



TOWARDS ACHIEVING FOOD SECURITY IN GHANA: ASSESSING THE INTEGRATION OF FOOD SECURITY ELEMENTS IN AGRICULTURAL POLICIES. THE CASE OF METASIP (I & II) AND IFJ

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Abstract

Universally, indicators used in measuring food security are difficult. Nonetheless, FAO together with the IFAD and the WFP have proposed a suite of dimensions (Availability, Accessibility, Utilisation and Stability) that describe food security in which the world appears to be comfortable with. This study therefore sought to evaluate the scope to which METASIP I & II and IFJ took into consideration the four main food security dimensions. A systematic desktop search strategy to gather literature from scientific databases and policy reports was adopted. The study found that only the availability and stability dimensions of food security were extensively considered, covered and implemented under the policies.

Keywords: Food security, METASIP, IFJ, Availability, Accessibility, Utilisation, Stability

Introduction

According to Article 25 of the United Nations Universal Declaration on Human Rights, access to food is a fundamental right, as such development of any kind depends on a nation's food security situation (Qureshi et al., 2015). The concept and explanation of food security was first coined during the 1970's world food conference (Qureshi et al., 2015; Peng & Berry, 2019), which incorporates on the face of it divergent conceptual and philosophical views (Food & Agricultural Organisation [FAO] et al., 2017; Qureshi et al., 2015). These ideas have since been advanced considerably over time (Maxwell, 1998; Qureshi et al., 2015) with several attempts to define it in policy practise and research (Peng & Berry, 2019; Gibson, 2012b).

Nonetheless, the generally accepted definition of food security is the one as captured in the 1996 World Food Summit and the FAO's yearly report on food security in 2001 (FAO, 2002, 1996; George-André, 2012). This

definition captures food security as a condition that ensues when all people, irrespective of time, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO et al., 2017; Barrett, 2010; FAO, 2012a, 2003a, 2002, 1996).

Despite the global reach of the phenomenon and its definition, food security still provokes widespread misconception (Gibson, 2012a cited in Gibson, 2012b; George-André, 2012). Particularly, after the revision of 1974 World Food Conference definition of food security, the Committee on World Food Security of FAO (2012b) in October 2012 attempted to revise the terms of their current definition once again. Indeed, measuring food security with universal indicators is not easy because, they need to be widely acknowledged as correct and reasonably objective and be homogeneous across time and space (Peng & Berry, 2019).

As a result, FAO et al. (2013, 2012); George-André (2012) have proposed a suite of food security dimensions, describing food security which the world appears to be comfortable with. These dimensions include: Availability, Accessibility, Utilisation and Stability (Qureshi et al., 2015; FAO et al., 2013; FAO et al., 2012; FAO, 2008, 2003, 2002; WFP, 2012). This study therefore sought to evaluate the scope to which METASIP I & II and IFJ took into consideration the four main food security dimensions.

Literature Review

Medium Term Agriculture Sector Investment Plan (METASIP I & II)

METASIP is a wide-ranging plan to modernize agriculture and structurally transform the economy, by means of strengthening food security and preparedness, employment opportunities and lessening poverty (United States Agency for International Development [USAID] & AfricaLead, 2013), even though, it has been critiqued for lack of deep focus on private investment (Bugri, 2012 cited in Overseas Development Institute [ODI], 2016; Ministry of Food and Agriculture [MoFA], 2018).

METASIP's establishment was to achieve an agricultural target growth of at least 6% GDP per annum and halving poverty by 2015 (2011–2015) (MoFA, 2015, 2010). Accordingly, MoFA under METASIP I came up with six programmes to help address the challenges identified in the agricultural sector, and they are: food security and emergency preparedness; increase growth in incomes; improve competitiveness and enhance integration into domestic and international markets; sustainable management of land and environment; science and technology applied in food and agriculture development; and enhance institutional coordination (USAID & AfricaLead, 2013; MoFA, 2010; Boateng & Nyaaba, 2014). The METASIP II has the core mandate of consolidating the gains from the METASIP I by renewing focus on food

security and encouraging the creation of decent jobs (Wageningen Economic Research, 2019).

