

# IFAD's Role in Indonesia's Food Security 2020-2024: Food Security Theory Analysis

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**Abstract.** *This article takes a closer look at what the International Fund for Agricultural Development (IFAD) has been doing to strengthen Indonesia's food security between 2020 and 2024, using Food Security Theory as the main analytical tool. Indonesia, as the world's fourth most populous island nation with over 270 million people, faces some serious headaches when it comes to feeding its citizens. We're talking about stunting rates stuck at 21.5% in 2024 way above the national target of 14% plus pressure from climate change on agriculture and unequal food access between cities and rural areas. This research uses a qualitative approach following Creswell's methodology, and pulls data from IFAD's official documents, Indonesian government policies, and relevant academic publications. What we found is pretty solid IFAD's programs have made real impact across all four pillars of food security. On the availability side, they modernized irrigation infrastructure across 74 districts in 16 provinces; for access, they've economically empowered 342,000 smallholder farmers and 320,000 rural youth; for utilization, they've pushed nutrition literacy and diversified local crops; and for stability, they've backed climate adaptation programs and peatland ecosystem management.*

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## INTRODUCTION

Food security has increasingly evolved from a production-centered concept into a multidimensional framework encompassing food availability, access, utilization, and stability. Recent scholarship further argues that agency and sustainability should be incorporated because food security is influenced by unequal power relations, ecological pressures, and the long-term sustainability of food systems (Clapp et al., 2022; Ogot, 2021; Piperata et al., 2023; Pinstруп-Andersen, 2009; Webb et al., 2006; Hendriks, 2015). This theoretical development is particularly relevant for understanding Indonesia, where food security cannot be assessed merely through national agricultural production. Geographic fragmentation, income inequality, rural poverty, market accessibility, dietary quality, and exposure to environmental shocks interact to determine whether households can obtain sufficient and nutritious food consistently (Sen, 1981; Ruel et al., 2018; Barrett, 2010; Ingram, 2011; Sibhatu et al., 2015; Ericksen, 2008). Food security therefore represents not only an agricultural outcome but also an indicator of socioeconomic resilience and human wellbeing.

Indonesia presents a particularly important context because the country simultaneously experiences improvements in food availability and persistent nutritional inequalities. Recent research identifies the coexistence of undernutrition, overweight, obesity, and micronutrient

deficiencies as a major manifestation of the triple burden of malnutrition in Indonesia (Andriani et al., 2023; Popkin et al., 2020; Beal et al., 2023; Oddo et al., 2022; Godfray et al., 2010; Gustafson et al., 2016). This condition demonstrates that adequate food supply does not automatically guarantee nutritional security. Food affordability, dietary diversity, household knowledge, health conditions, and the capacity to transform food into adequate nutritional outcomes are equally important dimensions of food security (Sibhatu et al., 2015; Ruel et al., 2018; Piperata et al., 2023; Pinststrup-Andersen, 2009; Webb et al., 2006). Consequently, interventions aimed at improving rural incomes and agricultural productivity must also be understood in relation to household food access, nutrition, and resilience.

The period 2020–2024 represents a particularly important period for examining these dynamics. The COVID-19 pandemic disrupted employment, household incomes, food distribution, markets, and agricultural livelihoods, exposing the vulnerability of food systems to systemic shocks (Swinnen & Vos, 2021; Laborde et al., 2021; Fatmah, 2024; Fan et al., 2021; Agyemang & Kwofie, 2021). Indonesia's experience during the pandemic demonstrates that food insecurity can emerge even when national food supplies remain available because households may lose purchasing power or experience difficulties accessing markets (Suryahadi et al., 2021; Sen, 1981; Barrett, 2010). At the same time, climate variability and increasing environmental pressures have intensified risks to agricultural production and rural livelihoods, making resilience and sustainability increasingly central to food security analysis (Wheeler & von Braun, 2013; Ericksen, 2008; Gustafson et al., 2016; Béné et al., 2023).

Within this context, IFAD's role can be interpreted through its emphasis on rural transformation, smallholder development, agricultural productivity, market participation, and livelihood resilience. Rather than viewing IFAD interventions simply as development assistance, food security theory provides a framework for examining how these interventions potentially influence availability, access, utilization, and stability. Evidence from rural development research suggests that improving smallholder productivity and market participation can strengthen household income and food access, while investments in infrastructure, agricultural knowledge, and institutional capacity can increase resilience to economic and environmental shocks (Davis et al., 2017; Hlatshwayo et al., 2023; Melesse et al., 2023; Arslan et al., 2022; Rimhanen et al., 2023). The analytical relevance of IFAD therefore lies in its potential to connect agricultural development with broader transformations in rural livelihoods and food systems.

