



# **IT for Change's Submission to the FAO Global Forum on Food Security and Nutrition**

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In April 2024, IT for Change responded to an online call for submissions titled 'How can the Food and Agriculture Organization (FAO) better support countries in addressing governance of agrifood systems transformation to make them more sustainable, inclusive, and resilient?'

This was jointly organized by the Office of SDGs, the Food Systems and Food Safety Division, the Governance and Policy Support Unit, and the Development Law Service. This initiative sought to engage various stakeholders and gather examples of governance-related measures and interventions with transformative impact for agrifood systems.

The results emerging from the received submissions will contribute to informing FAO's work at the country level related to policy, law, and governance for more inclusive, resilient, equitable, and sustainable agrifood systems. Our complete submission is as below.

### 1. Proponent (name/institution/unit)

Anita Gurumurthy, Executive Director at IT for Change

### 2. Title of the example presented and the type of *governance-related* transformative intervention/measure (policy, legal, institutional, financial...)

The Kerala Food Platform (KFP) is a government-owned digital platform ecosystem currently being developed by the Kerala Development and Strategic Innovation Council (K-DISC), operating under the aegis of the Department of Planning and Economic Affairs (Innovation and Development), the Government of Kerala, India. The Kerala Food Platform is an institutional-level intervention in order to develop a multi-stakeholder, cooperative-led platform where all stakeholders in the agricultural value chain—farmers, producers, consumers, and business providers of value-add services—are on-boarded onto one digital ecosystem, where data-driven insights and innovation is leveraged to support a state-wide cooperative agricultural network to promote inclusive & sustainable agri-value chains and food systems.

The Kerala Food Platform works in collaboration with the existing network of numerous and profitable cooperatives in Kerala and the panchayat system (India's local, decentralized governance models at the level of villages) in order to achieve network scale, with the goal to use affordances of emerging data value to develop publicly-owned data services—such as AI-based predictive analytics for forecasting demand and supply in order to improve profit for small and marginal farmers and to enhance farmer support services offered by the state, such as crop insurance and block level value-added services.

As a preliminary step in the implementation of the initiative, a pilot project has been rolled out in partnership with the Palliyakkal Service Cooperative Bank, Ezhikkara Panchayat, Ernakulam district of Kerala. In this institutional context, a platform enterprise solution is being piloted - a marketplace app with a traceability feature has been launched.

IT for Change is an invited member of Kerala Development and Innovation Strategic Council's (K-DISC) expert committee on *Digitalisation and Knowledge Economy Strategy*.

### 3. Location of the transformative intervention/measure (global/regional/national/sub-national; urban/rural)

Sub-national (Indian state of Kerala), district and panchayat level, rural and urban.

The current pilot is being executed at the Palliyakkal Services Cooperative Bank, Paravur Taluk, Ernakulam District, Kerala.

### 4. Which aspect, problem or challenge of the agrifood system was the transformative intervention/measure aiming to address?

Stagnated agricultural growth in Kerala: Kerala, a southern state in India, has been dealing with low rates of GDP growth, despite making significant gains in human development attainments. This lagging economic growth is particularly visible in the state of agriculture within Kerala: there is recorded agricultural decline<sup>1</sup> and lack of food sovereignty, with agricultural land rapidly being commercialized and enclosed by the private sector. Much like most parts of India, Kerala's agricultural sector is characterized by highly fragmented landholdings with poor farm productivity, due to the historical failure of land redistribution policies. The average landholding size in the state was 0.18 hectares in 2015–16, with over 92% of agriculturists falling under the category of marginal and small cultivators.<sup>2</sup>

<sup>1</sup>[https://spb.kerala.gov.in/economic-review/ER2017/web\\_e/ch21.php?id=2&ch=21#:~:text=Land%20use%20pattern%20in%20Kerala,declined%20by%2030.29%20per%20cent](https://spb.kerala.gov.in/economic-review/ER2017/web_e/ch21.php?id=2&ch=21#:~:text=Land%20use%20pattern%20in%20Kerala,declined%20by%2030.29%20per%20cent)

<sup>2</sup>[https://www.nabard.org/auth/writereaddata/careernotices/0810181621Mainpuri-ADS-%20Goatery%20Final\(1\).pdf](https://www.nabard.org/auth/writereaddata/careernotices/0810181621Mainpuri-ADS-%20Goatery%20Final(1).pdf)

Big data in agriculture: In addition to a fragmented and declining agricultural sector in Kerala, there is rapid datafication of food systems in the agri-value chain where there is an end-to-end control of production in market ecosystems by agri-big-tech corporations, where the monopolization of emerging data value entrenches corporate control and benefits only a select population of large farmers at the cost of destabilizing small and marginal farmers, the latter forming over 80% of India's farmer population.

