



Policy Brief

Food Crisis – A Review of Policy Aspects

Indonesian Academy of Food and Nutrition - Indonesian Academy of Sciences (AIPG-AIPI)

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Food Crisis means a food scarcity condition experienced by most community in the region caused by difficulties in food distribution, climate change, natural and environmental disaster, and social conflict, including war.

Law No 18 of 2012 on Food (Chapter I, Article 1, paragraph 29)

A food crisis occurs when rates of acute food insecurity and malnutrition rise sharply at local or national levels, raising the need for emergency food assistance.

Global Report on Food Crises (GRFC 2022)

Executive Summary

- **Indonesian food system** is complex and vulnerable to various threats. Which can disrupt food security and increase the risk of a food crisis. Factors such as the COVID-19 pandemic and the Ukraine-Russia conflict are particularly serious threats to the global food system, including Indonesian food system.
- **Food crises can have a significant impact on people's health, well-being, and the economy of a nation.** Managing food crises is a major challenge for the sustainability of human life and requires an integrated strategic and tactical management approach from all stakeholders.
- **As part of its scientific responsibility, the Indonesian Academy of Food and Nutrition - Indonesian Academy of Sciences (AIPG - AIPI)** has conducted multi/transdisciplinary review and formulated strategic recommendations to respond to the the potential risk of food crises in Indonesia.
- **These recommendations** include short, medium, and long-term strategies for the development, improving and strengthening of risk communication about food crisis, local food movements, access to food in areas vulnerable to food insecurity, legal aspects of food crises management, early warning systems for anticipating food crises through, food and nutrition surveillance, investing in research and development for food security and diversification, developing education and human resource capacity, and creating food reserves.

Background and Challenges

There are concerns that the food crisis that emerged in many parts of the world during the COVID-19 pandemic and its aftermath may continue into 2023. According to reports from various United Nations agencies (FAO, IFAD, UNICEF, WFP, and WHO, 2022), the number of people experiencing hunger and food insecurity has been gradually increasing since 2014. The COVID-19 pandemic has only worsened this situation, especially among children, by exacerbating all forms of malnutrition. The ongoing conflict in Ukraine has also disrupted global food supply chains, increasing the risk of a global food crisis. At a global level, this food crisis threatens to undermine the achievement of Sustainable Development Goals, particularly SDG2, which aims to eliminate hunger by 2030.

The conditions of the global food crisis mentioned above can have a negative impact on Indonesia's national food system. These concerns are based on the fact that Indonesia's food system is still vulnerable, with many areas still having a low food security index (FSI). As shown in Figure 1, some regions are classified as "vulnerable" and "very vulnerable" to food insecurity, which means they are at high risk of experiencing food crises when food supplies become limited or insufficient to meet their population's needs. In addition to the global factors mentioned earlier, Indonesia's food system

is also susceptible to various other risk factors such as natural disasters, climate uncertainty, changes in government policies, and economic factors like inflation and rising food prices.

The Food Security Agency (BKP, 2021) report shows that Indonesia's food security situation in 2021 has decreased compared to 2020, as illustrated in Figure 1, with an increase in areas with low FSI from 70 districts/cities (13.6%) to 74 districts/cities (14.4%). The Covid-19 pandemic is cited as a cause of this decline, leading to slowed regional economic growth and decreased incomes for people.

Out of 416 districts, 70 districts (16.83%) have low FSI scores in 2021, with 28 districts classified as very vulnerable to food insecurity, 17 districts classified as vulnerable, and 25 districts classified as somewhat vulnerable. The highly vulnerable districts are spread across the provinces of Papua (19 regencies), West Papua (6 regencies), Maluku, Riau, and West Sumatra (each with one district). Additionally, in 2021, four cities (4%) - Subulussalam City, Aceh Province (classified as very vulnerable to food insecurity); as well as the City of Gunung Sitoli, North Sumatra Province; Pagar Alam City, South Sumatra Province; and Tual City, Maluku Province (classified as somewhat vulnerable to food insecurity) - will also be affected.

The current food system in Indonesia needs to be strengthened, particularly due to the fact that around 14.4% of regions (regencies/cities) still have

