Task Force 6
Accelerating SDGs: Exploring New Pathways to the 2030 Agenda

ADVANCING THE TRANSFORMATION OF AGROECOLOGICAL FOOD SYSTEMS TO ACHIEVE ZERO HUNGER

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Abstract

Today's food systems are unable to ensure access to sufficient, safe, and nutritious food for all, and they contribute to ecological degradation, biodiversity loss, and climate change. The agroecological transformation of food systems is a promising way to effectively support Sustainable Developmental Goal (SDG) 2 (zero hunger). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has developed and piloted an integrated analytical framework that evaluates the extent to which various GIZ technical cooperation initiatives in India are contributing to food systems transformation through agroecology, identifying gaps and convergence opportunities. This policy brief recommends that the G20 prioritises agroecology as a key approach towards achieving SDG 2, while also promoting and advancing analytical frameworks that can identify synergies, gaps, and trade-offs,[1] and enable convergence and multistakeholder action across the food system. Such approaches can foster food systems that ensure sufficient food availability, good nutrition, resilient livelihoods, and ecological sustainability.

The Challenge

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Despite improvements in overall affordability of diets,[2] current agri-food systems in several regions fall short on issues of access to sufficient, safe, and nutritious food for all, and reducing malnutrition levels. The current production, processing, commercialisation, preparation, handling, and consumption patterns of food contribute to the ecological degradation of soil, land, and water resources; loss of biodiversity; and poor living conditions and declining health of producers and consumers in rural and urban areas globally. The year 2023 marks the mid-point in the achievement of the 2030 Agenda, but progress on achieving the Sustainable Developmental Goal (SDG) 2 is slow.[3] Various shocks (such as, extreme weather events, violent conflicts, and pandemics such as COVID-19) and stresses (such as, climate change) and their consequences further aggravate the situation and are amongst the major causes for the lack of progress. According to the World Food Programme, in 2022, more than 345.2 million people are acutely food insecure, with an increase of 200 million people since the COVID-19 pandemic.[4]

Under its G20 presidency in 2023, India has focussed on accelerating the SDGs. Given the magnitude of the task and the challenges involved in achieving the SDG 2, food systems need a transformative change to be able to feed and nourish the growing world population within planetary boundaries, and become nutritionally, economically, ecologically, and socially viable and sustainable. It has become progressively clear that increasing agricultural productivity and advancing production technologies alone will not be sufficient to accomplish the structural eradication of hunger and malnutrition. More systematic approaches to agriculture and food systems have been gaining momentum at a global scale. The first-of-its-kind United Nations Food Systems Summit (UNFSS) in September 2021 brought together diverse stakeholders from around the world to leverage the power of food systems transformation for SDG achievement and encouraged countries to develop their national pathways towards food systems transformation. Emerging from the UNFSS, the Global Coalition for Food Systems Transformation Through Agroecology aims to expedite the transformation of food systems through agroecology,

with a steadily growing membership of 44 countries and 94 organisations, including G20 members France and Mexico. Likewise, the sustainability of food systems is increasingly taking a prominent position in negotiations of global conventions such as in the Sharm el-Sheikh Climate Conference (COP27) and in the Kunming-Montreal Global Biodiversity Framework targets.[5]

However, many national governments have yet to take up these ambitious targets and effectively implement food systems approaches. Insufficiently coherent policy and socioeconomic frameworks need to be improved to address the interconnected challenges of hunger and malnutrition, poverty, degradation of ecosystems and biodiversity, pesticide misuse, water scarcity, pollution, and the increasing risks due to climate change and other shocks. As such, it is crucial to pay attention to the interdependencies and interactions among policies and stakeholders within a food system and the governance of the food environment to achieve overall health and nutrition outcomes. Strategic coordination and alignment are essential for this, but are often lacking. Recognising that countries are in different stages of food systems development—which influences the available opportunities and entry points for transformative processes—it is important to acknowledge that there is no universal, one-size-fits-all solution. Therefore, there is a need for analytical approaches that support evidence-based and participatory policy processes, and translate the resulting insights into actionable strategies to achieve health, nutrition, environmental, economic, and equity goals.

