

Seeking Indonesia's Food System Concept: Drawing Lessons from Food Estate Project

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ABSTRACT: Efforts to overcome food insecurity are becoming more crucial as triggered by the combination of climate change, global conflicts, rising cost of living, declining food production and high food prices. Indonesia with population growth, which is projected to increase by 69, 1% in 2045 or up to 311 million people in 2050, need to provide solution to reduce and mitigate the impact of food insecurity. Indonesia's heavy reliance on economic agriculture, fisheries, forestry and other natural resources, often troubled by all situations related to climate-related hazards. The government is trying to address problems with the food estate project, but has elicited backlash from some scholars and CSOs, as the project neglects socio-economic and cultural dimensions of local people. The opponents argue that the project is derived from neoliberal food security model, which has proven failed to eradicate the hunger problem. Researcher is using qualitative method with a desk study approach to examine data and information taken from secondary data sources. Researcher revealed some factors that made the food estate did not work as expected. One of them is due to the concept that ignores the importance of cultural diversity and ecologies coupled with a lack of engagement with the local population. The researcher provides some evidence on the weakness of the food security approach, and offer a policy shift to a mixed approach that fits the Indonesian case.

KEYWORDS: Food security, Food Sovereignty, Food Estate.

I. INTRODUCTION

Provide food to the people is implementation of the right to food as stated in the Indonesia Constitution, that is inseparable from social justice. Thus feeding people is one of the primary objectives of any government, and is a part of national sovereignty. But, it gives without saying, the food insecurity persists as a major problem around the world. According to United Nation since 2015 shown alarming increase a trend exacerbated caused by a combination of factors pandemic, conflict, climate change, and deepening inequalities. In case of Indonesia, despite level of hunger is moderate (ranks 77th out of the 125 countries with a score of 17.6 Global Hunger Index, (2023), Indonesian have to be caution as the country is often troubled by all situations related to climate-related hazards, such as; wild-land fires, droughts, storms, floods and landslides. Given Indonesia's heavy reliance on economic agriculture, fisheries, forestry and other natural resources couple with the steady population growth which is projected to increase by 69, 1% in 2045 or up to 311 millions people in 2050 (Bappenas, 2019), making the food issues are closely related to poverty level.

How to feed a growing population in the face of climate change that disrupts food yields, become more challenges the day to comes. This is probably behind the reason the project of food estate establishment, how to refrain country from economically dependent to foreign county's. Somehow, despite Indonesia rich in agricultural product, but remain dependence on import to certain foods such as; rize, sugar, maize, soybean and beef. President Jokowi designed the food estate project as part of the 2020-2024 National Strategic Project.

This initiative has elicited backlash from some scholars and CSOs, as the project neglecting socio-economic and cultural dimensions of local people. They criticized projects for being based on incorrect premises, as if Indonesia have a food crisis. Conversely, problem is lies on injustice, distribution barriers and affordability. Then, they accused the food security paradigm influenced by liberal market thinkers which is rooted in the neo-colonial concept. The establish a large-scale productions has neglect of right of people to healthy food, sustainable and ecologically friendly.

If the root causes of problem is not about food shortages, why is the government taking the wrong by establishing the food estate? The general answer to this question certainly cannot be separated from the paradigm that the government has. The food security concept generally put much emphasis on how full fill adequate nutrition for all, regardless of the source of the nutrition (local or imported) come from, as well as develop a large-scale industrialized and corporate-controlled farming, based on trade liberalisation and free trade.

Seeking Indonesia's Food System Concept: Drawing Lessons from Food Estate Project

The opponents call the country to shift the approach towards democratic, transparent, prioritize local foods and ecologically sustainable, namely food sovereignty. An alternative concept was originally a response to the perceived failures of food security programs. They also arguing they are more in line with the concept of sustainability as stated in the SDGs goal. Nevertheless, some academics consider debate on these two concept are not necessarily in conflict. The two concepts can complement each other, as neither food sovereignty nor food security models alone can guarantee long-term food security. Thus, a blended approach that integrates these perspectives need to be develop. In fact, (Nyéléni International Steering Committee, 2007) suggested the food sovereignty can be use concept as a prerequisite to food security. complex and interconnected system.

The purpose of this article is to offer a critique of Indonesia current policy on food system, particularly to project of food estate. The project which potentially deepens Indonesia to a food crisis and plunge the country into deeper food insecurity. The approach should not be in the position of choosing camp between food security or food sovereignty, but a blended approach of both concepts. To frame this introduction, there are two the most challenging questions will elaborates:

- I. What went wrong in the food estate project?
- II. What is the Indonesia pathway for sustainable food systems?

