential of these crops can be unlocked if they are supported by more research and more attention and promotion are devoted to them (Padulosi et al. 2013). Moreover, if incorporated in research and agri-food programs, FF/NUS will inevitably create an interface between farmers and researchers (Bioversity International, 2017), enhancing local innovation capacities, self-esteem, self-pride, and agency capacity of smallholder farmers and their communities. They can be called 'hidden treasures' that offer tremendous opportunities. For example, minor millets, a once-neglected crop can produce a reasonable harvest with only about 10 percent of the water required to grow rice. These crops are locally grown and consumed, so they have a relatively shorter supply chain, which reduces carbon emissions and provides livelihood opportunities to the locally developing rural economy.

FF/NUS, Forgotten foods, used in synonymous with minor crops, orphan crops, or poor people's crops, include yams (*Dioscorea* spp), kodo millet (*Paspalum scrobiculatum*), amaranth (*Amaranthus caudatus*), mung bean (*Vigna radiata*), jackfruit (*Artocarpus heterophyllus*) *Annona* (*Annona* spp.) (Padulosi et al., 2013). The locutions used to refer to these crops are all derogative. They only represent the point of view of the conventional production system and certainly, they do not encourage their use. However, for the people, who have been producing and consuming them for generations, they are far from being forgotten and belittled. Padulosi et al. (2013) articulated that the NUS

concept is directed at valuable plant species that are not among the major staple crops and those that have been disregarded in research and policymaking.

For centuries, Indigenous People and local communities of family farmers, fishers, herders, and pastoralists have been conserving, improving, and relying on agrobiodiversity for food, nutrition, and livelihood security, developing their varieties through local experimentation and careful observations. FF/NUS are entrenched in their local cultures and traditions (IFAD and Bioversity International, 2021; Padulosi et al. 2013; FAO, 1999). Several NUS, indigenous varieties, wild species, and farmers' landraces are known to be hardy, tolerant to stresses, and climate resilient (Li et al., 2018) because they have adapted to local conditions, especially in marginal areas (FAO, 2019; Bioversity International, 2017), they require fewer inputs as compared to improved varieties and are rich in important nutrients (IFAD, 2021; Hunter et al 2019). Moreover, their production is sustainable and economically viable (in the right setting).

FF/NUS can also be a lever in implementing several agroecology principles. According to FAO agroecology is "a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems" where ecology, economic, and social dimensions are integrated aiming at bringing sustainability in the food production system. Four key elements can be identified in the complex concept of agroecology: diversity; circular and solidarity economy; co-creation and sharing of knowledge; and, responsible governance.

The principles on which this proposal is based, the work envisaged, and the impact expected are fully aligned with the agroecological principles and approach. Promotion of forgotten foods and agroecology strongly aligns with the aims of the UN Decade of Family Farming (UNDFF) because they can be effective vehicles to in protecting and expanding the agency, inclusion and economic capacity of family farmers putting their diversity at the centre of sustainable development and contributing to the 2030 Agenda (FAO and IFAD, 2019).

III. The Nature of this Collective Action (CA) - An Approach

A. How the CA started

This collective action emanated from the Global Manifesto on Forgotten Foods, a guiding framework for present and future initiatives around forgotten foods, and a Global Concept Note drafted by the Alliance of Biodiversity and CIAT, which are products of robust country and regional-level consultation processes. The Manifesto recommends ten immediate, medium- and long-term actions, and at its core is the call for "transformation of the agricultural research and innovation system through a change in research methodologies/paradigm; professional change; changes in the governance/ organisation of development, research, and innovation; changes in institutions; and changes in training/capacity building approaches and curricula." This Global Manifesto was built on the Asia Pacific Manifesto on Forgotten Foods, which was developed based on consultations with 21 national agricultural research system (NARS) institutions and other innovation actors in the region (APAARI 2021, GFAR 2022), and the Asia Pacific Farmers

Declaration on Forgotten Foods developed by AFA, SEWA, AND MSSRF based on the survey results with 3,087 farmers in 19 countries conducted in 2021 (more on Asia-Pacific CA page).

This is a unique R&D project that has been developed under the leadership of farmers' organisations – with their active participation in the project design from the very beginning, emphasizing the need for research to bring back forgotten foods by particularly small and marginal women farmers, who are no longer seen as passive beneficiaries of the interventions designed by a third party. It builds on the work previously done by several research institutions and development agencies such as UN agencies and national and international NGOs[1].