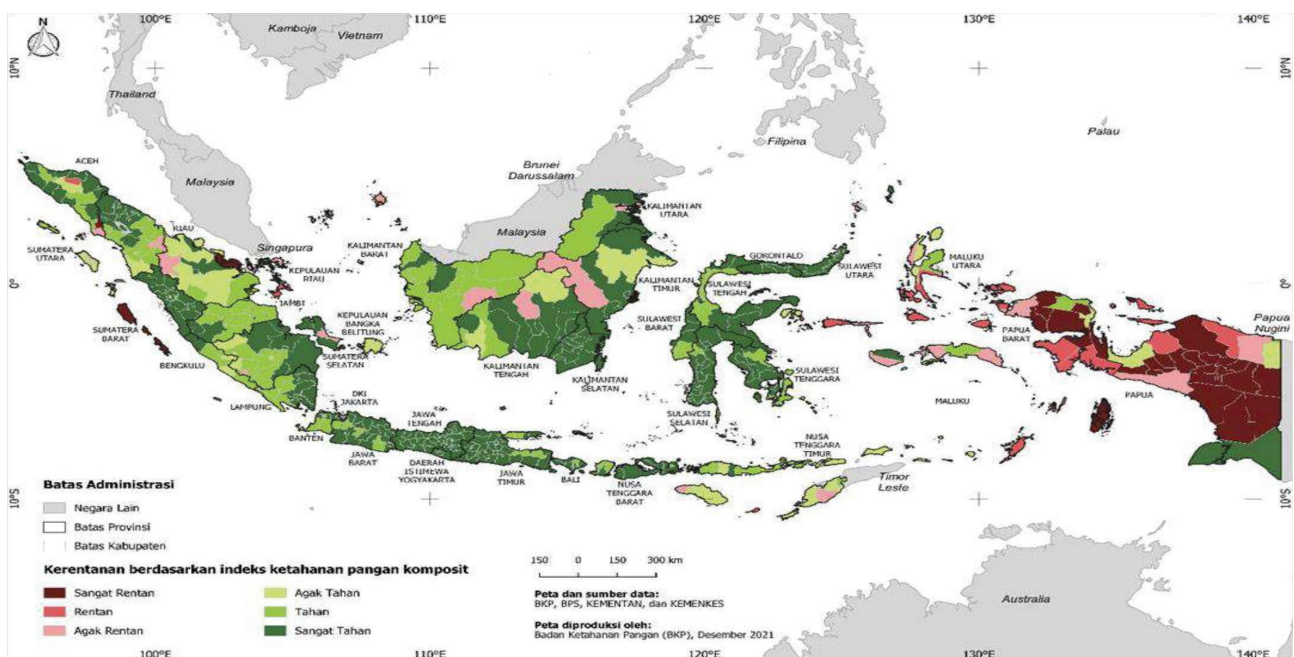


Figure 1. The map of the Food Security Index (FSI) of Cities and Regencies in 2021 (BKP, 2021)

low FSI, making them vulnerable to food insecurity. The deteriorating condition of food security, especially with the Covid-19 pandemic and conflict, raises fundamental questions regarding the current food system. Critics argue that the current system places too much emphasis on producing food in high quantities and low prices, which encourages intensive, large-scale agricultural practices focused on specific commodities and high inputs. This has not been able to increase food security and has even caused malnutrition and overweight and obesity (Wirakartakusumah and Hariyadi, 2023).

To address this issue, efforts should be made to design a food system that is resistant to various threats that could lead to a food crisis and is able to meet its own needs, without depending on imports during times of crisis. These threats include climate change, limited agricultural land and water resources, an increase in the number of people who need food, farmer regeneration, conflicts that have the potential to disrupt food production and logistics, and threats that occur due to the ongoing recovery program from the Covid-19 pandemic.

Given the current conditions, where the impact of the Covid-19 pandemic, the conflict between Russia and Ukraine, and climate change that have triggered various disasters such as floods and crop failures, the threat of a food crisis is very serious, especially for regions with very vulnerable food insecurity. Urgent anticipation is needed since a food crisis can have a major impact on public health and welfare, as well as on the national economy.

In response, the Indonesian Academy of Food Science and Nutrition - Indonesian Academy of Sciences (AIPG-AIPI), has initiated a series of multidisciplinary/transdisciplinary discussions on this issue and has provided the following recommendations.

Recommendations

A. Short-Term Strategies

a. Food Crisis Risk Communication

Effective food crisis risk communication is critical to addressing the crisis and minimizing its impact. In a food crisis situation, transparency, accuracy, and openness are very important in risk communication, as they can help gain the trust and support of the public and other stakeholders.

- i. The government should consider designating the National Food Agency as the public relations department in charge of risk communication for effective communication. The National Food Agency should be responsible for providing clear and accurate information to all stakeholders involved.
- ii. A risk communication statement about the food crisis needs to be concise, clear, and effective - realistic for all stakeholders. A good risk communication statement must be well prepared and delivered quickly so that the information provided can be well understood by all related parties.
- iii. Statements can be written statements, or in structured audio or visual form, with the aim of conveying quick information about risks.

b. Strengthening the Local Food Movement

As seen in Figure 1, areas with food insecurity conditions are generally identified locally with specific conditions (natural, social, economic, and cultural). For this reason, efforts are needed to emerge and strengthen the Local Food Movement, with the main target of strengthening in food insecure areas, but this Movement also needs to be echoed to be able to cover a wider area/nationally. At the same time, the movement can also be used to anticipate the 2023 climate impact, which is expected to occur the El Nino, or even 'light La Nina' or a normal climate that tends to be wet. This Local Food Movement strengthening program can be in the form of:

- i. The movement for local food diversification, including exploring “local underutilized crops” which in the long term will strengthen the development of better food reserves. Food diversification can be emphasized on the consumption aspect (towards more diverse, nutritious, and balanced food consumption) or on the production aspect according to local conditions and potential.
- ii. Campaigns can be launched to encourage and provide incentives for local communities to innovate and utilize their local potential. This can include using yards for food production, diversifying local food production, and promoting local trade by facilitating food transportation and logistics in the area.
- iii. Revitalization of the School Children’s Supplementary Feeding Program (PMTAS), which is linked to school gardens, and local community gardens, in accordance with the spirit of the Strengthening Local Food Movement as a whole.

c. Improving Access to Food in Vulnerable Food Insecure Areas

In the short term, during an emergency, the government can help people who are in a difficult economic situation (very vulnerable to food insecurity) by providing food subsidies, providing social assistance, and helping local farmers’ income.