II. RESEARCH METHODOLOGY

Given food estate projects conducted in a new form could be categorized as a new phenomenon. For this reason, this study uses the qualitative descriptive approach as the primary methodological approach, with a description narrative of the subject matter derived from scholarly works in the food system issues. Primarily sources are secondary data taken from various range of journals, books both national and international, and complemented by information of investigations report conducted by CSOs.

III. RESULT & DISCUSSIONS

- I. What went wrong in the food estate project?

The term of food security and food sovereignty is different both approach and politics. The food security concept originally use at the World Food Conference in 1974. Then, in 1994 following the UN Development Program's Human Development Report (UN Development Programme, 1994), the food security concept develop within the larger framework of social security and human rights. Later at the 2009 World Summit on Food Security, being revised by added the fourth dimension of stability to the concept of food security.

More recently the sustainability to be added as a fifth dimension to encompass the long-term time dimension (Berry et al., 2015). Food security is defined 'when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life' (FAO 2006). Food security is achieved once all four dimensions are fulfilled (physical availability of food, economic and physical access to food, food utilization, and stability of the other three dimensions).

While food sovereignty being defined as the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems (Sélingué, 2007). Food sovereignty was retrieved conceptually by La Via Campesina, an international organisation of small and middle-scale food producers with a focus on advocating sustainable agriculture through an ecologically friendly, localised food system. Later launched at the 1996 United Nations World Food Summit (Jonathan Siborutorop, 2015). In the NGO Response to the Rome Declaration on World Food Security (NGO Response, 1996). They demanded food sovereignty as the right of nations to determine their food systems and policies. Edited by Amy Irauger, (2015)

The difference between these two concepts can generally be seen in the following two ways. In food security for instance, do not question where food comes from, or the conditions under which it is produced and distributed. Even if it is necessary to fulfil it with imports. As mentioned by (Marc Edelman, at al, 2014) food security concept generally how to provide adequacy of supplies and nutritional content, without questioning how food produced and delivered, including far-off, chemical-intensive industrial agriculture. Even, in order to fulfill the national food security targets are often met by destruction environmental in exploitative conditions. Sarcastically (Otero et al. 2013) mentioned the food security discourse created as a way to justify neoliberal trade liberalization projects.

Meanwhile, the food sovereignty which emerged from social movements aimed to be used as alternative concept. The latter concept emphasizes ecologically appropriate production, distribution and consumption, social-economic justice and that guarantee sustainable food security for all peoples. Thus, prioritises local and national economies and markets and empowers peasant and agriculture farmers (Change for Children, 2016). The food sovereignty concept involves a broader vision than food security, asserting communities' power to democratically manage productive food system resources such as land, water and seeds, and to engage in trade on their own terms rather than being subjected to speculation through international commodity markets. Desmarais 2007; Wittman, (2011). In sum, food sovereignty comprise of two approach; first, there is the shift from an emphasis on national self-sufficiency (as a cry against global hegemony and dependency in access to food) and then an emphasis on democratic decision-making (Bima Agarwal, 2014).

Seeking Indonesia's Food System Concept: Drawing Lessons from Food Estate Project

Today, these two concepts continue to fight despite food security more common narrative use by international for the purpose of meeting world food needs and most firmly anchored in the development literature. But, alternative thought such as Amartya Sen kept suggest the famine is not the consequence of and food shortage, but the inability of certain groups of people to access or purchase food (Christophe Béné and Stephen Devereux Editors, 2023). Recently the mainstream understanding of food security, represented through its four pillars of availability, access, utilization and stability (FAO, 2006)

In Indonesia context, actually the Law No. 18/2012 on Food mentions food sovereignty without mentioning sustainability and environmental issues. It stipulates the right of the people to determine their own food system, but the implementation is not the case. Monoculture expansion and food uniformity that are forced to be consumed become business commodities, make food sovereignty failing. It prioritizes massive production over self-reliance.

II. Indonesia challenges to sustainable food systems pathway

The many country is facing food-deficit simply cannot provide enough food for current populations and make countries have taken the practical route of importing food at a cheaper price. But as reminded by Gerardo Otero, et.el, (2013), losing self-sufficiency is a condition that may lead to a country's loss of food security or at least increase its vulnerability to price fluctuations in food.

The food estate project is actually justified as a way to cover food shortages. This state-run food security projects, premised on the normative notion that people should have access to safe, adequate and appropriate food. But this concept is not as easy as one might think as many challenges occur as a result of the unpreparedness of the local population and the wrong homogenous farm approach.

The origin of Indonesia food estate project has started since the era of President Soeharto's administration with the Mega Rice Project programme in the 1990s. It aimed to turn 1 million hectares (ha) of peatland in Central Kalimantan into a centre for rice production. However, the project was failure, leaving only dried-up peatlands. Then in 2010, President Susilo Bambang Yudhoyono (SBY) initiated the Merauke Integrated Food and Energy Estate (MIFEE) which was aimed to ensure Indonesia's self-sufficiency in food and energy. But this MIFEE programme was also not able to produce food or energy (Gamma Galudra, [et.al](#), 2010).