The G20's Role

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The Matera Declaration,[6] signed by the G20 foreign affairs and development ministers in June 2021, includes ambitious commitments to ensure sufficient, safe, and nutritious food for all and sustainable people-centric food systems to achieve SDG 2. These commitments were reiterated in the G20 Bali Leaders' Declaration[7] in November 2022. Both declarations acknowledge that SDG 2 can only be achieved by 2030 through collective and cohesive global leadership, and holistic policies targeted at promoting sustainable agriculture production, improving nutrition security, preserving biodiversity, addressing climate change, and alleviating poverty. Given the global and collaborative scale of food systems transformation, the G20 should show global leadership by focussing its mandate more strongly on food systems transformation, and strengthen global governance through integrated approaches, such as agroecology.

The High Level Panel of Experts for Food Security and Nutrition (HLPE), representing the science-policy interface of the UN Committee on World Food Security (CFS), defines a food system as comprising "all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation, handling and consumption of food, and the output of these activities, including socio-economic and environmental outcome".[8] All national governments that are members of the CFS have agreed to the HLPE framework—essentially, the three interacting elements in a food system (food supply chains, food environments, and consumer behaviour). A significant benefit of adopting the HLPE food systems approach is the ability to differentiate between the drivers and outcomes of food systems transformation, while also taking into account their interactions, competing interests, and strategic leverage points.

In 2019, the HLPE defined agroecology as an approach for food systems transformation, guided by 13 interconnected principles[9] that are in line with the 10 elements of agroecology[10] propounded by Food and Agriculture Organization. The transdisciplinary approach includes the ecological, economic, socio-cultural, technological, and political dimensions of food systems. Its principles aim is to

optimise interactions between humans, plants, animals, and the environment,[11] ranging from field and landscape to the societal level, with a focus on producer-consumer connectivity. The 13 principles thus integrate the 'what' and 'how' of the sustainable transformation of food systems. All agroecological principles contribute, in different direct and indirect ways, to food and nutrition security. Agroecology is therefore an "overarching and comprehensive systems framework to guide public policies towards sustainable agriculture and food systems."[12] It emphasises on integrated and intersectoral policies and interventions, to effectively connect and transform agricultural and food systems within planetary boundaries.

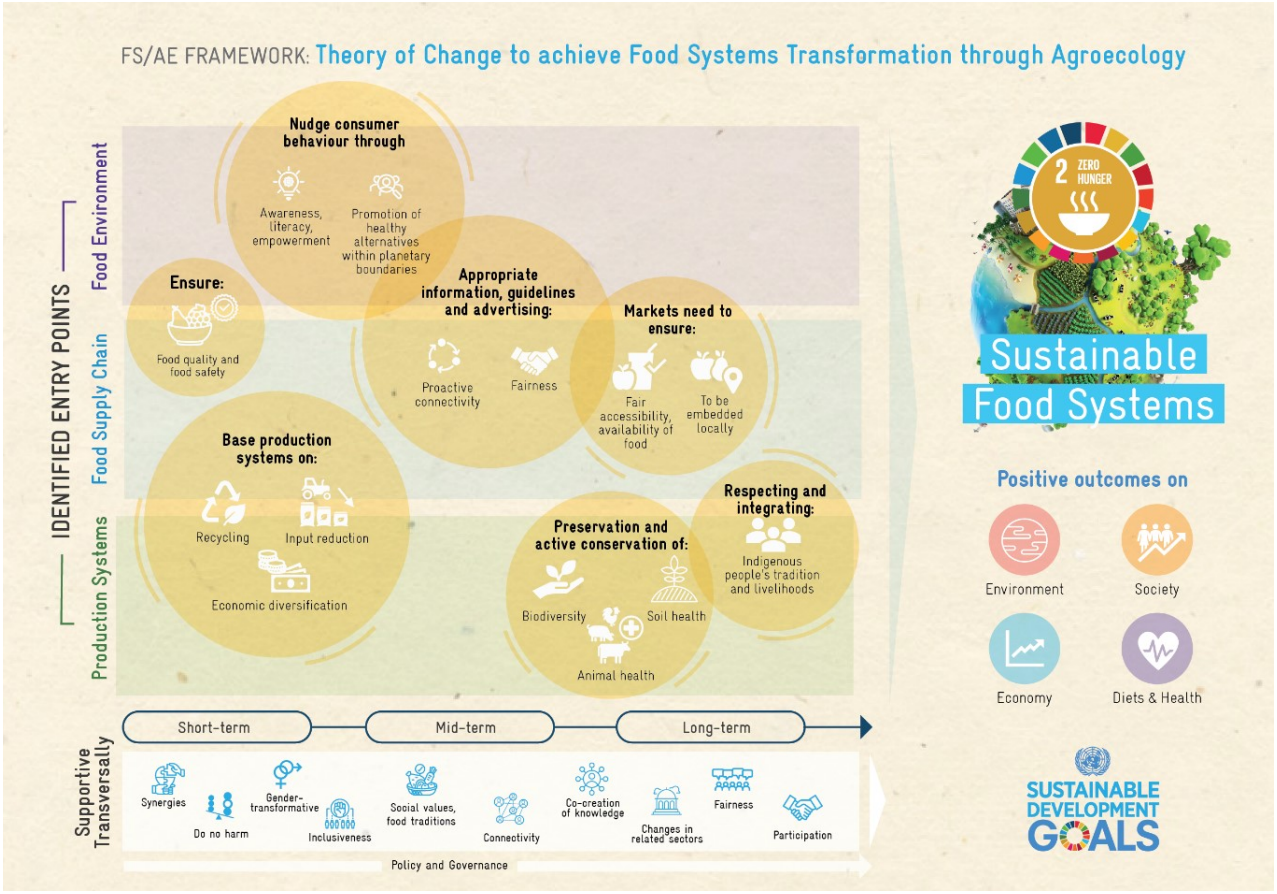
The systematic integration of agroecological principles into the food systems framework has the potential to effectively support the progressive achievement of sustainable food and nutrition security, as defined in SDG 2, while contributing to other SDGs, such as SDG 15 (life on land). To make this a reality, multiple stakeholders such as policymakers, public and private sector, civil society, and academia, need to work together at various levels, starting at the local level. This requires an understanding of the different components of food systems and their interlinkages to identify entry points for transformative pathways and practical implications for policymakers. A clearly structured, integrated analytical framework can enable assessing the connections and interdependencies of policies, institutions, and other stakeholders across the systems, to (1) determine the degree of integration, (2) identify synergies, gaps, and trade-offs for policy and multistakeholder action, (3) measure the extent of policy and programme implementation, and (4) leverage strategic coordination and convergence between stakeholders. This will be of critical importance to promote their constructive engagement in the transformative processes of food systems.

