

# **Promoting Export Oriented Food Production in the Border Regions of Indonesia**

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## **INTRODUCTION**

As an archipelago country, Indonesia consists of approximately 7000 islands, even though only some islands are inhabited. Largest part of population lives in 8 largest islands, namely Java, Sumatera, Kalimantan, Sulawesi, Nusa Tenggara, Bali, Maluku, and Papua. Geographically, 6 islands are in border with other countries, namely: Sumatera in border with Malaysia and Singapore, Kalimantan with Malaysia and Brunei Darussalam, Sulawesi with the Philippines, Nusa Tenggara with Timor Leste, Maluku with the Philippines, and Papua with Papua New Guinea (PNG).

Most of the border regions are rich in natural resources but economically underdeveloped due to poor infrastructures, support services, and lack of skilled labor. Therefore, developing border regions has been one of priority agenda of the current administration. Specifically, the *Nawa Cita* (Nine Vision) of President Joko Widodo and Vice President Jusuf Kalla emphasize a strategy to “develop from the side line” (*membangun dari pinggiran*), which includes border regions. In accordance to the national policy framework, since 2016 the Ministry of Agriculture has launched a program: “Developing Export Oriented Food Production in Border Regions”. This program is also considered as part of the broader initiative to promote Indonesia as food exporter in 2045. The objectives of the program are: (a) to strengthen food security and food sovereignty in the border regions; (b) to support livelihood improvement of the farmers in the region and reduce development gap across regions; (c) to contribute to food supply in the world market; (d) increase foreign exchange revenue through export of food commodities. In the first phase, the program covered five provinces, namely West Kalimantan, North Kalimantan, Riau Islands, East Nusa Tenggara, and Papua.

The purpose of this brief is to highlight major points of this program, some challenges, and future direction.

### **Current state of development**

Cross border trade has been traditionally practiced by people living in the border regions of Indonesia and neighbouring countries, in particular those having family ties. In the transaction process both parties exchange some commodities at limited quantities, mostly for home consumption. The transaction is also conducted in a local market place, usually open once a week. To cross a border, residents in the region must have a cross border pass, issued by local Immigration office, which must be renewed every month. The transaction is also exempted from any taxes and levies, as long as the value of the goods does not exceed the stated limit. The value limit is as follows: (i) for Indonesian-Malaysian border: FOB Malaysian Ringgit (MYR) 600 per person per month for any commodities transported by land transport, and FOB MYR 600 per boat per trip if the commodities transported by sea

transport; (ii) for Indonesian-Philippines border: FOB US\$ 250 per person per month; (iii) for Indonesian-Timor Leste border: FOB US\$ 50 per person per day; (iv) for Indonesian-PNG border: FOB US\$ 300 per person per month. This regulation is in effect on a reciprocal basis involving two neighbouring countries.

Current pattern of trade focusses particularly on basic food commodities such as rice, vegetable, mung bean, ground nut, beef and pork (Table 1). On the other hand, there is also observed trade on commercial commodities such as cocoa bean, black pepper, palm oil, and rubber. This indicates a comparative advantage on producing some agricultural commodities in the border regions of Indonesia to meet demand of the neighbouring countries. The challenge is how to scale up and to improve competitiveness of those commodities for the benefit of local community.

Table 1. Current and prospective export commodities in five border provinces

No.	Province/Regency	Country of Destination	Current Products	Prospective Products
1	Riau Island (Lingga, Natuna)	Singapore, Malaysia	Fresh vegetables	Rice, vegetables, pepper, local fruit
2	West Kalimantan (Sanggau)	Malaysia	Red rice, black rice, local banana (kepok), pepper, latex, palm oil (fresh fruit bunch and CPO)	Rice, maize, local banana (kepok), pepper, palm oil (fresh fruit bunch and CPO), latex
3	North Kalimantan (Nunukan)	Malaysia	Local rice (Adan), cocoa beans, palm oil (fresh fruit bunch), fresh banana, latex	Local rice (Adan), maize, cocoa beans, palm oil (fresh fruit bunch), fresh banana, latex,
4	East Nusa Tenggara (Malaka, Belu)	Timor Leste	Hog, pork, mung beans, ground nut, beef, animal feed	Hog, pork, mung beans, ground nut, beef, shallot, animal feed(pakan), mango
5	Papua (Merauke)	Papua New Guinea	Rice, eggs, vegetables, sago flour, sweet potato, vanilla, hog	Rice, eggs, vegetables, sago flour, sweet potato, vanilla, hog, brown sugar

