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Strengthening Farmers Resilience and Rural Food System in Response to the Pandemic

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The economic slowdown due to Covid-19 hits hard in many countries. In Indonesia, the economic growth rate for the first quarter of 2020 is only 2.97% - below the central bank estimation (Akhlash, 2020). Simulations estimated the number of unemployed people would rise between 3.5 to 8.5 million, depends on the rate of economic growth. The official number from BAPPENAS shows 3.7 million have gone unemployed since the pandemic hits Indonesia. The government promises to provide social safety nets, especially to the needed households. Yet the news often mentioned that these social aids had not reached its targets even in the city's neighborhood.

The situation is more uncertain for the rural area. Limited information is available about the pandemic situation in Indonesian rural life. The general assumption prevails that rural life dynamic is different from the urban that results in a lower infection rate. Naturally, the government focuses on the pandemic response in cities. However, in reality, the taken measures also affect rural livelihood, especially farmers who have a very vital role in addressing the challenge that we face now: preventing food crisis.

DISRUPTED FOOD SUPPLY-CHAIN DURING COVID-19

In 2020, 56 percent of Indonesia's population is living in the city. This number will increase by up to ten percent

in the next two decades. Providing food for 150 million people in urban areas requires a long supply chain starting from the production source to the customers. Most foods, either processed or fresh, comes from elsewhere outside the city. To maintain an adequate supply, food production and the markets must be connected so it can be accessed at any time.

Covid-19 brings adverse impacts to food distribution (Hobbs, 2020). The government of Indonesia has announced that food stocks in many provinces are depleting. The regulation of large-scale social restriction has affected food distribution and demand. The national supply chain is disturbed, including the export-import sector. Furthermore, high dependence on imported food commodities will undermine the local suppliers. In times like these, the government should have put a higher concern to rural farmers since they are the key actors of a large proportion of our foods. Large scale farming activities cannot be applied in the city. Rural farming contributes to crop cultivation, meat supply, as well as other food raw ingredients.

The pandemic effect on food production may not show a strong indication during the May-April rice harvest period where many areas in Indonesia have reported to generate, on average, 5 ton/ha of grain (Shofihara, 2020). The paddy surplus can be stored for a longer time. Meanwhile, other commodities such as vegetables and fruits need to be sold immediately.

Many fresh products farmers are relying on restaurants and food retailers to absorb their yields. However, pandemic has jeopardized this business sector since they are ordered to close and people stop to dine out. As a result, demands for the harvested commodities are significantly dropped. National news have been reporting that farmers in various areas in Indonesia are suffering from plummeting food price, for example, in Bandung chili price downed by Rp 7,000/kg where normally was Rp 30,000/kg; horticulture products in Bali also dropped from Rp 8,000 to Rp 4,000/kg; in Malang, some farmers even threw away their harvest since no one buys and their crops were rotting (Hidayat, 2020; NusaBali, 2020; Sari, 2020; Werdiono, 2020).

The situation drives the farmers to face harder challenges to perform the next growing season as they will barely afford the seed, fertilizer, pesticide, and labor. Furthermore, 50% of Indonesian farmers only have half-hectare (1.2 acres) of the crop field with a low harvest rate. There are also numerous landless farmers that depend on other people's fields. Better measures to support rural farmers should be placed to prevent the very worst case of the food crisis. In the coming months, rural farmers might reduce their production, avoiding loss due to difficulties in the market. Essentially, improving rural livelihood means securing more food access for everyone.

AGRICULTURE AND RURAL DEVELOPMENT

Improving agriculture in rural areas is not only crucial to strengthen food security, but also maintain the stability of their economic activities (Boughton et al., 2020). Both sectors are part of the rural development cycle that cannot cut down in the process. The cycle includes maintaining production (seed, fertilizer, water/irrigation) and labor), distribution, market demand, and stability provided by the government. Ideally, these circulation activities are sustainable and resilient to change, but the Covid-19 pandemic makes the disruption inevitable (Raja, 2020).

Increasing resilience for future change requires improvement in rural livelihood that is specifically tailored to rural development. The United Nations defines rural development as the transformation of social and economic structures, institutions, relationships, and processes in any rural area.

Agriculture is an important objective of rural development in the economic sector while also embracing non-agricultural aspects such as infrastructure and technological information. In short, the transformation must involve the enhancement and preparation for any outbreak in the future. The development goal is not merely agriculture and economic growth, but also sustainable development that is resilient to social and economic change.

Since 2015, Indonesia has been deploying the Village Funds program (Dana Desa) where the national government provides up to more than one billion Rupiah for village development. This fund can be utilized to advance farmers' welfare by increasing their crops' productivity or to address poor infrastructures such as lack of water and health facilities, soil erosion, and lack of center of technology information. On the other hand, extensive agriculture development sometimes leads to unsustainable practices like slash and burns. A reliable education on responsible farming and a strict monitoring system is needed to take into account to ensure the balance between agriculture and development.