Accordingly, examining IFAD's role in Indonesia during 2020–2024 requires more than documenting projects or financial interventions. The central analytical issue is how IFAD's interventions correspond to the multidimensional nature of food security and whether they address the structural conditions that determine food availability, household access, nutritional utilization, and stability over time. This approach also recognizes that contemporary food security increasingly depends on agency and sustainability, meaning that rural communities should have greater capacity to participate in food-system decisions while maintaining the ecological foundations of future production (Clapp et al., 2022; Fanzo et al., 2022; Gustafson et al., 2016; Béné et al., 2023). The study therefore analyzes IFAD's contribution to Indonesia's food security between 2020 and 2024 by connecting its rural development interventions with the theoretical dimensions of food security and the socioeconomic and environmental challenges affecting Indonesian rural communities.

## **METHODS**

This study employs qualitative document analysis as a systematic approach to examining and interpreting secondary written sources (Bowen, 2009). Document analysis was selected because it allows comprehensive examination of IFAD's stated objectives, implementation strategies, and available outcome evidence without requiring primary data collection or direct engagement with program participants. Qualitative research, as Creswell explains it, is basically an investigative approach meant to explore and understand what meaning people or groups attach to a social or human issue (Creswell, 2013). We went with qualitative methods because

our subject is how an international organization tackles non-traditional security issues is complex social stuff that can't be captured just with statistics. Creswell's qualitative method has some key features that work well for this research. First, it's naturalistic, we gathered data from various sources without manipulation. Second, the researcher acts as the main instrument, able to adjust the focus as things develop on the ground. Third, analysis is inductive, building general understanding from specific data points (Creswell, 2014). The descriptive-analytical framework lets us not just document IFAD's programs, but really understand how they work and their impact on each food security pillar.

The documents used in this study were systematically identified and selected from four main categories of sources. The first category consisted of IFAD institutional documents, including the Indonesia Country Strategic Opportunities Programme (COSOP) 2023–2027, IPDMIP (Inclusive Productive Development and Modernization of Irrigated Rice-Based Production) Project Supervision Reports covering the period 2020–2024, project design documents, mid-term and final evaluation reports, annual progress reports, and relevant thematic studies. These documents were obtained from the official IFAD website and its institutional repository. They were selected because they provide direct information on IFAD's strategies, program implementation, project progress, and evaluation of agricultural and rural development initiatives in Indonesia. The second category included Indonesian government documents and official statistical publications. These sources consisted of the Rencana Pembangunan Jangka Menengah Nasional (RPJMN/National Medium-Term Development Plan) 2020–2024, the Ministry of Agriculture's five-year strategic plans and annual performance reports for 2020–2024, national food security reports and statistical publications from the National Food Agency (Badan Pangan Nasional), and food security indicators, malnutrition data, poverty statistics, and agricultural production data published by the Central Statistics Agency (Badan Pusat Statistik). These documents were accessed through official government websites, including BPS, the National Food Agency, and the Ministry of Agriculture. Government sources were used to provide national-level evidence and to assess changes in Indonesia's food security and agricultural development conditions during the study period.

The third category consisted of reports and assessments published by international organizations. These included Food and Agriculture Organization (FAO) reports and food security assessments concerning Indonesia for 2020–2024, FAO Food Price Index monthly data and related contextual analyses for 2019–2023, World Food Programme (WFP) Indonesia Country Briefs and situational analyses for 2020–2024, World Bank reports on agricultural development and rural poverty, and UNICEF reports on nutrition and stunting. These sources were selected to provide an international perspective on Indonesia's food security situation and to support the analysis of broader factors such as food prices, poverty, nutrition, agricultural development, and vulnerability. The fourth category comprised academic and peer-reviewed literature published between 2015 and 2024. The literature focused on Indonesia's food security, agricultural development, the role of international development organizations, rural poverty reduction, and food security theory. Relevant studies were identified through Google Scholar, ResearchGate, and direct searches of academic journals in development studies, agricultural economics, and international relations. The main search terms included "food security Indonesia," "IFAD agricultural development," "stunting Indonesia malnutrition," "rural development Indonesia," "climate adaptation Indonesian agriculture," and "international development organizations." No prior language restrictions were applied during the initial search. However, the final selection included academic articles written in English or articles with English abstracts that provided sufficient methodological information for critical assessment. The dates of the literature searches were recorded, with the most recent searches conducted in July 2024. Overall, the document selection process aimed to ensure source diversity, relevance, and reliability. IFAD documents were used as primary evidence of the organization's policies and programs, Indonesian government sources provided national-level data and policy context, international organization reports offered broader assessments and comparative perspectives, while academic literature provided theoretical and empirical foundations for the analysis. The combination of these sources

allowed the study to examine IFAD's role in supporting Indonesia's food security from both institutional and empirical perspectives.