CA partners embarked on a co-design process to develop a programme design in which India was identified as the jumping off point of the CA. Series of workshops were convened by the Self Employed Women's Association (SEWA), M. S. Swaminathan Research Foundation (MSSRF), and North East Slow Food & Agrobiodiversity Society (NESFAS) in four districts, namely Koraput in Odisha, Modasa in Gujarat, Rhi Boi in Meghalaya, and Namakkal in Tamil Nadu. The Asian Farmers Association for Sustainable Rural Development (AFA), Asia-Pacific Association of Agricultural Research Institutions (APAARI), and A Dialogue supported the process. This was followed by a Partners' Meeting in Ahmedabad bringing together 87 participants.

This co-leadership of farmers' associations (AFA, SEWA) in the co-design process guarantees that smallholders' interests and needs, particularly the research requirements necessary to revive and value forgotten foods, are the guiding principles of the project development. At the same time, the presence of experienced national and international R&D organisations and institutions, as well as NGOs and regional fora, will allow the development of a solid foundation of evidence-based interventions, and organisational and institutional frameworks that will facilitate farmers' participation in all activities. The CA goes beyond the development of mechanisms and process that valorise the role of NUS and farmers in improving nutrition, and transforming the production system, it also aims at developing marketing strategies and enabling policies that will lead to an equal and sustainable production system.

B. Capacity development

The Collective Action will support different levels of capacity development for different actors.

For farmers and their organisations, one of the areas will be the development and/or strengthening of soft skills (for example negotiation of contracts) and technical capacities, especially women farmers, to strategically engage with researchers and private sector entities. This means they will be enabled to i) generate new knowledge and use it to fine-tune existing innovations or develop new ones to address barriers associated with FF/NUS and to develop new enterprises and business models ii) elaborate their research questions, iii) examine how research priorities are set and contribute to their adjustments,

[1] for example the Alliance of CIAT and Bioversity International, IDRC, Crops for the Future, IFAD, MSSRF, ICRISAT and SEWA; see www.nuscommunity.org

and iv) track, describe and valorise their initiatives in different domains, in particular climate change adaptation, and be able to express their ingenuity and experimentation capacities (as researchers in their own right), which mobilise farmers' knowledge as a strong basis for more balanced co-research partnerships, reducing the asymmetries of power between actors. The CA will strengthen the capacities of farmers and their organisations to recognize their potential in driving the research and co-innovation agenda to respond to their needs and interests. This will enable them to participate in collective research and policy advocacy to support the promotion of indigenous and local crops, and associated knowledge and to organise themselves not only for the production and marketing of their FF/NUS. Hence, contributing to the pro-poor and women-led transformation of agricultural research and food production and innovation systems.

For research community, the CA will build capacity to: (i) work with men, women and young farmers through an equal partnership of co-innovation and farmer-centred action research; (ii) engage in collaboration to co-generate new knowledge and evidence that leads to crop improvement, greater adoption and scaling up; and (iii) support farmer experimentation and locally-specific problem-solving research that addresses the needs and priorities of farmers, in particular women farmers. It will create a safe learning environment where they are exposed to the initiatives and skills of farmers as well as to their own experimentation capacities in order to be able to reposition research agenda, methods and evaluation criteria so as to incorporate other knowledge systems in a logic of transdisciplinarity. Particular attention should be devoted to ensure that new participatory arrangements/methodologies – drawn from different country experiences/contexts - cover the full spectrum of activities, from research question formulation to assessment of results and their documentation and dissemination, considering that the generation and implementation of tested, effective models of co-research and co-innovation governance is one of the key outputs of the CA.

For extension and rural advisory services, the CA will build their capacity to: (i) know and value forgotten food and the specific barriers faced women and men farmers in producing and marketing FF/NUS; (ii) support farmers' experimentation and capacity development; and (iii) engage in co-research.

For policy makers, the CA will build their understanding of the role and importance of forgotten food to build their interest and commitment to: (i) better support localized actions of men and women smallholders and create a business climate favourable to investments from the private sector along value chains; (ii) contextualize policies within their own communities and countries to favour agrobiodiversity and sustainability; (iii) make governance and decision-making processes more inclusive with participation of men and women farmers; and (iv) integrate forgotten food in innovation strategies on foods and crops that are pro-poor.