Investing for Food and Jobs (IFJ)

The Investing for Food and Jobs (IFJ) has been developed to operationalise the vision of the Government of Ghana as indicated in the Medium-Term National Development Policy Framework (MTNDPF) which is titled “Agenda for Jobs: Creating Prosperity and Equal Opportunity for All (2018-2021) (MoFA, 2018).

It is a second generation National Agriculture Investment Plans (NAIPs) designed to address the challenges identified with the first generation of the NAIPs Medium Term Agricultural Sector Investment Plans (METASIP I & II) developed under the CAADP framework (MoFA, 2018; Abugri, et al., 2020).

IFJ seeks to increase agricultural productivity through modernization of the agricultural sector resulting in increased food production, improved incomes and jobs. As part of the strategies to achieve these, the government will facilitate farmers' access to improved technologies, certified seeds, fertilizers, improved livestock and poultry breeds through the implementation of all Government flagship programmes in the agricultural sector (MoFA, 2018; Malabo Montpellier Panel report, 2021a, 2021b). These flagship programmes are Planting for Food and Jobs Campaign (PFJ), Rearing for Food and Jobs (RFJ), Planting for Export and Rural Development (PERD) and Green House Villages (MoFA, 2022, 2021, 2018; Malabo Montpellier Panel report, 2021a, 2021b).

Methodology

Search Strategy

Systematic literature review methodology was applied in this study. This included an explicit desktop search approach to retrieve literature from scientific databases (PubMed, Google and Google scholar) and policy reports or documents. The search was conducted from September to October 2022. The researchers

included articles published and policy documents between 2008 and 2017. This was done because, it was between these periods that IFJ and METASIP I & II were implemented and ended as well. Three Key terms and

concepts combined with “AND”, “OR” Similar to USAID (2017); Ae-Ngibise et al. (2021); Lencucha et al. (2020) were used to form the search basis to identify reports and/articles on the topic (See Table 1).

Table 1: Terms for Record Search

Terms for Search
Overview OR Role OR Aim OR Purpose OR Goal OR Objective OR Target
AND
Medium Term Agriculture Sector Investment Plan
AND
Investment for Food and Jobs
AND
Food security in Ghana: (“Availability”: [“Production” OR “Distribution” OR “Exchange”] OR “Access”: [“Affordability” OR “Allocation” OR “Preference”] OR “Utilisation”: [“Nutrition” OR “Safety of food” OR “Social”, OR “Cultural” OR “Religious” benefits about food products] OR “Stability”: [“Irrigation” OR “Alternative Livelihood” OR “Storage”])

Source: Authors (2021)

Inclusion criteria

Only publications, policy papers, and documents that mentioned METASIP and or IFJ, and their efforts to address any aspect of food security, whether directly or indirectly, were taken into consideration.