## RESULTS AND DISCUSSION

### Theoretical Framework: Food Security Theory

Food security thinking has gone through an interesting evolution: from just making sure the government has enough food stockpiled to recognizing it's a multidimensional issue tied to rights, social justice, and environmental sustainability (Ammar et al., 2023; Manikas et al., 2023; Calloway et al., 2023). The FAO started with three pillars in 1982: availability, access, and stability, then added a fourth pillar (utilization) in the early 1990s. The real consolidation happened at the 1996 World Food Summit, formalized in 2001: food security means everyone at all times has physical, social, and economic access to enough safe, nutritious food (Calloway et al., 2023; Manikas et al., 2023).

The Copenhagen School's security framework adds something important: Indonesia has actively framed food security as a national security issue. Stunting rates at 21.5%, food price swings, and climate pressure are all positioned as strategic threats in the national development plan. From this angle, IFAD's presence helps the country respond to these threats better (Ngongolo & Gayo, 2024; Favas et al., 2024).

The four pillars work like this: Availability means having enough food of different types available throughout the country, depending on domestic production, import capacity, and storage. Access focuses on whether households can actually get food, tied to purchasing power, physical access to markets, and whether there are social-cultural barriers. Utilization is about whether bodies actually absorb nutrients from food, shaped by cooking practices, sanitation, and nutrition knowledge. Stability protects all three pillars against shocks from pandemics, conflict, or climate weirdness. These four pillars don't work in isolation; they're all connected (Calloway et al., 2023; Ammar et al., 2023; Béné et al., 2023).

This study operationalizes food security using the four-pillar framework developed by the Food and Agriculture Organization (FAO), namely availability, access, utilization, and stability. These four pillars provide an analytical framework for examining food security not only in terms of the amount of food available, but also in terms of people's ability to obtain and properly utilize food and to maintain food security over time. Each pillar was translated into specific indicators that could be identified and assessed through IFAD documents, government and international organization reports, statistical data, and relevant academic literature (Manikas et al., 2023; Ammar et al., 2023).

Availability refers to the physical presence of sufficient and diverse food supplies across regions. In this study, availability was assessed through several indicators, including domestic agricultural production by commodity, particularly rice, corn, soybeans, and vegetables; agricultural productivity measured through yield per hectare and cropping intensity; the coverage and functionality of irrigation infrastructure; diversity of crops within agricultural production systems; dependence on imports and import volumes for major food commodities; and storage capacity and post-harvest losses. These indicators were used to examine whether IFAD-supported agricultural interventions contributed to increasing food production, improving productivity, strengthening agricultural infrastructure, and reducing vulnerabilities in domestic food supply (Kabir et al., 2022; Kafle et al., 2022; Rimhanen et al., 2023).

Access refers to the ability of households and individuals to obtain adequate food through their own production, purchasing power, markets, or other available mechanisms. The operational indicators included household income and farm profitability, geographic access to markets and distribution facilities, the functionality of market and distribution systems, consumer purchasing power in relation to food prices, and social and cultural factors that may influence food consumption. The analysis also considered gender equality in household food allocation and the effectiveness of social protection mechanisms. These indicators were used to

assess whether improvements in agricultural production were accompanied by greater economic and physical access to food among rural households and other target groups (Usman & Haile, 2022; Milner et al., 2022; Maffioli et al., 2023).

Utilization refers to the ability of individuals to consume food and absorb its nutrients effectively. This pillar was assessed using indicators related to nutritional and health outcomes, including stunting, acute malnutrition, anemia, and micronutrient deficiencies. The analysis also considered dietary diversity and overall diet quality, household nutrition knowledge and food preparation practices, food safety and hygiene conditions in households and markets, access to clean water and sanitation, and the prevalence of infectious diseases that may affect nutrient absorption. These indicators were particularly important for determining whether agricultural and food security interventions generated benefits beyond increased food production and contributed to improved nutritional well-being (Manikas et al., 2023; Maffioli et al., 2023; Narayanan et al., 2023).

Stability refers to the ability of individuals, households, and food systems to maintain adequate food availability, access, and utilization over time despite seasonal variations and external shocks. The indicators used to assess stability included household and agricultural capacity to adapt to climate change, adoption of climate-smart agricultural practices, household resilience to food price shocks, and the institutional capacity of food systems to function during crises such as pandemics, conflicts, and natural disasters. The analysis also examined the diversity and sustainability of agricultural production systems, ecosystem health and natural resource management, particularly water availability and peatland conservation, as well as the effectiveness of early warning and crisis-response mechanisms. These indicators were used to assess whether IFAD interventions strengthened the long-term resilience and sustainability of food systems rather than producing only short-term improvements (Béné et al., 2023; Favas et al., 2024; Ngongolo & Gayo, 2024; An et al., 2024).

The four pillars were analyzed individually and collectively. This approach recognizes that improvements in one pillar do not necessarily result in overall food security if other dimensions remain weak. For example, increased agricultural production may improve food availability, but its contribution to food security may remain limited if households lack sufficient income to access food or if poor sanitation and nutrition practices reduce the effective utilization of available food. Therefore, the analysis examined the interaction among availability, access, utilization, and stability to provide a comprehensive assessment of IFAD's contribution to food security in Indonesia (Manikas et al., 2023; Béné et al., 2023; Abay et al., 2023).