INCREASING RESILIENCE WITH A CONTINGENCY PLAN

Under the pandemic, rural farmers are in a vulnerable position due to the dropping crop price. They are experiencing economic loss and unable to afford capital for the next planting season. In the short term, the government implementing pandemic response using a top-down approach, social aids will take time to reach the rural region. Although, thankfully, many initiatives are going on to protect the people, such as handing out food and other necessary supplies. The most immediate measures are now still being carried out by the government. Stimulus packages such as Program Keluarga Harapan, non-cash food assistance, social cash assistance will cover the basic household necessity. Village Funds cash transfer has also been made available for 10-12 million households. The main challenge to distribute this social assistance is to identify the right beneficiaries accurately. The village-level officials in rural areas should be empowered to have the capacities managing and cross-checking the data.

The long-term plan should equip rural farmers' resilience with contingency plans to prevent a food

crisis. Three approaches can be applied to minimize the risk of food security. First, food supply maintenance by increasing food productivity and croplands. Alas, these efforts are constrained with the decreasing agricultural land that correlates with industry and settlement growth (Rozaki, 2020). With such conditions, boosting food supply can be implemented through farming intensification and opening new croplands. There are 8.28 million hectares of potential paddy fields across Indonesia. The number consists of 2.98 million ha of swamp paddy fields and 5.30 million ha of non-swamps (Ritung, 2010). These suboptimal land types can be utilized in accordance with sustainable agriculture principles.

Second, reorganize the food distribution map and activities. The pandemic has caused sudden disruption of food stock and price. The government should develop a map of food distribution that contains vulnerable areas, alternative locations, and effective distribution routes. The region with high vulnerability poses a high priority for rural development, especially for infrastructures like road and irrigation systems. Rural farmers should be provided with direct access to the market to know the food demand and trend so they can determine which commodity they can sell and plan the next planting season (FAO, 2016). Access prevents short-run demand if farmers can analyze the people's consumption patterns during the outbreak. Enabling rural farmers to adapt to pandemic situation will advance their capabilities in responding to sudden supply-demand change.

Looking at current trends, digitalization can also be the key to food distribution. The government and private sectors, too, can drive agriculture technology (AgriTech) adoption, especially for information dissemination to rural farmers. Grow Asia's study finds that the farmer does not use their mobile apps for farming practice but to stay in touch with each other and keep updated with many messenger groups or digital services (Voutier, 2019). Better information flow would help farmers to access more agricultural input, learn better cultivation methods, receive season and market updates, and build networks, which eventually improve farmers' income. This also proves that infrastructure development plays an essential role to boost rural productivity. At the very least, an adequate telecommunication network must support this implementation. Adopting this technological opportunity is a feasible option to accommodate

sudden changes like large scale social restriction. Lastly, the Indonesian government should perform a stronger food system in an emergency condition. In the worst scenario of an outbreak like Covid-19, people could survive without experiencing the food crisis and unstable food prices. This is a contingency plan to increase resilience for both rural farmers and people in the cities. Indeed, Indonesia has a Public Corporation Logistics Agency (Bulog) to manage and distribute rice stock. The government only focuses on rice as the staple food. More diverse commodities are necessary in case of a longer emergency period. The government also needs to purchase agricultural surpluses from farmers as an effort to ease the farmer's loss. While Presidential Instruction No. 5/2015 instructs Bulog to prioritize purchasing farmers' crops, the government can collaborate further with private sectors to act as off-takers.

Anticipated actions to strengthen the food system and rural farmers need to be constantly implemented. In the future, this plan will help us to survive even if exporting countries stop their food supply to secure their domestic demands. Another solution to reinforce resilience is to shorten food supply chains by raising local consumption and local production (Cappelli and Cini, 2020). When rural farmers can secure their local demands, their self-sufficiency will help them to be less affected by global issues. Therefore the strategy is improving rural farmer capacity to keep producing food despite the crises.

CONCLUSION

A smart and immediate move is needed to strategize stimulus packages to support farmers' food production and supply chain, all to prevent the imminent food crisis. Other than providing basic needs, the government should plan how to empower rural farmers as the driver of our national food production. To date, the plan includes the provision of subsidies and soft loans for smallholders such as the Kartu Tani program. In the near future, the government should allocate more public spending to rural livelihood improvement. The plans must aim to accelerate recovery and address the perpetual issue of inequalities so that rural resilience is improved. Indonesia has several funds that are specifically assigned to villages and its people. One with the most potential is the Village Funds which has an allocation to support the agriculture sector in the villages.

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ABOUT TJF

Tay Juhana Foundation (TJF) is a nonprofit organization dedicated to promote the advocacy of the conversion and cultivation of suboptimal lands into productive lands, through the most environmentally, economically, and socially sustainable manner.

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