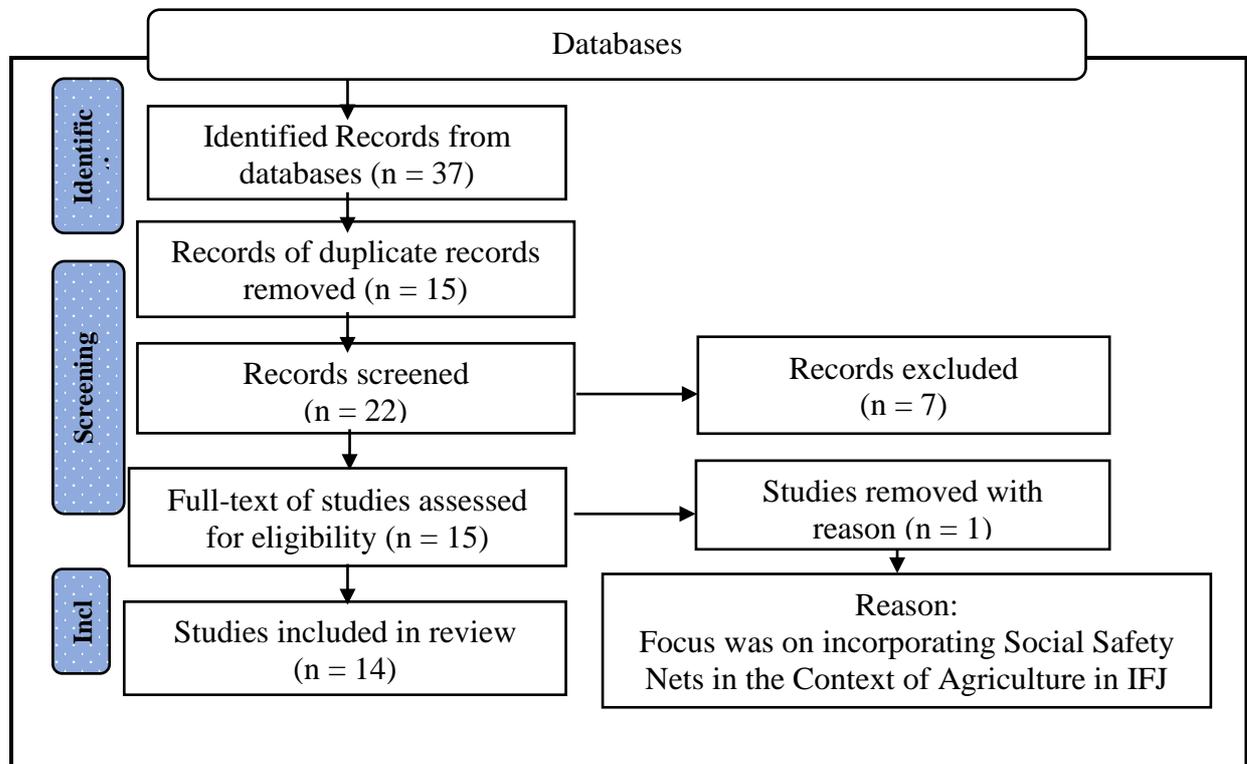


Figure 1: PRISMA Flow Chart on Records Selection Process

Thirty-seven records (37) were identified after searches conducted from all data sources. These 37 total records were reduced by 15 records after duplicate titles were excluded. The 22 remaining records were screened for inclusion, out of which seven (7) records were excluded for varied reasons. In the course of full-text assessment for eligibility, 15 records were vetted, and one (1) record excluded because its focus was on incorporating social safety nets in the context of agriculture in IFJ. Therefore, 14 studies were selected and reviewed.

Data Selection and Extraction

The systematic review strategy adopted in the study involved an initial review of article titles. Guided by an inclusion criteria, EG and ARII individually screened all abstracts and titles of the search outcomes. Differences were settled by MAA. All reviewers individually downloaded and read the full texts of possibly qualified abstracts in order to choose the

documents that met the review questions. A meeting was arranged to debate the complete texts that the reviewers had flagged as "not relevant," to reach a consensus and also avoid selection bias. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses [PRISMA] illustrates the extraction procedure to indicate the counts of records found during databases search as well as the included and excluded studies and justifications for exclusions (Moher et al., 2009; Akparibo et al., 2021) [see Figure 1].

Analytical Procedure

This study was limited to the assessment of four food security dimensions [availability, access, utilisation and stability]. In each document studied, the researchers sought to identify whether or not or how any of the four dimensions were captured or considered. Below in the figure 2 is how the dimensions were assessed.

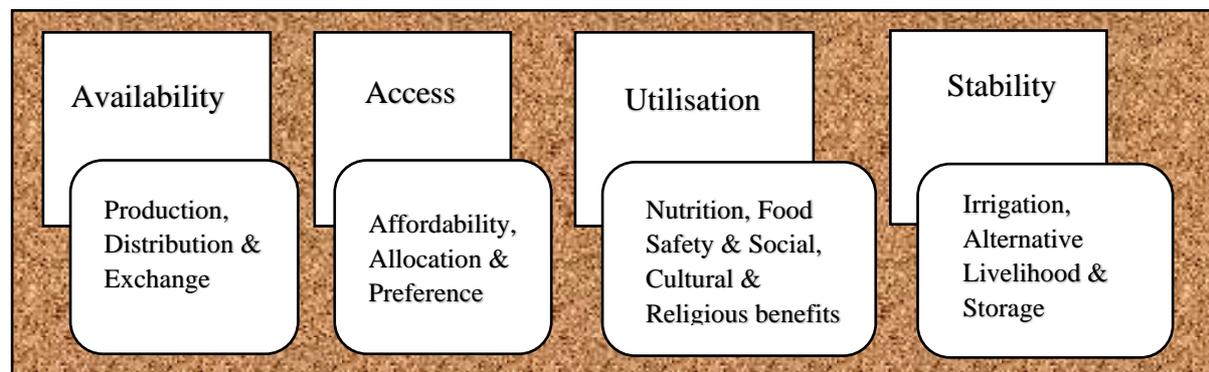


Figure 2: Dimensions and elements of food security studied

Source: Authors (2021) with adoption of some elements from Wageningen Economic Research (2019)