For the private sector entities, the CA will create opportunities for partnership with farmers' organisations and cooperatives across the value chain to develop markets for raw and semi-processed nutritionally-dense forgotten crops for both urban and rural communities. The CA will engage with private enterprises and companies that have incorporated social returns as a measure of their growth. Potential partners are those who are already in the market, those who are ready to invest and can provide a stable market

for the farmers, and those who can support the challenges related to access to quality seeds and financial services.

C. Gender approach

Despite women's contribution to agricultural production and food security and multiple responsibilities within the household and communities, their role has often been ignored and women are left out from all levels of decision-making. Differences between women and men in knowledge, needs and distribution of tasks, responsibilities and knowledge must be fully understood and taken into consideration when designing and planning activities and interventions. The collective action will encourage dialogue between gender groups to promote mutual understanding and guarantee men support to enhance and create a conducive environment for women to engage in innovative agricultural activities, and decision-making processes.

Interventions will aim to challenge, as much as possible, discriminatory norms, improve awareness of gender inequalities, develop knowledge on gender, and enhance equal opportunities among farmers and other stakeholders. This includes recognizing the importance of women's economic empowerment, minimizing its negative effects, such as women's overwork, and understanding the limitations to women's emancipation due to their non-involvement in decision-making bodies, illiteracy, and lack of access and control to resources and land among others.

Specific action plans and indicators will be developed for the different intervention sites that will revolve around the 4 strategic objectives:

1. Promote equal participation in decision making processes
2. Support equal rights, access to and control over natural and productive resources
3. Enhance equal rights and access to services knowledge, markets and working opportunities and ensure equal control over the resulting income and benefits.
4. Reduce women's work burden through access to technologies and infrastructure

D. Main guiding principles of this Collective Action

i) Co-research and co-innovation process using participatory action research approaches

Brought together by GFAR, this is a partnership on promoting FF/NUS amongst various agricultural research institutions, regional and international development agencies/fora, NARS, NGOs, and family FOs at national, regional, and global levels. This CA will track, among others, various partnership models, processes, relationships, and specific actions at various levels (people, groups, and institutions). Some of the key questions include:

- *In what ways farmers active participation in global partnerships (between research institutions, farmers' organizations, private entities and civil society organizations) at national and international levels contribute to transforming food production system?*
- *In what ways does FF/NUS contribute to food systems transformation, e.g. resilience building, agrobiodiversity conservation, food security, nutrition, and livelihoods improvement, bioeconomy (SDG 1 and 2)*
- *What are the partnership mechanisms needed to accelerate the achievement of SDGs 1 and 2 - nutrition, food security, and livelihood improvement?*

- *In what ways is the CA on FFINUS contributing to gender equality and social inclusion and justice?*

Specific research questions for the participatory action research activities will be formulated by farmers-researchers at the national level or sub-national level. Possible focus areas/ topics are – seeds, soil, yield, appropriate technologies, assets, income, governance, business models, and marketing strategies.

ii) Farmer-led and farmer-driven

CA partners believe that mainstream research and traditional knowledge systems can complement each other, giving high value and recognition to the latter, thereby unleashing the potential of millions of women, men, and young family farmers for research and innovation. The initiative places them as protagonists and at the centre of the research innovation system, as compared to just being recipients of technologies generated on their behalf. It is co-led and co-managed by the farmers' organisation, including small marginal farmers, which constitute a larger proportion of farming in the Global South.