### **IFAD's Profile and Strategy in Indonesia**

IFAD was born out of the global food crisis in the mid-1970s, established in 1977 as a result of the 1974 World Food Conference. Today it operates in 92 countries, pumping public and private capital to help rural populations tackle major challenges. IFAD's been working with Indonesia since 1980 one of the longest partnerships in the Asia-Pacific region with total investments over one billion dollars. The 2023-2027 strategy document lays out a vision for transforming the food system along two tracks: an economic-productivity track pushing higher-value crop diversification, and an institutional strengthening track building self-sufficient local governance.

The biggest program is IPDMIP with a USD 852.9 million budget largest project in IFAD's 40-year Indonesia history, dwarfing any single bilateral aid contribution. It's financed through partnerships: Asian Development Bank put in USD 600 million (70.4%), IFAD USD 100 million (11.7%), and the Indonesian government USD 152.9 million (17.9%). This model pools resources from multiple actors to achieve scale no single player could manage alone.

Table 1. Portfolio of IFAD's Principal Programmes in Indonesia 2020–2024

| Program | Total Budget      | IFAD Contribution | Primary Target                          | Geographic Coverage                                                      | Period    |
|---------|-------------------|-------------------|-----------------------------------------|--------------------------------------------------------------------------|-----------|
| IPDMISP | USD 852.9 million | USD 100 million   | 900,000 smallholder farm households     | 74 districts, 16 provinces, 2.5 mn ha irrigated rice fields              | 2017–2024 |
| READSI  | IFAD-led          | IFAD-led          | 342,000 smallholder farmers (50% women) | 18 districts, 3 provinces (Sulawesi, W. Kalimantan, E. Nusa Tenggara)    | 2018–2024 |
| YESS    | IFAD-led          | IFAD-led          | 320,000 rural youth                     | 19 districts, 4 provinces (W. Java, E. Java, S. Kalimantan, S. Sulawesi) | 2019–2025 |
| ACTIVE  | USD 5.5 million   | USD 5.5 million   | 50,000+ climate-vulnerable households   | 6 districts, 3 provinces (W. Kalimantan, E. Kalimantan, W. Sumatra)      | 2023–2027 |

Source: IFAD (2024); IPDMIP (2024); Kementerian Pertanian (2024).

To ensure a systematic and transparent analysis, relevant information was extracted from each selected document and organized into an analytical matrix. The matrix was designed to ensure consistency in the data collection process and to facilitate comparison across different sources. The information extracted from IFAD program documents focused primarily on the objectives and stated theory of change of each program, characteristics of the target population, implementation activities and outputs, budget and financing structures, reported outcomes and results, food security indicators, implementation constraints and adaptations, and the timeline of program implementation. Target population characteristics included the number of beneficiaries, gender, geographic location, and economic conditions. Information on implementation outputs included the number of hectares rehabilitated, farmers trained, infrastructure developed, financial services provided, and young people participating in the programs.

Particular attention was given to the outcomes and results reported in IFAD's mid-term and final evaluation documents. These data were used to assess the extent to which program activities contributed to improvements in food security and rural livelihoods. The analysis also identified food security indicators explicitly mentioned or used by IFAD to measure program performance. In addition, documented implementation constraints, institutional challenges, and adaptations identified in supervision and evaluation reports were recorded to understand how IFAD programs responded to operational and contextual difficulties. The implementation timeline was also extracted to identify the different phases of each program and to examine the development of interventions over the study period.

For government and international organization sources, the data extraction focused on national baseline conditions and trends in key food security indicators, including agricultural production, food prices, malnutrition, poverty, and stunting. These data were used to establish the broader food security context in Indonesia and to identify changes occurring during the study period. Information on relevant government policies and complementary programs operating in the same regions as IFAD interventions was also collected. This was important for distinguishing IFAD's contribution from other government or development interventions. Furthermore, contextual factors such as climate-related events, market disruptions, food price fluctuations, and other economic or environmental shocks were recorded because these factors could influence food security outcomes independently of IFAD interventions.

For academic literature, the extraction process focused on three main areas. First, theoretical frameworks used to analyze food security and the effectiveness of international development organizations were identified to provide the conceptual foundation for the study. Second, empirical findings from previous agricultural development programs in Indonesia and comparable developing-country contexts were reviewed to provide a basis for comparison. Third,

critical discussions concerning implementation challenges, institutional limitations, and the measurement of food security were examined. This literature helped contextualize the findings from IFAD documents and government data and supported a more critical assessment of IFAD's role in Indonesia's food security.