B. Medium-Term Strategies

a. Utilization of legal solutions to overcome the food crisis

This legal solution can be found in Law No. 23 2014 on the Local Government.

- i. According to Article 24 paragraph (1) of this law, there should be a mapping of government affairs related to the food sector. This is necessary to create good synergies between ministries and non-ministerial government agencies that have been given responsibilities for food affairs in the regions.

- ii. Article 24 paragraph (2) requires that such mapping be arranged through a Ministerial Regulation, taking into account the recommendations from the minister responsible for domestic government affairs. The aim is to ensure that the handling of the food crisis is carried out in a coordinated manner between the central and regional governments.

b. Strengthening the Early Anticipation System of Staple Food Crisis.

The current real conditions in Indonesia show that the risk of a crisis in staple (carbohydrate-based) food commodities will have a major impact on food security and nutrition in Indonesia. Therefore, the Indonesian government should take the following steps:

- i. Create a commodity surveillance program to collect data on the availability, area of production and productivity, and consumption of carbohydrate-based commodities. This data will help ensure food security and nutrition.
- ii. Develop a model to predict price increases based on the principle of probability to minimize risk. This model can be implemented at both national and regional levels.
- iii. Strengthen the role of Bulog in contributing to commodity supply-demand management, rather than seeking direct profit. However, it is necessary to find sources of financing for the development of food security, such as from the business world, consumers, or the government/state budget (APBN).

C. Long-Term Strategies

Here are the recommended long-term strategies to overcome the food crisis in Indonesia:

- a. **the Food and Nutrition Surveillance System will be strengthened** to enhance early identification of food security threats and prevent food crises,

- i. By reinforcing indicators of food production, poverty, and nutritional status, the food and nutrition alert systems will be strengthened for the early detection of food crises.
 - ii. To improve data collection and analysis related to food availability, production, productivity, and consumption, the Food Security and Insecurity Maps will be strengthened.
- b. **Strengthening the Research and Development Programs for Food Security and Diversification:**
- i. Enhance agricultural productivity through technology, sustainable farming methods, and infrastructure development such as building an irrigation system and road.
 - ii. Develop a Peatland Rehabilitation Program (PRG) to support agriculture on extreme lands affected by various stresses, including abiotic stress, salinity, acid, dry soil, brackish and biotic stress (insects, viruses), etc.
 - iii. Increase food diversification by expanding the variety of local and traditional food products.
 - iv. Reduce food waste by strengthening the supply chain and improving distribution management, and exploring waste treatment technologies.
 - v. Conduct a comprehensive review of large plantations to evaluate food versus energy production potential.
 - vi. Explore potential new food sources, such as edible insects and seaweed, based on local potential.
 - vii. Utilize genome editing (GE) technology to accelerate the genetic assembly of plant, animal, and fish varieties.
 - viii. Improve management of production facilities for fertilizers, pesticides, and soil conditioning, including eliminating exploitation by the “fertilizer mafia”.
 - ix. Increase self-sufficiency in the production of food industry support materials.
- c. **Development of Human Resource Education and Capacity**
- i. Improve the quality of human resources supporting these programs by providing relevant education and training in the food sector.
 - ii. Establish a food security and nutrition surveillance program and equip qualified staff to implement it effectively.
 - iii. Strengthen P2L/*Pekarangan Pangan Lestari* activities (creating a food-plant garden in each household) by adopting sustainable agriculture practices, promoting local wisdom, empowering communities, and adopting market-oriented approaches.
- d. **Development of Food Reserves**
- i. Maintaining adequate food reserves to cope with emergency situations, including natural disasters and food crises.
 - ii. Enhancing public understanding and awareness of the significance of food availability. This will be done by launching campaigns on nutrition and healthy food habits, raising awareness about the importance of food for human health and life.

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Indonesian Academy of Food and Nutrition
Indonesian Academy of Sciences

**Indonesian Academy of Food and Nutrition – Indonesian Academy of Sciences
(AIPG-AIPI)**

AIPG-AIPI was established based on Law No.8 of 1990 on AIPI.

AIPG-AIPI aims to assemble leading Indonesian scientists in the field of food science and nutrition to provide opinions, suggestions, and considerations on their initiatives and/ or requests regarding the mastery, development, and utilization of science and technology, especially in the field of food and nutrition to the Government and the public to achieve national goals by always prioritizing: a) values and ideals from Pancasila and the Constitution of the Republic of Indonesia 1945; b) the value of humanity; c) awareness and ethical responsibility; d) improving the quality of human and people's lives; e) the integrity of the personality of the nation; and f) the balance of the environment in sustainable development.