The need for state-driven/economy-wide intervention to achieve scalable and sustainable open cooperativism: Platform cooperativism is an ongoing movement that aims to enable workers, producers, and consumers to own and control platform infrastructures and to appropriate platform affordances. However, current experiments in platform cooperativism only focus on enterprise-level transformations, unable to achieve scale and sustainability, particularly so within Global South food systems, where small agricultural cooperatives and Farmer Producing Organizations (FPOs)<sup>3</sup> attempting to digitize consistently failing to reach network scale.

It is against this background that the Kerala Food Platform is being developed and piloted—the state government has launched a series of efforts to revitalize the agriculture sector through the digitization of the agricultural value chain, using the sustainable backbone of agricultural and livelihoods cooperatives already functioning in Kerala. Recognizing the need for platform cooperativism in agriculture—a digital version of traditional cooperativism to harness the computational architecture of platform infrastructures—the KFP is an endeavor for an institutional-level, economy-wide transformation to support a cooperative platform ecosystem for equitable distribution of data value.

## 5. What transformational impact was the intervention/measure aiming to achieve (including in terms of the three pillars of sustainability)?

Social and Economic: The KFP is envisioned as a cooperative venture with the goal of enacting socio-economic transformation through state institutions: it is intended to be an interoperable public platform backbone where small cooperative service banks, Farmer Producer Organizations (FPOs) and other business enterprises are onboarded so that network scale is achieved through a federation of numerous decentralized cooperative ecosystems at the local level, ensuring farmers and other stakeholders—such as other Self Help Group (SHG) members—in the agri-value chain benefit from data value creation and distribution, directly benefiting small and marginal farmers, farmers with no or fragmented landholdings and hyperlocal traders in food system. Currently, over 1000+ members of the Palliyakkal Services Cooperative Bank have been enrolled, with 10% of its active members being women farmers/cultivators.

Environmental: The KFP's pilot at the Palliyakkal Service Cooperative Bank cultivates "safe-to-eat" all-organic paddy, with all farmers adopting agro-ecological techniques to grow a salt-resistant variety of paddy called Pokkali in order to boost sustainable agriculture. This variety has a GI tag, whose cultivation is increasingly recognized as more suited to this climatic zone than hybrid high-yielding varieties due to its resilient properties, reducing the land's reliance on fertilizers and pesticides.

## 6. What was the impact achieved in practice?

1. The KFP is being successfully piloted in partnership with the Palliyakkal Service Cooperative Bank, Ezhikkara Panchayat, Ernakulam district, Kerala, reaching out to a community of over 400 families, with 50% of its 1000+ member community being active. The Palliyakkal Service Cooperative has a membership of 28 self-help groups in the areas of paddy farming, floriculture, vegetable production, and dairy.
2. A marketplace app with a traceability feature has been launched (December 2022) to expand downstream marketing of vegetable produce of cooperative self-help groups of the Palliyakkal Bank, through facilitating direct end consumer distribution. By January 2023, 60–70 households from the nearby towns of Paravur and Aluva had been onboarded onto the app by the marketing officer of the Palliyakkal Bank.
3. The traceability service embedded within the application offers visibility across the supply chain, starting from farmer registration information and data supporting each stage of the supply chain. The platform is also compliant with certification processes such as the Participatory Guarantee System, India, for organic produce, with supporting data to show its origin.

<sup>3</sup>Nikam, V., Singh, P., Ashok, A., & Kumar, S. (2019). Farmer producer organisations: Innovative institutions for upliftment of small farmers. *The Indian Journal of Agricultural Sciences*, 89(9), 1383-1392.