The extracted information was subsequently analyzed through thematic and comparative analysis. Thematic analysis was used to identify recurring patterns related to agricultural productivity, access to food, rural livelihoods, poverty reduction, nutrition, institutional capacity, and implementation challenges. Comparative analysis was then used to examine differences between program objectives, implementation outputs, and reported outcomes, while also considering changes in the broader food security context. By combining information from IFAD documents, government and international organization reports, and academic literature, the analytical framework enabled the study to assess IFAD's contribution to Indonesia's food security while recognizing the influence of other institutional, economic, social, and environmental factors.

## **Analyzing IFAD's Contribution Across the Four Food Security Pillars**

### ***IFAD's Contribution to the Availability Pillar***

Availability means having adequate food supply in sufficient quantity and variety across all regions. Indonesia's made progress but there's still a gap between what's been achieved and what's targeted. 2020 was a tough year: poverty spiked to 10.19% and malnutrition climbed back to 8% after nearly dropping to 7% in 2019 showing how fragile the food system is when hit with major shocks. The government responded by setting expansion targets in the 2020-2024 plan: 304,000 hectares for rice, 90,000 for corn, and 184,650 for soybeans.

The biggest vulnerabilities are wheat completely import-dependent at about 11 million tons yearly and soybeans where domestic production (0.34 million tons) falls far short of needs. IFAD tackles availability through three channels. First, IPDMIP rehabilitates irrigation networks covering 2.5 million hectares across 74 districts, pushing farmers from one harvest annually to two in many areas. Second, READSI transfers knowledge farmer-to-farmer to intensify and diversify crops. Third, it accelerates local food diversification Indonesia actually has amazing food wealth that's underutilized.

Indonesia has 77 types of carbohydrate alternatives, 389 fruit varieties, 228 vegetables, and 77 plant-based proteins yet reliance on rice and imported wheat persists. The 2023-2027 strategy pushes shifting this paradigm by making nutrient-rich local foods core to smallholder production systems. As Juned argues, IFAD is particularly effective because of its flexibility and ability to respond to local needs, supported by a more decentralized organizational structure than that of traditional bilateral development agencies.

### ***IFAD's Contribution to the Access Pillar***

Access is about more than food existing in markets it's whether households can actually get it. Rural farmers in Indonesia, living on low and unpredictable farm income, face structural access barriers. Urban-rural gaps create inequality that can't be fixed by producing more food (Juned & Bahara, 2022).

IFAD uses four complementary approaches. First, strengthening farmer groups and cooperatives READSI targets 342,000 small farmers with 50% being women, ensuring gender equality from the start. Second, financial inclusion: IPDMIP explicitly makes financial services a core output, opening productive credit to farmers previously stuck with high-interest moneylenders. Third, YESS injects entrepreneurship spirit into 320,000 rural youth across 19 districts not just jobs, but agricultural sector regeneration. Fourth, making supply chains more efficient through better post-harvest infrastructure and connecting production centers to consumption hubs.

### ***IFAD's Contribution to the Utilization Pillar***

Utilization asks: is available and accessible food actually delivering good nutrition? This is the pillar most development programs miss. Indonesia carries a heavy burden here: stunting still at 21.5% in 2024, acute malnutrition threatening two million kids, and anemia rates still high. IFAD's response uses nutrition-sensitive agriculture a framework recognizing that boosting production alone doesn't automatically improve nutrition without attention to quality and diversity.

READSI puts reducing chronic malnutrition right up there with production goals. The 2023-2027 strategy sets an ambitious target: 50% of all program beneficiaries are women, because women make most household food choices and preparation decisions a recognition grounded in real-world evidence. Promoting traditional nutrient-rich local foods also diversifies diets while preserving agricultural biodiversity that has strategic value.

### ***IFAD's Contribution to the Stability Pillar***

Stability means keeping availability, access, and utilization steady through seasonal swings, economic shocks, and environmental disasters. Consider the FAO Food Price Index: it jumped from 98.1 in 2020 to a peak of 143.7 in 2022 46.5 points in two years driven by post-pandemic supply chain chaos and the Russia-Ukraine conflict disrupting wheat and vegetable oil markets.

As a country importing 11 million tons of wheat yearly, Indonesia felt it immediately through rising flour, noodle, and grain product prices hitting millions of low-income households. IFAD's ACTIVE program with a USD 5.5 million budget leads stability efforts, reaching 50,000+ households in West Kalimantan, East Kalimantan, and West Sumatra with climate adaptation capacity-building. Peatland conservation complements this: Indonesian peatlands spanning millions of hectares are crucial for local water cycles, and their degradation threatens nearby farming productivity.

Practically, IFAD promotes climate-smart agriculture, drought and flood-tolerant varieties, water-efficient irrigation, and diversified farm systems plus community grain storage as local buffers against shortages. Research shows that climate-era food stability needs both technical adaptation (new techniques) and institutional adaptation (new governance approaches).