In the assessment of the food security consideration in METASIP and IFJ, the four globally known food security dimensions were broken down into elements as revealed in Figure 2 in order to do a fair assessment using colours. These colours included: Green, blue and red.

Results and Discussion

Integration of Food Security Elements in METASIP I & II and IFJ

The resultant outcomes of food security considerations in METASIP I & II and IFJ after the assessment of 14 full text documents and reports eligible for the study are revealed in Table 2

Table 2: Food Security Integration in METASIP I &II and IFJ

Food Security Dimensions	Policy Interventions	
	METASIP (I & II)	IFJ
AVAILABILITY		
Production		
Distribution		
Exchange		
ACCESS		
Affordability		
Allocation		
Preference		
UTILISATION		
Nutrition		
Safety of food		
Social, Cultural and religious benefits about food products		
STABILITY		
Alternative Livelihood		
Irrigation		
Storage		

Source: Authors (2020)

Note: The green colour implies that the element is considered by METASIP & IFJ using the specific term and/or directly described it, whereas blue colour means METASIP & IFJ considered the element devoid of directly using or describing the term. Colour red means the element is not mentioned and not considered by METASIP & IFJ

From the Table 2 above, it is indicated that availability of food featured extensively in METASIP I &II and IFJ. Under food availability, METASIP had in its plan to increase production of food (MoFA, 2009; Boateng & Nyaaba, 2014). Thus, productivity was specifically and directly described in METASIP, particularly under component 1.1 (productivity improvement) by introducing improved crop varieties (high yielding, short duration), advocate for passage and enforcement of seed law, increase access to fertiliser, among other measures to smallholder farmers, and in addition to carry out genetic characterisation and development of indigenous livestock species as well as train community livestock

Guo et al., 2023: UDSIJD Vol 10(2)

workers in health and production and providing mechanisation services (Boateng & Nyaaba, 2014; MoFA, 2010, 2009) just to ensure that food is produced in abundance. Likewise, in IFJ, production was specifically used and considered as a component particularly under its sub programme 2.1 (Production and Productivity Improvement) (MoFA, 2022, 2021, 2018; Mabe et al., 2018; Tanko et al., 2019; Peasant Farmers Association of Ghana [PFAG], 2018). Some of the related efforts considered to ensure production and productivity included promoting genetic improvements in plants to increase productivity, enhancing smallholder farmers access to blended fertilizer, ensuring that farmers had access to improved seeds,

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facilitating access to credit and equipment to smallholder farmers, supply of improved breeding stock etc. (MoFA, 2018)

Also, METASIP under component 1.4 (food distribution) specifically used the term food distribution as part of its plans to improve and ensure food distribution (MoFA, 2009; Boateng & Nyaaba, 2014). Under this component, it put in measures to connect all district capitals with tarred roads. In addition, the METASIP policy considered linking at least 70% of communities to their district capitals by feeder roads and constructing farm tracks in farming areas etc. to improve distribution of food stuffs (MoFA, 2010, 2009). In same vein, while similar efforts by way of developing feeder roads and other transport infrastructure in various farming districts in the country to ensure food distribution was directly described and considered under IFJ (MoFA, 2022, 2021, 2018), IFJ in addition considered promoting market hub enterprises (MHEs) whose ultimate aim was to promote MHEs as drivers to transform food distribution systems in Ghana. Again, IFJ considered supporting selected products beyond the farm gates in post-harvest activities including distribution (MoFA, 2018). As well, METASIP directly described exchange typically by connecting producers to markets, and not necessarily the exchange of food by buying at markets (Wageningen Economic Research, 2019), similar to IFJ (MoFA, 2022, 2021, 2018). For instance, whilst METASIP under component 3.1 (marketing of Ghanaian produce in domestic and international markets) emphasised the identification of successful agro-industries and applying feasible model(s) of linkage with smallholders, as well as urging supermarkets, hotels and restaurants to partake in some commodity value chains with smallholder production base (MoFA, 2015, 2010, 2009), IFJ under its policy tool (PT) 2.3.1.5 (Promotion of farmer and Community Market), committed to providing accessible markets to enable easy trading of agricultural commodities in the bank of agricultural clusters. In addition, IFJ sought to implement

commodities trading centres across all MMDAs (MoFA, 2022, 2021, 2018).