4. Four monitoring committees—comprising member representatives, board representatives, and technical staff of the bank—have been created to provide oversight to the bank’s Self Help Groups working in paddy cultivation, vegetables, flowers, and fisheries. Palliyakkal Bank has aggregated data of all farmers from their jurisdiction into the platform, where procurement prices can be announced, enabling easy procurement by the cooperative, along with automatic record creation. The project aims to track the entire lifecycle of the bank’s projects and schemes for production support and revenue generation, in order to enhance production support decision-making, with members of the monitoring committees having access to data to decide future course of action.

**7. How was the transformative change obtained by the intervention/measure? (a) data and evidence collected, b) concrete ways to measure, c) actors involved)**

The project is currently in a pilot stage, and has not progressed enough to measure its impact.

**8. What were the key challenges and trade-offs identified and how did a measure/intervention succeed in producing co-benefits and synergies [delivering on economic, environmental and social (including gender equality) sustainability] rather than favoring one option over the other?**

1. Digital accessibility, divide, and achieving scale: As a rural transformation project, ensuring all stakeholders have access to a smartphone and internet connectivity has been an ongoing challenge in order to achieve scale. To mitigate this issue, the KFP is being piloted with cooperative banks that are active and profitable, with the goal to expand to other locations once proof-of-concept has been established.
2. Data centralization and privacy: The KFP was proposed to ensure data-driven insights and innovation benefit producers; however necessitates the creation of a centralized database of stakeholders, despite risks to privacy. To mitigate these risks and prevent free-riding by any specific stakeholder in this ecosystem, K-DISC seeks to evolve a framework for data ownership/ trusteeship in order to ensure producer cooperative control over member data and ensure a fair share in data value.

**9. Who were the key actors and stakeholders involved in the design and implementation of the intervention/measures in question, and what were their respective roles and capacities to exert power and influence?**

The Kerala Food Platform is a platform ecosystem being developed by the government of Kerala, a state in South India, under the aegis of Kerala Development and Innovation Strategic Council. Key stakeholders and beneficiaries include 1600+ primary agriculture cooperative societies/service cooperative banks, 3300+ dairy cooperatives, and eventually the 11,000+ cross-sectoral cooperatives operating in the state of Kerala. The marketplace application has been developed by the service provider SunTec, a leading tech company born in Kerala’s Technopark.

IT for Change is an invited member of Kerala Development and Innovation Strategic Council’s expert committee on *Digitalisation and Knowledge Economy Strategy*, informing K-DISC on platform ecosystem design and equitable data governance strategies.

**10. Did any of these key actors and stakeholders oppose or resist the envisioned transformative intervention, and if so, what were their main motivations and interests, and how was this resistance addressed?**

Not applicable.

**11. To what extent is this measure transformative in improving the livelihoods of the most disadvantaged, and how does it contribute to a more inclusive food system?**

The Kerala Food Platform is a crucial pilot programme that provides a blueprint for the state to create enterprise-level and economy-wide solutions to sustain a commons-oriented data value creation in the agricultural sector. By offering a flexible, digital public infrastructure backbone to traditional cooperatives and panchayats, the KFP offers actionable ways of democratizing data value by actionising principles of platform cooperativism at the economy-level, ensuring experiments in organic and agro-ecological agriculture receive institutional support and means of achieving scale and sustainability to achieve a more inclusive food system.

The primary stakeholder that the KFP aims to benefit are small and marginal farmers in Kerala, who are unable to bargain in the competitive agriculture market due to fragmented and small land holdings. The KFP, in collaboration with existing agricultural cooperatives, improves the collective bargaining power of small and marginal farmers by providing a vital digital public infrastructure backbone that not only enables easier pooling of produce before reaching the market but also promotes hyperlocal markets and selling strategies, reducing the cost of transportation and logistics.

In addition to empowering small farmers within Kerala's agri-supply chain, the KFP also aims to strengthen Kerala's domestic agrarian supply chain through principles of safe-to-eat, pesticide-free food. Currently, Kerala's food imports from other states have been tested to show high levels of insecticides and pesticides, adversely affecting the health of consumers and Kerala's food systems. The KFP in its pilot at Palliyakkal Service Cooperative has successfully supported the growth and sale of Pokkali paddy and processed food items from this paddy variety, an organic, salt-resistant variety of paddy that can be grown in the brackish waters of the Ezhikkara Panchayat. This is critical to preserving this traditional variety of paddy and also as a climate-appropriate farming practice, reducing farmers' reliance on more expensive, hybrid, water-intensive, and pesticide-reliant paddy varieties that require repeated purchase of seeds and other inputs.