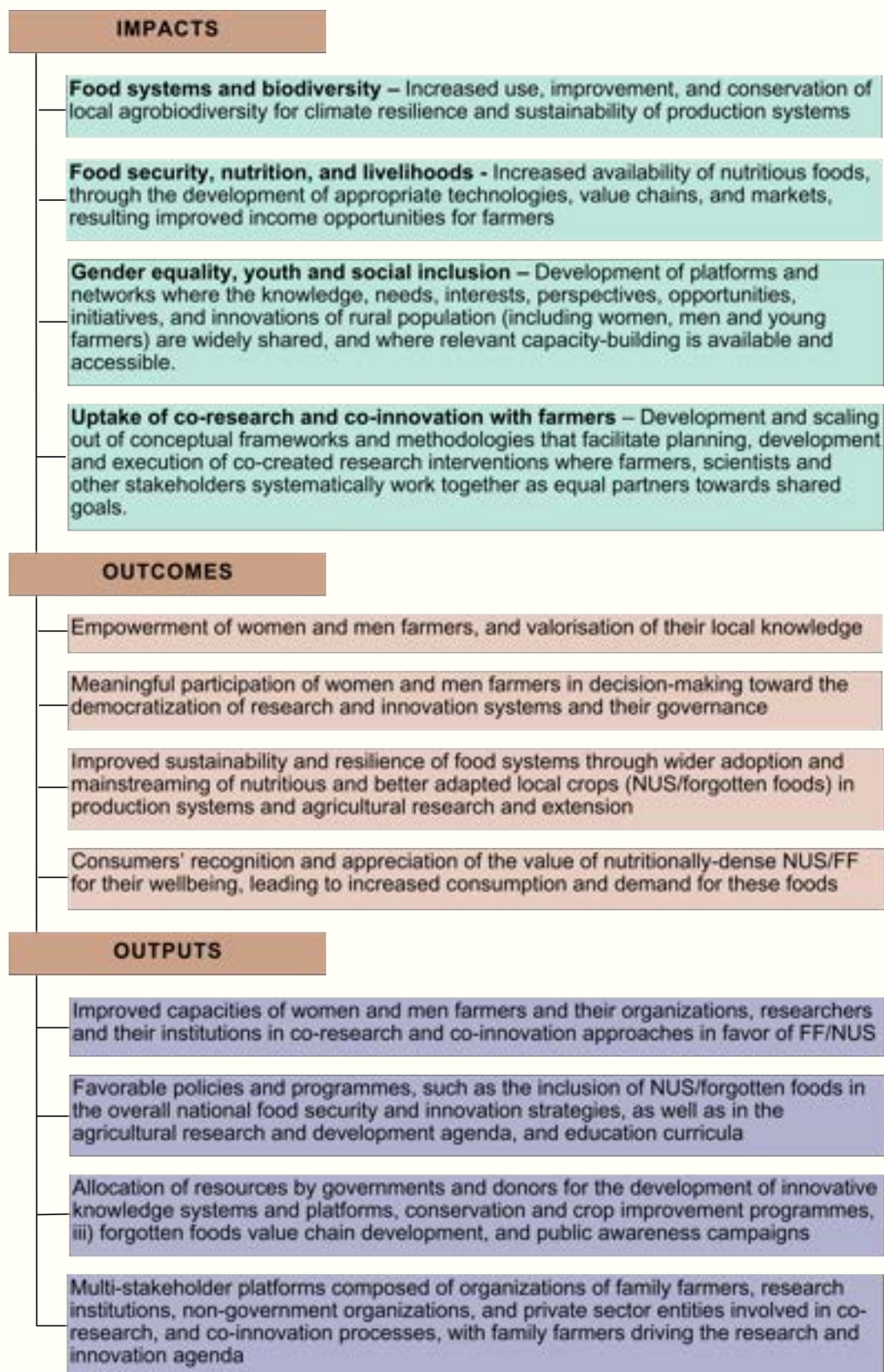
The CA will build on the work of several organisations[2] who have been engaging in participatory research and involving farmers in their research programs and activities. Already, several manuals and papers have been published based on participatory research activities (Singh and Dubey, 2021). One example is the Participatory Research and Development for Sustainable Agriculture and Natural Resource Management A SOURCEBOOK. It is common that research questions are elaborated with seldom or minimum consultation with farmers, hence they respond to research needs rather than farmers' needs. In this sense, this CA will make a difference in that the goals and the issues to be addressed are co-identified and co-developed by farmers and scientists as equal partners.