In 2022, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH developed an integrated analytical framework, food systems transformation through agroecology (FS/AE), to assess the extent to which different GIZ technical cooperation initiatives in India are contributing to an agroecological food systems transformation. The FS/AE framework outlines 10 key pathways that are

necessary for achieving transformation, focussing on crucial aspects such as sustainable and resilient production systems, efficient and inclusive supply chain management, connecting consumers and producers, addressing food security and nutrition, and strengthening policy environment. Each pathway has derived from subdimensions of the food systems framework and the 13 agroecological principles outlined by the HLPE. In total, 20 principles/subdimensions have been suggested, including interventions to support transformation processes. Figure 1 illustrates the theory of change on which the FS/AE framework has been based, as well as key entry points for transformative actions. The 10 pathways can be clustered in shifts in policy and governance, and the three entry points within food systems, namely production systems, food supply chains, and the food environment (read Figure 1 from bottom to top). The developed theory of change emphasises the importance of joint and complementary action within two adjacent entry points to catalyse a systemic shift rather than isolated measures. While some measures are associated with more than one entry point, the interplay and interconnectedness of these measures is crucial to increase impact and transformative action.

To assess the extent to which different GIZ technical cooperation initiatives in India are contributing to food systems transformation through agroecology, a two-pronged approach was piloted. The technical cooperation initiatives first ranked up to five out of the 10 key pathways that significantly represent their area of work. Subsequently, in stage two, the initiatives mapped their work according to the subdimensions of the key pathways shortlisted in stage one during a semi-structured interview. The interview guide contains dichotomous questions per key pathway and subdimensions, which offer the option to provide more information and secondary data from the initiative. The interviewed initiatives operate in 16 Indian states and engage with six political partners (Indian government departments). The results of the GIZ pilot analysis show that while interventions place a large focus on building resilient production systems and increasing agroecosystem synergies, there is less attention given to the food environment, especially addressing food consumption behaviour, nutrition and health, and support systems and nutrition

Figure 1: Integrated analytical framework to promote agroecological food systems transformation



Source: Authors' own

outcomes. This shows a rather linear supply-led thinking (from production to consumption), i.e., seeking to enhance nutrition security through increasing the supply of food, with less attention given to consumer behaviour. Furthermore, the FS/AE framework provides the scope to assess intention and action. Despite a high level of engagement and ambition demonstrated at the principles level in technical cooperation initiatives, an intention-action gap is apparent when examining the scope of activities at the operational level, indicating that there is a need for improvement in translating intentions into action.