After the Job Creation Law was enacted in 2020, new model of food estate program re-emerge. It envisioned the establishment of large-scale agricultural plantations across the country. The government indicated three proposed food estate projects, all of which require millions of hectares of land ? These plantations of crops like rice, cassava and potato were supposed to meet domestic demand. The project require the large scale transfer of land control of up to millions of hectares through fraudulent practices. As a result, indigenous peoples are excluded and lose control over land and forests which constitute the source of life, they face difficulty in accessing sources of food and sources of livelihood, destruction of social and cultural systems, exploitation of workers and inadequate wage, violence, non-compliance by the state and corporations in fulfilling the promises of prosperity and decent profit sharing, deforestation, malnutrition, destruction of the ecosystems where flora and fauna live, and even water pollution.

The location of food estate project resides in seven provinces (CNBC Indonesia,2024) namely:

- I. The food estate in North Sumatra is in Humbang Hasundutan (Humbahas) district. The food estate in this area is focussed on the development of horticultural crops, especially onions;
- II. In Central Java, food estates in Temanggung and Wonosobo districts are focussed on horticultural crops;
- III. In West Java, in Garut district specifically for horticulture; (iv) In East Java, in Gresik district specifically for mangoes designed for the export market. The food estate project in Gresik is combined with intercropping of maize, groundnuts, mung beans and lime, as well as integrated farming of maize with cattle and sheep;
- IV. In Central Kalimantan was developed in Pulang Pisau and Kapuas districts with a focus on rice, coconut and duck farming. In addition, food estate is also developed in Gunung Mas district, which is devoted to the development of cassava and corn agriculture;
- V. In East Nusa Tenggara (NTT), food estate is resides in Central Sumba district, aimed to develop of rice barns. While in Belu district for corn and sorghum;
- VI. In Papua province (Merauke) food estate projects are worked on in Keerom district. These two areas are specialised for the development of rice and corn farming.

Results of the food estate project Following initial criticisms from various group, the most spoken criticisms come from the grup of CSOs which rejected the food estate concept. To backup their argues, they provided at least seven studies directly related to food estates (a program started by the government in 2020), released by several non-governmental organizations (NGOs) and other institutions concerned with the environment. All of these studies show that food estates bring more harm, even violence, to communities and the environment than benefits. None of these studies have been considered by the presidential candidates (Kompas May 17, 2024).

- I. The state of food estate in Humbang Hasundutan is, many farmers have left the food estate project. Resulting hundreds of hectares of land appear being abandoned. Analysts s made by Jonathan Siborutorop, (2015) found that participating farmers cultivate government-mandated crops, which were decided on a national rather than on a localised basis, on a government-

Seeking Indonesia's Food System Concept: Drawing Lessons from Food Estate Project

- mandated farming schedule, regardless of local agricultural customs. Farmers were forbidden from using their traditional farming practices and had to strictly adhere to government-approved farming techniques.
- II. In Central Kalimantan, the result was the failure of 600 hectares of cassava plantations are stalled and 17,000 hectares of new rice fields have not been harvested. BBC News Indonesia's investigation with NGO Pantau Gambut found that the National Food Barn project in this region has only triggered new problems, widespread and prolonged floods, and forced Dayak people to change their planting habits. On the 16th of November 2022, the regional representative council of Gunung Mas Regency as the elected representative of the inhabitants of Gunung Mas Regency demanded an end to the Gunung Mas food estate programme and the reconversion of the new farmlands back into forest cover. Jonathan Siborutorop, (2023).
 - III. In Papua, NGOs reported failing plantations and inflated yields, but the government decided to continue the project in to bigger area. It plans to establish 10,000 hectares (nearly 25,000 acres) of corn plantations in the easternmost region of Papua. Food estate in Papua. Statement issued by Yayasan Pusaka Bentala Rakyat and LBH Papua complained the National Strategic Food and Energy Development Project in Merauke potentially violates human rights and worsens the ecological crisis.
 - IV. In Belu, Nusa Tenggara Timur, food estate project is merely ceremonial activities, with nothing come ro good result. Only a few corn plants are alive, but they are stunted by lack of water and weeds. There were no sprinklers to circulate the water pumped from the Rotiklot Dam; water was only released when farmers asked for it. Apparently, after President Jokowi and his entourage died in Belu, the sprinkle was removed, so there was no more water supply for the corn plants. It could be that this project is a hoax or just an image. "Water is only available when he (Jokowi) comes (Iwan Purwantono, 2023). The food estate in Central Sumba, NTT, has been hit by drought. The programme is only running for the first planting season. Farmers are struggling with machinery and agricultural tools, irrigation water, and more.