Source: Ministry of Agriculture (2017)

To develop or to expand food production, the most important natural resources is the availability of land. Table 2 indicates the available land for various intervention program, namely: intensification, diversification, mixed farming, and extensification. Among five provinces, Papua shows the largest land resources available with 3.10 million hectares, and 96.8% of the land is suitable for extensification program. The next largest province in terms of land availability is West Kalimantan with 1.37 million hectares, and 42.1% is dedicated for extensification. With regard to intensification program, the largest is in West Kalimantan (129.7 thousand hectares), followed by East Nusa Tenggara province with 36.1 million hectares.

Table 2. Potential land for food crop production in the border regions (ha)

Province	Intensification	Diversification	Mixed	Extensification	Total
Riau Island	500	20,533	10,956	135,796	167,785
West Kalimantan	129,688	358,792	303,486	576,123	1,368,089
North Kalimantan	7,448	41,693	6,998	583,989	640,128
East Nusa Tenggara	36,132	52,674	0	304,805	393,611
Papua	22,281	59,337	9,516	3,004,980	3,096,114
Total	196,049	533,029	330,956	4,605,693	5,665,727
Source: Ministry of Agriculture (2017)					
Note:					
Intensification: development of lowland rice (existing);					
Diversification: development of dry land agriculture;					
Mixed: mixed cropping of annual crops and perennial crops;					
Extensification : opening new land.					

## Challenges and opportunities

Future demand for food keeps growing and changing in structure, in term of quantity as well as its diversity in response to population growth, income, and changes on demographic characteristics. Demand for food is not only limited to carbohydrate and animal protein, but also sugar, vegetable and fruits. However, effort to accelerate food production is also constrained by increasingly limited land due to conversion to other use and land degradation.

Some study shows that land productivity and efficiency of production system in the border regions is lower than in other regions due to low adoption of new technology and limited human resource capacity. On the other hand, some regions indicate an unique and exclusive food production system. For instance, in Nunukan Regency of East Kalimantan we may find locally grown food products such as local rice variety called Adan, local buffalo, Krayan, Kepok banana in Sebatik.

Other opportunities which may promote development in border region is mega-biodiversity related to food commodities, diversity on soil characteristics, agroecosystem, and climate providing ample opportunities to produce a diversity of food products. The available technology is feasible to be applied in the appropriate agroecosystem of the border regions.

More specifically, result of a SWOT analysis on food production development in the border regions is presented in the following:

**Strength:** (a) strategic location and access to border trade; (b) personal relationship among citizens in two countries; (c) availability of natural resources; (d) local wisdom.

**Weakness:** (a) lack of understanding on resource potential; (b) limited infrastructures and agricultural support services; (c) development gap across regions; (d) lack of connectivity to the export market and center of domestic economic growth; (e) low competitiveness of domestic products.

**Threats:** (a) official border sign in some locations are not yet clear; (b) institutional arrangement in the border regions is not yet well-developed; (c) trend of outmigration from the border regions; (d) sense of nationalism has been degraded; (e) competition of products from the neighbour.

**Opportunities:** (a) bilateral, regional, and multilateral cooperation; (b) prospects of food export to the neighbour; (c) development of rural infrastructures; (d) potential to increase food production; (e) the existence of traditional local market in the border regions; (f) regional and inter-islands trade.