Based on the pilot experience, the FS/AE framework can be further developed into an applicable tool for analysis of policy interventions and programmes by government and other stakeholders at different levels. It can enable the identification of gaps and trade-offs

as well as convergence possibilities for advancing food systems that not only ensure the sufficient availability of food, but also good nutrition, resilient livelihoods, and ecological sustainability towards the achievement of SDG 2. Furthermore, the tool provides the possibility to assess the extent to which policies and programmes are put into action and multistakeholder multisectoral action is realised.

As seen in the UNFSS Global Coalition for Food System Transformation Through Agroecology, agroecological food systems transformation is supported by leading stakeholders as an essential approach to improve food and nutrition security while mitigating environmental externalities. In a review of recent literature, Kerr et al. (2023) [13]find that agroecology has the "conceptual, scientific foundation, practical applications, and social legitimacy" to support food systems transformation and address major planetary challenges such as climate change, nutrition insecurity, biodiversity loss, and ecosystem degradation. The commitments set by the G20 in the 2021 Matera Declaration and the 2022 G20 Bali Leaders' are ambitious, but, as with any declaration, the ultimate validation lies in its implementation. The theme of India's G20 presidency—'*Vasudhaiva Kutumbakam*' ('One Earth One Family One Future')—provides a perfect frame to focus the group's mandate more strongly on sustainable food systems, and strengthen global governance through integrated approaches, such as agroecology. The theme spotlights the movement Lifestyle for Environment (or LiFE), which places the focus of action on environmentally sustainable and responsible choices, both at the individual and national level, leading to globally transformative actions.[14]

In line with this, advancing resilient food systems transformation through agroecology can ensure sufficient food availability, accessibility, affordability, literacy, reducing food loss/waste, food safety and sustainable consumption at all levels – local, national, and global. The G20 is well positioned to provide global leadership on recognising agroecology as an important approach for sustainable food systems transformation towards SDG 2 achievement. This calls for appropriate instruments for evidence-based policy and multistakeholder action, such as the analytical FS/AE framework piloted by GIZ to identify synergies and gaps, mitigate trade-offs, and pursue ambitious yet concrete and actionable programmes.

Recommendations to the G20

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Prioritise food systems transformation through agroecology to achieve SDG 2

The G20 should recognises agroecology as an important approach for transforming food systems from their current unsustainable and inequitable trajectories towards the achievement of SDG 2. The shift must take into account the sociocultural context by fostering inclusivity and connectivity between producers and consumers, while also acknowledging local and indigenous knowledge systems and respecting planetary boundaries. The G20 should use policy recommendations developed by the CFS[15] as an orientation to successfully harness the potential of agroecology in achieving sustainable agriculture and food systems that enhance food and nutrition security.

Promote analytical approaches such as the FS/AE framework

The G20 should promote suitable analytical instruments such as the integrated FS/AE framework piloted by GIZ to enable the identification of gaps or trade-offs and potentials, as well as convergence possibilities for advancing food systems that not only ensure sufficient food availability within planetary boundaries, but also good nutrition, resilient livelihoods, and ecological sustainability towards the achievement of SDG 2. The G20 should discuss the key policy findings with member states and support commitments on investment and improvement at the global, regional, and national levels. This means, where gaps or trade-offs are identified, the G20 should support its members to develop context-specific policies and programmes to address those and redirect public policies, budgets, and public and private investments. In cases where synergies are identified, G20 countries should promote the integration of agroecological and food systems approaches in policies and programmes, and strengthen existing and, where needed, adopt new institutional mechanisms for multistakeholder cooperation. One potential mechanism for such collaboration could be the establishment of a multistakeholder hub to track the transformation of food systems by the G20. This should be closely aligned with the UNFSS stocktaking process.

Further, the G20 should adopt and promote the development of tools

and mechanisms to monitor progress towards the implementation of integrated systems approaches with a geographical focus, budget allocations, and indicators to measure the transformative change of food systems. The Food Systems Countdown Initiative, which emerged from the UNFSS as an interdisciplinary collaboration of dozens of scientists, can be one such approach.[16]

Attribution: Liesa Nieskens et al., "Advancing the Transformation of Agroecological Food Systems to Achieve Zero Hunger," *T20 Policy Brief*, July 2023.

Endnotes

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