Table 2. Dynamics of the FAO Food Price Index 2019–2023 (Index, 2014–2016 = 100)

| Year | Food Price Index | Cereals Index | Vegetable Oils Index | Meat Index | Contextual Note              |
|------|------------------|---------------|----------------------|------------|------------------------------|
| 2019 | 95.1             | 95.7          | 77.0                 | 95.7       | Stable pre-pandemic baseline |
| 2020 | 98.1             | 103.1         | 89.5                 | 93.8       | COVID-19 onset               |
| 2021 | 125.7            | 127.2         | 164.6                | 109.6      | Post-pandemic supply surge   |
| 2022 | 143.7            | 154.7         | 183.3                | 121.0      | Russia-Ukraine conflict      |
| 2023 | 124.0            | 125.7         | 128.6                | 114.8      | Partial price correction     |

Source: Food and Agriculture Organization (2023).

### **Analytical Approach: Evidence Classification and Program-to-Pillar Assignment**

This study employed a combined deductive and inductive analytical approach to examine the contribution of IFAD programs to the four pillars of food security. In the deductive phase, each program intervention was assigned to one or more food security pillars based on its stated objectives, planned activities, and primary areas of intervention. For example, the irrigation rehabilitation component of IPDMIP was primarily classified under the Availability pillar because improved irrigation infrastructure is intended to support agricultural productivity and domestic food production. At the same time, the intervention was also considered relevant to the Access pillar because increased agricultural productivity may improve farmers' income and their economic ability to obtain food. This approach recognizes that a single intervention may influence more than one dimension of food security.

In the inductive phase, the analysis examined the documents within each food security pillar to identify recurring implementation themes, outcome patterns, and contextual challenges. This process involved careful reading, annotation, and comparison of evidence across IFAD programs and other relevant sources. Rather than assuming that all programs produced similar results, the analysis allowed common patterns and differences to emerge from the available evidence. This approach was used to identify how IFAD interventions operated in practice and how their results interacted with broader economic, social, institutional, and environmental conditions.

### ***Evidence Classification Procedure***

For each program and food security pillar combination, the available evidence was classified into four categories: inputs, outputs, outcomes, and impacts. Inputs refer to the resources allocated to implement a program, including financial resources, staffing, planned beneficiaries, and geographic coverage. For example, the financial contribution of IFAD to an agricultural development project was classified as an input because it represents a resource provided for program implementation. Outputs refer to the direct and measurable products of program activities, such as the area of irrigation infrastructure rehabilitated, the number of farmers trained, infrastructure constructed, or financial services delivered. Outcomes refer to changes in the conditions of beneficiaries or immediate results identified through program monitoring and evaluation. For example, an evaluation finding that farmers in project areas achieved higher rice yields than farmers in comparison areas would be classified as an outcome. Impacts refer to broader changes in the food security system that extend beyond individual program beneficiaries and may be influenced by multiple actors and factors. Changes in national agricultural production, food prices, poverty, or nutritional conditions were therefore treated as potential impacts rather than automatically attributed to IFAD interventions. This distinction was important because national-level changes cannot generally be attributed to a single development program without sufficiently strong causal evidence.

### ***Attribution and Contribution Assessment***

The analysis carefully distinguished among direct contribution, associated development, and contextual influence. A direct contribution refers to results for which there is relatively strong evidence linking the observed change to IFAD-supported activities, particularly when the relationship is documented in independent program evaluations. In such cases, the analysis used cautious formulations such as “the program resulted in,” “the evaluation documented,” or “beneficiaries reported,” depending on the strength and type of evidence available. Associated development refers to improvements that occurred during the implementation of an IFAD program and may have been influenced by the intervention but cannot be attributed exclusively to IFAD. Such improvements may also have been affected by government policies, market conditions, other development organizations, or changes in household behavior. In these cases, the analysis used terms such as “was associated with,” “occurred during program implementation,” or “may have contributed to.” This distinction prevented the analysis from overstating the causal role of IFAD. Contextual influence refers to broader developments and external shocks that affected Indonesia’s food security independently of any single development program. These factors included the COVID-19 pandemic, the effects of the Russia–Ukraine war on international food and commodity prices, climate variability, natural disasters, market fluctuations, and government macroeconomic and food policies. These contextual factors were incorporated into the analysis to distinguish changes related to IFAD interventions from changes resulting from the broader national and international environment.

### ***Source Triangulation and Quality Assurance Procedures***

Several procedures were applied to improve the analytical rigor, reliability, and transparency of the study and to reduce potential bias. First, source triangulation was conducted by systematically cross-checking claims regarding IFAD program outputs and outcomes against multiple sources. These included Indonesian government statistics, particularly data from the

Central Statistics Agency (Badan Pusat Statistik), assessments published by international organizations such as FAO and WFP, independent program evaluations, and academic literature examining agricultural development programs in Indonesia and comparable contexts. When discrepancies were identified between sources, greater consideration was given to sources that were more recent, methodologically transparent, and institutionally independent, while the existence of conflicting evidence was also documented where relevant.