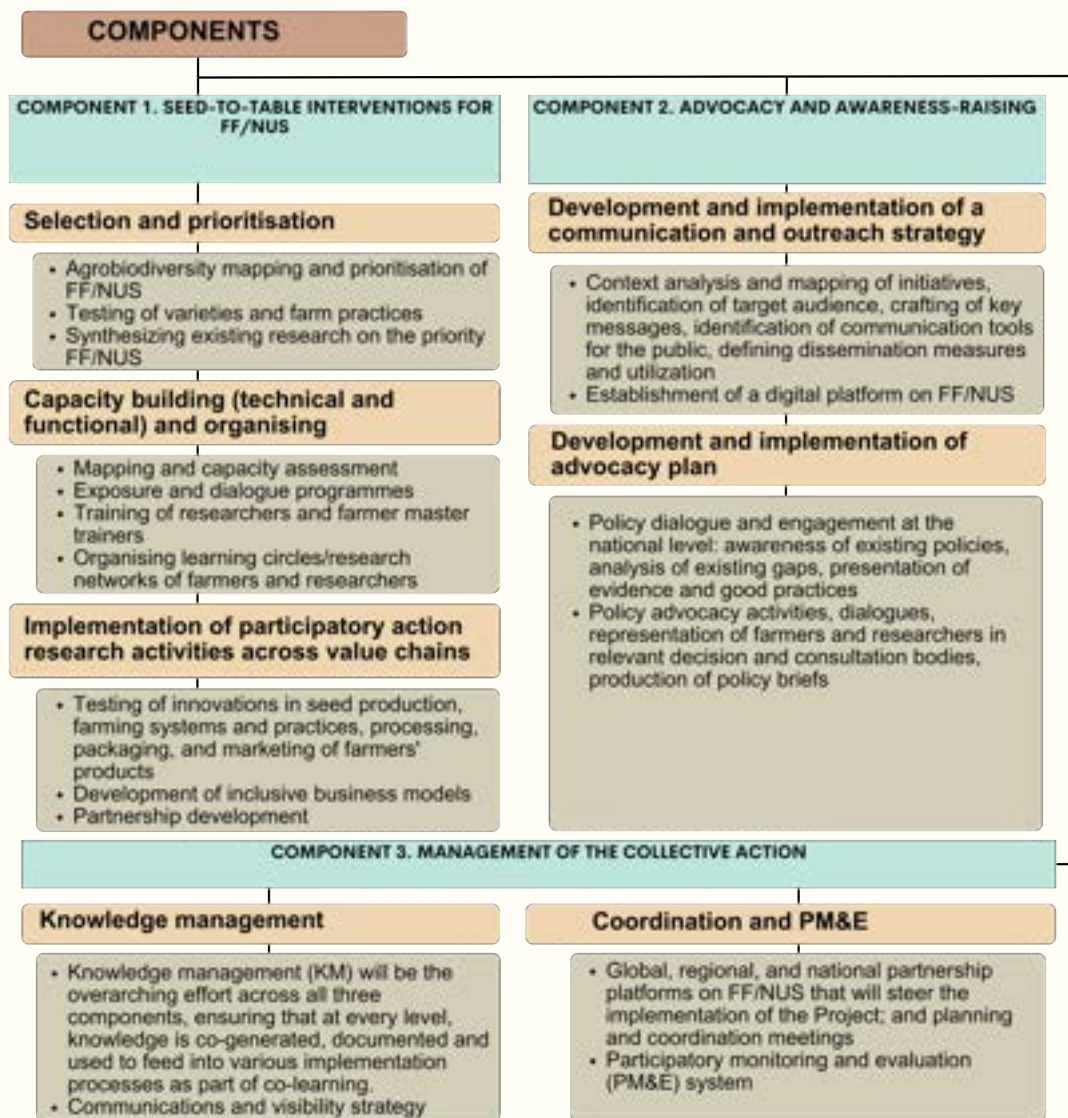
iii) Partnership Principles

The partners will work on agreed goals, objectives, and approaches through a process that is based on openness, transparency, mutual trust, respect, fairness, and power-sharing, as well as valuing and building on each other's differences. At the same time, the partners will find synergies, share risks and benefits, practice empowering communications, foster understanding rather than judging, and promote the spirit of multiple points of view exchange and dialogue towards a desire for mutual understanding, positive relationships, and improvements in the ways of working.

IV. Impact Pathway - Impacts, Outcomes, and Outputs

The CA will contribute to agrobiodiversity conservation and enhanced reliance of national programs on their local food systems by incentivizing smallholder farmers and forgotten foods and enhancing their contribution to the transformation of food systems. It will complement other initiatives working toward the goal of making agroecologically produced food more available and affordable while also contributing to poverty reduction.





Box 3. CA's impact pathway

Monitoring and evaluation processes and procedures will be developed after appropriate indicators are defined in a participatory manner to assess achievement of outputs and outcomes. At different levels, roles and responsibilities of stakeholders engaged in the implementation of the project will be defined. Efforts will be made to ensure that all stakeholders understand the outcomes and products of the project, including their use. Periodic meetings (virtual and/or in presence) will be organized to share information on the progress of the project and possible delays and difficulties for which timely corrective measures will be identified and adopted. Annual meetings will be organized to review the project work plan and monitor its relevance and the possible need for corrective measures.