With respect to access to food, METASIP considered it a supply-side issue, since it was mainly influenced by the distribution element of the food availability pillar (See paragraph 2 above on “food exchange”) which is supposed again to ensure that food is physically allocated to consumers in established marketing centres with appropriate infrastructure. This supply side consideration, to mean “access”, can be applicable to IFJ too as the policy made efforts to ensuring easy trading of agricultural commodities by providing accessible markets through Metropolitan, Municipal and District Assemblies (MMDAs) (MoFA, 2022, 2021, 2018). Thus, allocation was considered devoid of using the specific term or being directly described. However, affordability and preference in terms of “access” as a food security dimension were not taken care of in both METASIP and IFJ. Thus, within the access to food dimension only one element (allocation) was considered.

Furthermore, in assessing the food security considerations of METASIP and IFJ under the utilisation dimension, METASIP had a component on nutrition (MoFA, 2015, 2010, 2009; Boateng & Nyaaba, 2014), likewise IFJ (MoFA, 2022, 2021, 2018) as part of their implementation plans. This means, the specific term “nutrition” was used and directly described in both METASIP and IFJ (specifically in component 1.2 of METASIP and sub-programme 2.4 of IFJ. In METASIP, nutritional issues and measures through the consumption of high-quality protein maize, orange-flesh sweet potato as well as moringa and other leafy vegetables, eggs, meat/fish among others were much highlighted (MoFA, 2010, 2009). Furthermore, measures considered under METASIP in nutrition included promoting ‘biofortified high-nutrient crops’ and micronutrient-rich foods researches, nutrition education campaigns and enthusing kitchen and school gardens (MoFA, 2015, 2010, 2009) similar to IFJ which also considered the production and consumption of biofortified

crops, kitchen gardens and preservation and the consumption of improved livestock breeds (MoFA, 2022, 2021, 2018) as well as promoting the education and training of consumers on appropriate food combination of available foods to improve nutrition (MoFA, 2022, 2021, 2018).

Similarly, food safety was directly considered in both IFJ and in METASIP. In IFJ, the policy directly took into consideration food safety by committing to set and enforce standards that meet the requirements of WTO's Sanitary and Phytosanitary (SPS) agreements that ensure food is safe for consumers (MoFA, 2018, p49) as well as strengthening PPRSD, FDA and GSA to provide quality assurance in food production, processing and distribution to ensure food safety and promoting food safety quality schemes by providing one-time cost sharing incentive for the certification and traceability systems to farmer organisations (MoFA, 2022, 2021, 2018). Then again, in METASIP, it ensured in the consideration of food safety the promotion of healthy and pest-resistant varieties of seeds for production, food safety public awareness and intensified surveillance and control of food-related diseases as well as market sanitary practices (MoFA, 2015, 2010, 2009). Unfortunately, all these measures of ensuring food safety were only put in place to meet requirements of international markets. However, cultural and religious purposes of food were not considered in both METASIP and IFJ which largely is in line with the assertion by Havas and Salman (2011) that sufficient food exists to feed the world's population, but not culturally appropriate across the globe.