From these background of the story, it is obviously showed the evidence a policy that do not take into account the multifaceted perspectives as important part of the concept of food sovereignty. For instance, military personnel deployed in the programme were only given one week of training, while traditional farmers in the area were not consulted on their agricultural. Greenpeace Senior Forest Campaigner Syahrul Fitra believes that this project is not in line with the government's promise to the international community to reduce carbon emissions to prevent a climate crisis. Because the clearing of the food estate has the effect of increasing the potential for peatland fires and releasing large amounts of carbon emissions. The food estates worsen national food security, because food estates will homogeneous nise people's food and reduce the food sovereignty of Indonesia's diverse communities (Tempo, Februari 2023).

The failure of food estate projects is generally due to two main things. First, The root of the problem is lack of proper planning. Second, The government also didn't consider local knowledge and experience in designing the program, resulting in planners forcing local farmers to use seeds that aren't suitable for the type of soil in the region. government also didn't consider local knowledge and experience in designing the program, resulting in planners forcing local farmers to use seeds that aren't suitable for the type of soil in the region. The cassava crops for instance, are dying because the they're not suited to the soil which is mostly sandy and shallow. Some of the large-scale food plantations established by the Indonesian government under a "food estate" program have reportedly been abandoned (Mongobay, 2023).

The Ministry of Agriculture of course denied the allegations that the food estate program was poorly designed with a rushed strategic environmental assessment. It said all relevant ministries had carried out analyses using their own maps to determine which areas were suitable for establishing a food estate. According to the recent Lancet Series on Planetary Health, (2015) the degradation and destruction of natural ecosystems has been identified as a major threat to crop diversity and thus the stability of food systems globally. The people's disappointment with this program is not only due to the lack of consultation, but also because most of the converted land is not even planted with food commodities, such as plantations or industries.

What is policy choice?

Legally speaking, Indonesia's basic concept to food is food sovereignty. If we look at to Indonesian law by Act Number 18/2012 defines 'food sovereignty' (or called kedaulatan pangan) as "the right of the country and nation to independently determine food policies that guarantees the right to food for the people and gives the right for society to determine food systems that align with local resource potentials". Above principles closely related the principles made by FOA which is encouraging the participation of all stakeholders in the dialogue leading up to the elaboration of the national strategies FOA Policy Brief Changing Policy Concepts of Food Security. Food Security, (2006). This principles obviously revealed the food system should be a state-based initiatives that promote the interests of domestic farmers, not capital.

The Indonesian Constitution of 1945 also recognises the rights of indigenous communities (Masyarakat Adat). In Chapter 18B Article 2 states that "The state recognises and respects legal units of indigenous communities and their traditional rights as far as they are extant and in line with the principle of the Unitary State of the Republic of Indonesia, as governed in laws". In the World Report (FAO, IFAD, UNICEF, WFP and WHO, 2023) has repeatedly highlighted the intensification of conflict, climate extremes and economic slowdowns and downturns has led world are off track to meet the SDG 2 targets.

Recent Indonesia official publication describes, base on the targets as set out in the 2020-2024 National Medium-Term

Seeking Indonesia's Food System Concept: Drawing Lessons from Food Estate Project

Development Plan (RPJMN), Indonesia's food security score is 95.2. However, in fact, Indonesia's food security score in the Global Food Security Index ranks 63 out of 113 countries with a score of 60.2

Deputy Chair for Development Policy of the National Research and Innovation Agency (BRIN) Mego Pinandito proposed five components in realizing food self-sufficiency, namely; sufficient availability, stability of availability, affordability, good quality/food safety, and no dependence on outsiders. Food self-sufficiency creates high resilience against developments and world economic turmoil (brin.go.id, 2023)

IV. CONCLUSION

This study reveals a misconception of the food system in Indonesia. In particular, the food security approach ignores the principles of democracy, transparency and the participation of local residents in designing foodstuffs that are suitable for development in their area. The Indonesian approach to get away from food insecurity through the food estate program was proven for from successful. Indonesia problem on food system not because of food scarcity, but about cannot overcome food distribution and people access to healthy food.

To design the future food system concept, Indonesia needs to use the perspective of food sovereignty, as mandated in the 1945 Indonesian Constitution. Below are some practical suggestions that are worth considering

1. The development of food-related policies must involve the acknowledgment of local people and develop local food sources that are more adaptive to specific environmental and local social conditions. Large potential of local food resources and high biodiversity available in Indonesia, make it possible to support the provision of diverse and quality food. Local food commodities can be increased in production including their diversification, availability and ease of market access.
2. A blended concept to food systems is a better approach to match the sustainability development goal of freedom from hunger. One solution is to increase local food production according to the characteristics of each region. This will strength point in anticipating food crisis

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