V. Coverage

This is an inter-continental CA covering Asia-Pacific, Africa, and Latin America. Phase 1 will be for 3 years to start in Asia-Pacific covering 3 countries -India, Philippines, and Vietnam, where farmers' organisations and research institutions exist that can be mobilised to implement this CA. Asia-Pacific region underwent a process of co-design process and initial identification of priority FF/NUS and reasons for cultivating them and associated challenges. In the other regions, the CA will ensure appropriate consultative process will also be done. On the 2nd year, two to three countries will be identified in Africa and Latin America.

VI. Indicative budget

For the global CA the indicative budget for Phase 1 covering 3 years is 5.4 million euros (3M for Asia-Pacific, 1.5M for Africa, 0.5 M for Latin America. 0.2M for NENA and 0.2M for Central Asia). This proposed budget is aligned with 3 components, with indicative activities to be presented in the full design.

While this Concept Note was developed with the perspective of implementing it at the global level, any interested organisation can implement any component in this Concept Note, as long as it will remain coherent with the over-all purpose, values and ambition stated in this Concept Note. Therefore, the budget can be adjusted based on the scope and coverage that will be proposed.

VII. Farmers at the centre of innovation: A guide to developing the implementation arrangement at all levels - global, regional, and national

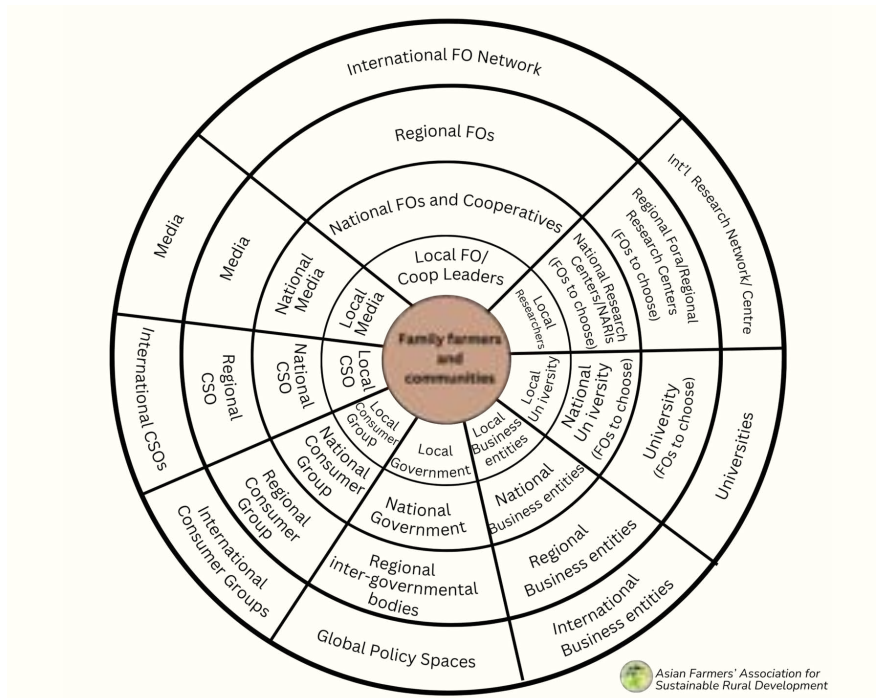


Image 1. Circle of support

The work for a farmer-led, co-innovation process for promoting FF/NUS as described in this Concept Note requires the collective intelligence and joint support of many stakeholders. These stakeholders include farmers and their organizations and cooperatives; researchers and their organisations, whether public, private, or university-based; government; non-government organisations; businesses and private sector; media and consumer groups. These stakeholder groups may be organised at all levels - from local to national, to regional to global.

While this Concept Note was developed with the perspective of implementing it at the global level, any interested organisation can implement any component in this Concept Note, as long as it will remain coherent with the overall purpose, values, and ambition stated in this Concept Note.

However, as this is a farmer-led, co-innovation participatory action research on FF/NUS, the implementation arrangement should ideally show that at all levels, from global to local, organizations of farmers and research organizations voluntarily come together in equal and fair partnerships, deciding together the goals, the processes, the methodologies, the benefits, the responsibilities, and the activities; and then agreeing together, based on their mandates, roles and competencies, the allocation of the responsibilities, tasks, activities; as well as the corresponding budgets to allow each implementing partner to effectively deliver the required outputs.



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Funded by
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