Second, the study applied measures to address institutional bias. IFAD progress reports and project supervision documents may naturally place greater emphasis on program achievements and implementation progress. Therefore, independent mid-term and final evaluations were given greater analytical weight when assessing program outcomes. Government statistics and reports from international organizations were also used to verify and contextualize IFAD's reported achievements. Where independent evaluation evidence was unavailable, findings were presented cautiously by explicitly identifying the source of the claim and acknowledging the limitations of the available evidence.

Third, temporal verification was applied to quantitative claims involving specific periods or changes over time. Statements concerning changes in agricultural production, crop yields, food prices, poverty, or nutritional indicators were compared with relevant official statistics and international datasets to assess their temporal consistency and plausibility. This procedure helped ensure that reported changes were interpreted within the correct time period and were not incorrectly associated with program activities that occurred before or after the observed change.

Fourth, analytical consistency was maintained throughout the coding process. Program activities were consistently coded according to the four food security pillars, while evidence was classified as inputs, outputs, outcomes, or impacts according to the definitions established in the analytical framework. Coding decisions were regularly cross-checked against the original source documents and the analytical framework. Relevant excerpts and supporting evidence were recorded to make the reasoning behind each classification transparent and verifiable.

Finally, the study maintained an audit trail documenting the analytical process. The audit trail recorded the specific documents consulted for each program component, the classification of evidence as inputs, outputs, outcomes, or impacts, the rationale for assigning interventions to particular food security pillars, alternative interpretations considered during the analysis, and discrepancies between sources and the procedures used to resolve them. This documentation strengthened the transparency of the research process by allowing the researchers to trace individual findings back to their supporting evidence and enabling readers to understand how the conclusions were reached.

Overall, this analytical approach was designed to avoid over-attributing changes in Indonesia's food security to IFAD interventions. By combining program-level evidence with national statistics, international assessments, academic literature, and contextual analysis, the study distinguishes between what IFAD directly contributed to, what occurred alongside its interventions, and what resulted from broader structural or external factors. This distinction is particularly important for assessing the role of an international development organization within a complex food security system involving multiple governmental and non-governmental actors.

### **Implementation Challenges for IFAD Programs in Indonesia**

Despite these tangible contributions, IFAD's implementation in Indonesia has not been without challenges. A major obstacle lies in institutional fragmentation, as rural development programs involve at least four technical ministries at the national level while decentralization has created considerable disparities in administrative capacity across local governments (Juned & Harianto, 2022). This fragmented governance structure often results in overlapping activities in some areas and insufficient intervention in others, ultimately reducing program effectiveness.

At the same time, the relatively short duration of IFAD-funded projects presents another limitation. Most initiatives operate within a five- to seven-year cycle, which is generally insufficient to achieve meaningful and lasting institutional transformation. As Juned (2022) notes, transforming food systems typically requires a long-term commitment of 10 to 15 years, leaving many farmer organizations dependent on external assistance even after project completion.

These institutional constraints are further compounded by Indonesia's unique geographical characteristics. As the world's largest archipelagic country, with more than 17,000 islands and uneven access to roads, electricity, and digital connectivity in remote areas, delivering development services to the most vulnerable communities remains both costly and logistically complex (Juned & Bahara, 2022).

At the same time, the increasing frequency and intensity of climate-related disasters have placed additional pressure on rural livelihoods. The 2023 El Niño caused severe droughts across Sulawesi, East Nusa Tenggara, and West Kalimantan, while flooding became increasingly frequent, creating risks that often exceed the response capacity of time-bound development projects. According to Juned climate change has entered a new phase that requires substantially greater investment in long-term adaptation strategies instead of short-term interventions.

Financial constraints further limit the scale of IFAD's impact. Although the organization has invested more than US\$1 billion in Indonesia over the past four decades, this amount remains relatively modest when compared with the enormous resources needed to transform the food system of a country with more than 270 million people. Consequently, program coverage remains limited relative to the scale of national development challenges. These difficulties are further intensified by fluctuations in global food prices. Between 2022 and 2023, the FAO Food Price Index increased by approximately 14.3%, while Indonesia continued to rely on imports of around 11 million tonnes of wheat annually. Rising food prices have reduced farmers' purchasing power and weakened food access among low-income households.

### **Study Limitations and Reflexivity**

This study has several limitations that should be considered when interpreting its findings. The first limitation concerns data availability. Several IFAD program evaluations, particularly final evaluation reports, were not publicly available or were still in draft form as of July 2024. Consequently, the analysis was limited to documents that had been officially published or formally made available. This limitation may result in an incomplete representation of program performance, particularly if unpublished evaluations contain findings related to limited effectiveness, implementation failures, or unintended negative effects.