**12. What means were used to demonstrate positive changes in the most disadvantaged sectors of the population, and what monitoring and accountability mechanisms were put in place to ensure proper implementation?**

The project is currently in a pilot stage and has not progressed enough to measure its impact.

**13. Key lessons that can be learned from your case (both positive and negative), and whether these could be applicable in other contexts with similar characteristics**

Successful demonstrations from the pilot of the KFP can inform agricultural policy on Farmer Producer Organizations (FPOs) and cooperatives in other states of India. IT for Change's work with other coops and FPOs have shown that experiments in digitizing that are driven by private corporations and CSR-funded initiatives are often unsustainable, with the lack of a state-funded digital public infrastructure backbone within the agri-supply chain emerging as a key theme.<sup>4</sup> KFP's success can enable transformation of digital policies within India's agricultural industry, both at the level of states and union governments.

**14. Based on your experience, what gaps/areas of improvement still remain that need further action?**

1. Achieving scale: For the federated network to achieve scale and become a viable business model, more stakeholders - especially farmers — need to be onboarded onto the platform. However, currently the Indian union government's taxation and fiscal policy regimes impede the ability of the state government of Kerala to raise revenues needed for outreach to other cooperatives and maintenance of the digital ecosystem.
2. Poor support for cooperative enterprise development in macroeconomic national policy choices: Policy blueprints of the union government, such as the emerging AgriStack project<sup>5</sup> are focused on the creation of data exchanges in agriculture that prioritize market-driven innovations and open data sharing with large agri companies. Initiatives like the Kerala Food Platform that enable producer-cooperative control over

<sup>4</sup><https://itforchange.net/creating-sustainable-data-cooperatives-global-south-frameworks-for-institutional-support>

<sup>5</sup><https://pib.gov.in/PressReleasePage.aspx?PRID=1883173>

member data and pooled agricultural data do not receive institutional and financial support, and are incompatible with the current union government models of data exchanges.

3. Protection against big-agri-tech co-option: As an experiment in progress, the Kerala Food Platform must eventually develop regulatory and legal measures to prevent the co-option of data value from big-agri-tech. The Government of Kerala must engage in developing an agriculture-specific data protection act that recognizes cooperatives as data fiduciaries, with recognized legal rights and responsibilities. Access to raw and personal data must be disallowed for private, for-profit organizations, and anonymized data sharing must be allowed only in identified use cases in order to prevent co-option and freeriding by private enterprises.

#### **15. What are your key messages/takeaways from this intervention/measure?**

1. To realize more equitable food systems within the paradigm of rapid agri-digitalization requires solutions that do not emulate technological quick fixes. As the UN notes, affordances from data-driven innovation can be powerful vectors to transform food systems, but require appropriate, multi-scalar intervention and governance by states to ensure there is equitable distribution of generated data value.
2. The ongoing movement of platform cooperativism focuses largely on enterprise-level transformations, which often lead to unsustainable and non-scalable solutions that face the risk of being co-opted by big-agri-tech. The Kerala Food Platform is an experiment in envisioning a pathway towards this economy-wide transformation through the creation of an interoperable platform backbone provisioned by the state as overhead capital, with onboarding of actors based on value match with the norms of inclusive, sustainable, and fair agricultural value chains.
3. For the realization of distributive justice within a platformized economy, platform cooperativism needs a concrete state-driven agenda for a multi-scalar institutional transformation through bottom-up governance of data, with legal provisions for frameworks of data trusteeship, and ensuring state mechanisms have access to agricultural sector data for public policy decision-making to maximize the social value of data.

#### **16. Please feel free to share relevant links to resources and documentation regarding your intervention.**

1. Multi-Stakeholder Platform. K-DISC. <https://kdisc.kerala.gov.in/en/project-2/multi-stakeholder-platform>
2. The Digital Ecosystem Opportunity for Indian Agriculture - Making the Right Choices  
<https://itforchange.net/digital-ecosystem-opportunity-for-indian-agriculture-making-right-choices>
3. Kerala's Experiments with Digital Tomorrows  
<https://platform.coop/events/roots-of-resilience/keralas-experiments-with-digital-tomorrows/#::~:~:text=Explore%20Kerala's%20digital%20innovations%20in,government%2Drun%20online%20taxi%20service%2C>