

# **Food Security and Vulnerability Atlas (FSVA) of Indonesia in 2015**

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## **INTRODUCTION**

Indonesia has achieved the first element of the Millenium Development Goal (MDG), halving the number of population under extreme hunger and poverty. The new administration, under the leadership of President Joko Widodo, has prioritized food and nutrition program under the Midterm Development Plan of 2015-2019. To support the government on achieving this objective, Food Security and Vulnerability Atlas (FSVA) of 2015 has identified some districts and municipalities which are most vulnerable, and their corresponding causes. This document serves an appropriate tool to ensure that policy and allocated resources provide maximum impacts.

After the first atlas was released in 2005 and the second edition in 2009, there has been significant improvement on food availability at the national level. Poverty rate has declined which improved access to food. Currently, more households had access to health services thereby improving their life expectancies.. Electricity and road infrastructures have likewise reached wider regions.

### **Overview of the Food Security and Vulnerability Atlas**

In Indonesia, Law No.18 of 2012 defines food security as the condition of food fullfilment for the country down to the individual level, which can be seen from sufficient food availability in terms of quantity, quality, safety, diversity, nutrition, equal distribution, accessibility, and the absence of contradiction to religion, belief and culture of the community leading to a healthy, active, sustainable and productive life.

FSVA utilizes 13 available indicators at the district level which measure various aspects of food and nutrition security. FSVA classifies those indicators into two categories: chronic and transitory food and nutrition vulnerability. Transitory indicators explain climate and environment which influence food vulnerability from the availability and access sides. On the other hand, chronic food vulnerability is the indicator used to measure food availability, access, and utilization. Nine indicators related to chronic food vulnerability are then combined to come up with a composit indicator to explain the status of food security in the corresponding district and their rank of priority across districts.

## **Food security has improved but some regions still lag behind**

Since 2005, there has been a decline in the number of most vulnerable districts on food security, classified as Priority 1 and 2. The number of Districts classified as Priority 1 has significantly declined from 11% in 2005 to 4% in 2015. However, the number of Districts classified as Priority 2 are stagnant at 11% during the same period. In general, food security of most Indonesian communities has improved in 2009-2015. This is the impact of improvement on several indicators related to food and nutrition security. This is also encouraging, but this progress may face some hurdles if major challenges are not properly tackled.

### **Major challenges**

#### **1. Improving economic or financial access to food, including sustainable investment on infrastructures**

Indonesia has achieved a remarkable achievement on poverty alleviation in terms of the number of people living under the poverty line. Nevertheless, the number of poor people in 2014 was still relatively high at 27.7 million. Another challenge which needs attention is increasing income disparity, which is shown from increasing Gini coefficient from 0.36 in 2007 to 0.41 in 2013.

Although Indonesian economy is growing fast, recently there is also a sign of slowing down. A combination of slowing down economic growth and increasing income disparity may keep poor people vulnerable to food insecurity.

#### **2. Acceleration on the mitigation and intervention to under nutrition**

Even though there has been overall improvement in food security, the data shows that nutrition security is still lagging behind. Furthermore, the achievement on several MDGs target related to health and nutrition is not progressing well, such as the increase on stunting of children under five in 2010-2013; increasing mothers' mortality rate; and relatively high rate of infant mortality. In addition, the achievement on MDGs target related to hygiene, needs serious attention, like bad health status and malnutrition which are considered vicious cycles.

The problem of malnutrition in Indonesia is not only the problem of poor people, which can be seen from the fact that stunting rate is almost four times higher than the rate of poverty. For non-poor people experiencing malnutrition, the hurdle to achieve better nutrition status is not necessarily economic access or poverty alleviation program of the government, but more on insufficient knowledge on better diet. On the contrary, for poor people facing malnutrition, they have to cope with additional problem of economic access and other social problems.

### **3. Coping with the increasing vulnerability to the risk of climate change**

Indonesia is one of the most vulnerable countries as far as disasters in the world is concerned. Natural disaster is one of major factors affecting transitory food insecurity. Based on research of the Center for Research on the Epidemiology of Disaster (CRED), there are six countries (Indonesia, China, USA, Philippines, Afganistan, and India) experiencing frequent natural disasters in 2012 and 2013.

Natural disaster, deforestation, and climate change cause the largest impact to food security in Indonesia. The phenomena of extreme climate change has caused the significant lost of food production wguh is related to the El Nino/Southern Oscilation (ENSO). One degree increase on the sea level temperature is predicted to have significant impact to the rainfall in the provinces of Maluku, West Nusa Tenggara, western part of East Nusa Tenggara, and most part of South Sulawesi, North Sulawesi, Central Sulawesi, and Central Java.

Rainfall variability tends to have negative impact to sustainable agriculture except for the fact that there is available water storage (dam, reservoir) and appropriate irrigation. Analysis on the impact of climate change to rice production in Java shows that rice production in 2025 and 2050 will decline by 1.8 million tons and 3.6 million tons respectively compared to its current production.

Moratorium on deforestation since early 2011 has played major role in reducing the rate of deforestation, but the rate is still considered to be relatively high.

#### **Recommendation**

##### **a. Economic access**

With 27.7 million poor people and some million more people living just above the poverty line, the social assistance and social safety net are so important to support poor household access to food in the short run, while the longterm program such as strengthening and diversification of livelihood, and expansion of infrastructures and basic services need to be implemented soon. In 2014 the Government of Indonesia spent around 0.75% of the GDP for social assistance program, but the average is still lower than regional average and average of the middle income group. The increase on budget for social assistance program combined with new innovation to improve the effectiveness and nutrition sensitivity, so as to provide a significant impact to food access.

##### **b. Nutrition**

Multi sectoral approach to reduce and avoid maknutrition is highly important to be implemented involving government agencies, NGOs, UN agencies, civil society, and the private sector. With regard to government agencies, coordination across sectors needs to be improved to tackle institutional constraints on designing and implementing government program, and being able to improve nutrition sensitivity of the welfare program, agriculture and/or climate change program. Due to limited time "window opportunity of the first 1000

days life” for intervention, improvement on the quality and schedule of data collection on nutrition status will enhance the capability of all sectors to do the intervention.

Social safety net program can be a major program to improve nutritional outcome. Currently the largest social assistance program is Raskin. The program is a subsidized rice for the poor as income transfer using food as the primary modality. However, with the shift toward fortified rice, this program is a cost effective way to increase micro nutrient intake of lower income family. This motivates government to implement a pilot test on rice fortification which is now underway.

### **c. Climate change**

Sustainability of water supply and other environmental services are important to enhance capacity of society on climate change adaptation. Water management can be strengthened through improvement on spatial planning and land utilization management on conservation and essential ecosystem cluster, rehabilitation of degraded ecosystem, and acceleration on the construction and rehabilitation of infrastructures to support agricultural activities (to include irrigation, reservoirs, and dams) by utilizing new and resilient climate technology. Other opportunities include improvement on early warning system for predictable shock (slow-onset) and sudden shock (sudden-onset) related to climate change, create incentive program for research and development on crop resilient to climate conditions and new crop pests.

## **CONCLUSION**

Considering strong economic growth and large institutional capacity, Indonesia shows great prospect to improve food and nutrition security in the years to come. This requires government programs which focus on poverty alleviation, nutrition-sensitive program, food diversification, and climate adaptation strategy. Through the improvement on communication and coordination across sectors, and more on synchronizing public and private sector initiatives, Indonesia can achieve a healthy society, prosperous, with equal income distribution, and resilient to the impact of natural and man-made disasters.

## **REFERENCES**

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