Last but not least of food dimensions, it is indicated in Table 2 above that the term alternative livelihood as a measure to ensure food stability was specifically used and directly described in METASIP (Boateng & Nyaaba, 2014; MoFA, 2010, 2009) particularly in component 1.3 (Support for alternative livelihood activities) as well as in IFJ under sub-programme 2.5 (diversification of livelihood options) (MoFA, 2022, 2021, 2018, 2017; Mabe et al., 2018; Pauw, 2022; CARITAS Ghana,

2018; PFAG, 2018). In the case of METASIP, it ensured the establishment of agro processing micro and small enterprises (MoFA, 2010, 2009). In addition, METASIP put in measures to identify and train vulnerable groups within communities in entrepreneurial skills (MoFA, 2010, 2009). On the part of IFJ, the policy as part of its green village initiative set up graduates from the training school to establish their own enterprises (MoFA, 2022, 2021, 2018, p60). In addition, IFJ aimed to promote a wide range of small and medium enterprises needed to enhance efficiency in commodity value chains to create off-farm employment for the youth (MoFA, 2018).

Again, under food stability, the term irrigation farming was specifically used and directly described in METASIP in component 1.6 (irrigation and water management). Under this component, METASIP had in its plans to educate extension workers in water and irrigation management technologies and skills to enable them to carry out irrigation extensions, increase service providers' capacity, particularly in the construction of small dams, establish participatory management systems in large scale irrigation schemes etc. (MoFA, 2010, 2009; Boateng & Nyaaba, 2014) to ensure all year-round farming which would ultimately ensure food security for smallholder farmers. In the same vein, irrigation farming was specifically used and directly described in IFJ under its sub-programme **2.2 (Mechanisation, Irrigation and Water Management)**. Some of the activities under this sub-programme were to expand access to irrigated agriculture by mobilising investment to expand and rehabilitate irrigation infrastructure including dams and dugouts and other schemes, developing systems to harvest excess water for irrigation etc. (MoFA, 2022, 2021, 2018).

Then again, the specific term "food storage" was used and directly described in METASIP in component 1.4 (food storage and distribution). METASIP revealed that the Buffer Stock Agency was set up to create and maintain strategic national reserves (MoFA, 2015, 2010, 2009; Boateng & Nyaaba, 2014) by buying

surplus food and providing or selling it out in the event of food shortage in the country during any time of the year. Likewise, in the case of IFJ, storage was considered as part of the programme implementation (MoFA, 2022, 2021, 2018; Marivoet & Sall, 2019; Mabe et al., 2018). Particularly, under its adopted SP 2.3 (post-harvest management and agricultural marketing), IFJ sought to facilitate the provision of storage infrastructure with a drying system at the district level and a warehouse receipt system (MoFA, 2022, 2021, 2018).

Conclusion

In the study, whereas only the availability and stability dimensions of food security were extensively considered, covered and implemented under the policies considered in this study, the other dimensions revealed mixed results since all their elements were not extensively considered, covered and implemented. Thus, the study can conclude that emphasis on addressing food security by stakeholders in Ghana is centred on making food available and stable which defeats Sen's empirical work that suggests that in several famines in which masses of people have perished, there was no general drop in food availability (Clark, 2005; ODI, 2001; Vizard, 2005) and so the focus on food security should well go beyond availability to include individuals capability to function as well as their entitlements.

Implication for Policy Adoption

From the study, the policies under review were primarily centred on ensuring the availability of food for smallholder farmers and somewhat being able to sustain the availability of food, improve livelihood and reduce poverty (stability) till another farming season was due, to the total neglect of other elements in other dimensions particularly the social, cultural and religious benefits about food products element under the utilisation dimension which has implications for policy adoption by smallholder farmers. This is because, Ghanaians are guided by social values, culture and religion and are

therefore conscious of these in all their dealings. Particularly when such knowledge systems and experiences are acquired from past generations by individuals, groups and nurtured into skills for routine use and subsequent transfer (Millar, 2008). For example, in separate studies by Guo (2020); Guo et al. (2022), it was revealed that policy interventions particularly the provision of "improved variety of seeds" were not all that helpful. In their studies, respondents revealed that the new variety of seeds especially millet, that were provided in the market, and to farmers did not really serve their purpose rightly since according to them, "pito" (the traditional millet beer) that is brewed with this variety is not as palatable as "pito" brewed with the indigenous variety. This status quo has the tendency to force farmers into using the old variety of millet which does not yield much or takes a longer time to yield. Therefore, this could make efforts by governments in ensuring food security a mirage. Going forward, the government in collaboration with MoFA and other relevant stakeholders should make conscious efforts at ensuring that new and improved varieties of seeds produced meet the taste and cultural needs of the people.

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