The second limitation concerns the distinction between attribution and contribution. Food security in Indonesia is influenced by a complex institutional environment involving national and local government agencies, international development organizations, private-sector actors, farmers, markets, and other stakeholders. As a result, it is not possible to rigorously attribute specific national-level changes in food security to IFAD alone using the available documentary evidence. The analysis therefore uses cautious contributory language, such as "contributed to," "was associated with," and "may have influenced," rather than making definitive causal claims. This approach is intended to reflect the complexity of food security governance and avoid overstating the role of a single international organization.

A third limitation relates to geographic specificity. Most available evidence on program performance is reported at the project, district, or beneficiary level within the geographical areas covered by individual IFAD interventions. Consequently, conclusions regarding IFAD's contribution to food security at the national level are partly based on the geographical coverage and potential relevance of these programs to broader national trends. Such national-level interpretations should therefore be treated cautiously and should not be understood as direct evidence of nationwide causal effects.

The fourth limitation concerns measurement gaps across the four food security pillars. While indicators of food availability and economic access are relatively well documented, several dimensions of food security receive less consistent measurement in available IFAD reports. These include dietary diversity, nutrition knowledge and household practices, social resilience, gender and equity in resource distribution, and the long-term sustainability of food systems. As a result, the analysis places greater emphasis on the availability and access dimensions than on utilization and stability. This imbalance reflects the nature and availability of the existing evidence rather than an assumption that availability and access are inherently more important than the other pillars. The fifth limitation concerns the temporal scope of the study. Some IFAD programs examined in this research were initiated before 2020, but their implementation continued to influence program outcomes during the 2020–2024 period. Where possible, the analysis considered the pre-2020 implementation context to avoid treating earlier interventions as entirely new activities during the study period. Nevertheless, separating the effects of program components implemented before 2020 from outcomes observed between 2020 and 2024 remains difficult. Therefore, the findings should be interpreted as an assessment of IFAD's contribution during the broader implementation period rather than as a strict causal assessment limited only to activities initiated after 2020.

And for Reflexivity, the researchers recognize that the interpretation of documentary evidence can be influenced by the characteristics, institutional positions, and purposes of the sources being analyzed. IFAD documents, for example, are produced by an organization with a direct interest in documenting and communicating the progress of its programs, while government and international organization reports may reflect their respective institutional mandates and policy priorities. Academic literature may also differ in its theoretical assumptions and methodological approaches. To address these potential influences, the study did not rely on a single source or institutional perspective. Instead, findings were compared across IFAD documents, government statistics, international organization reports, independent evaluations, and peer-reviewed academic literature. The researchers also maintained an audit trail of document selection, evidence classification, and analytical decisions to make the interpretive process as transparent as possible. Reflexivity in this study therefore involves acknowledging the limitations and institutional positions of the available evidence rather than assuming that any single source provides a complete or neutral representation of IFAD's role in Indonesia's food security.

## CONCLUSION

This analysis gives a pretty clear picture of how IFAD supports Indonesia's food security from 2020-2024. Using Food Security Theory's four-pillar framework, we can conclude IFAD has made significant, structured, and highly relevant contributions to Indonesia's specific challenges. IPDMIP and READSI strengthen availability through 2.5 million hectares of irrigation rehabilitation and productivity improvements for 342,000 small farmers (International Fund for Agricultural Development, 2024). Access gets boosted through economic empowerment from cooperative strengthening to 320,000 rural youth entrepreneurs via YESS (Kementerian Pertanian, 2024). Utilization improves through nutrition-sensitive components and women empowerment as household-level change agents. Stability most vulnerable in our climate and volatile-prices era gets addressed through ACTIVE, peatland conservation, and climate-smart agriculture (Juned, 2023b). From a theory perspective, our findings support what's been argued: IFAD plays multiple roles. Through the Copenhagen School lens, IFAD's involvement is part of state strategy to strengthen capacity against food threats framed as national security issues (Buzan et al., 1998). Liberal institutionalism highlights how IFAD increases coordination capacity and resource efficiency (McMichael, 2009). Food Regime Theory reminds us IFAD works within a global political economy that's still unjust shown in Indonesia's exposure to FAO Food Price Index swings from 98.1 to 143.7 in two years. All three frameworks together confirm: food security is shaped by simultaneous interaction of local dynamics, national pressures, and global configurations. Recommendations for the Indonesian Government: Strengthen inter-ministry

coordination mechanisms focused on results, boost budget allocations for farmer institutional support after projects end, and systematically integrate food security programs with stunting reduction goals (from 21.5% toward the 14% target). For IFAD: Shift more funding to climate adaptation programs, expand YESS to address farmer generation crisis, and strengthen data-driven monitoring-evaluation for long-term impact accountability. For future research: We need quantitative studies on program-farmer income correlation and cross-region comparative analysis to identify success factors in different contexts, using methodologies that blend qualitative and quantitative data.

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