### **Concept and strategy**

The primary objective of the program is to enhance food security, promote food investment and export, social, economic, and security stability in border regions. In the short-term, the program focuses on accelerating export of the existing commodities, particularly food products. In the medium-term, the priority is more on promoting agricultural innovation and product development. Finally in the long-term, the program emphasizes on scaling up and sustainability aspects. Commodity development is conducted in a cluster, based on need and market demand, and in partnership with the private sector. Some other critical elements are also technology innovation, infrastructure development, support services, financing, and marketing.

Direction and targets of promoting food production in the border regions are: (a) stabilization of food security and regional economy; (b) to accelerate economic activity and food trade through infrastructure development; (c) promote investment on the food sector, particularly for export market; (d) to increase food export; and (e) increase stability on the social, economic, politic, devense and security in the border regions. For that purpose, the stragy in promoting export oriented food production in the border regions are: (i) increase export volume of any commodities from the border regions which traditionally has been developed; (ii) increase the production and export of the potential commodities; and (iii) develop the potential export catalisator regions (neighboring regency or provinces). Even though some neighboring regions do not export directly, they contribute to promoting the border regions by supplying farm inputs or farm services.

Development of export oriented food production in the border regions is characterised by four elements: (1) based on cluster and area development driven by domestic need and international market demand; (2) farmers empowerment and partnership with private sector; (3) application of modern agriculture supported by innovation and mechanization; (4) development of institution related to infrastructure and supplies, financing, processing and marketing.

As a starting point, short-term strategy in 2017 are: (a) acceleration of the related program of the Ministry of Agriculture in the border regions in accordance to the Grand Design in the corresponding location; (b) strengthening production system by technology innovation along with the promotion of the market mechanism; (3) formulation of the Grand Design and Action Plan in the corresponding location along with improvement or revision of the Ministry's program of work for 2018; (4) comunication and diplomacy with related agencies in the neighboring countries on innitiating export. Mid-term strategy in 2018-2019 are focused on: (a) build and develop infrastructures; (b) increase food production (productivity and quality); (c) expansion and sustaining production of the existing and prospective commodities; (d) development of the system and regulation of export and import; (e) development of the cluster and modern food production in line with the regional comparative advantage and and market opportunity.

## Priority programs

Food production in the border regions is directed to develop a modern and sustainable agricultural system based on cluster and driven by technology and management innovation. Some more specific targets are increase on production and quality both of the existing and prospective commodities to meet domestic as well as export market. The ultimate goals are to meet local and national food demand, export market by emphasizing farmers' welfare and conserving the environment. Product competitiveness is a strategic element which will be achieved by improving production efficiency, focus on priority commodities, quality improvement, including development of the downstream industries. Locally specific commodities will be conserved without neglecting the need to improve efficiency.

There are two models which need different approaches. *First*, a model to improve an existing commodity. The primary focus of this model is to improve the existing system in term of productivity, quality, profitability, and competitiveness. *Second*, a model to develop a newly open specific cluster with potential commodities. The primary focus is to develop a modern agriculture supported by innovation, investment and partnership with private sectors. Based on physical and socio-economic characteristics of the locations, the models would be site specific in term of the farming system, priority commodities, technology, and institution.

In general, the program includes: (1) development of infrastructures and support services; (2) improvement of the existing food production system; (3) opening new land dedicated to food production (increase production capacity); (4) post harvest handling and development of downstream industry (improvement of competitiveness and value addition); (5) improvement of human resource capacity, development of institution, and transmigration; (6) development of trade networks and marketing; and (7) cooperation on investment in the border (Joint Border Investment).

In the short-term, the priority program include: (1) improvement of the existing production system with technology innovation and development of marketing of export commodities; (2) promotion of the export commodities to the neighbouring countries. Whereas in the medium and long-term include: (1) development of infrastructures; (2) increase food production interm of quantity and quality; (3) expansion and sustainability of the existing and potential products; (4) improvement of export-import regulation.

Due to variability of the border regions in terms of bio-physical and socio-economic characteristics, the action program should be local specific, based on cluster approach, bottom up, community based, and consider the local wisdom. The following section will briefly highlight priority program in five border regions, namely: (1) Inland border regions between Kalimantan and Malaysia; (2) Inland border regions between East Nusa Tenggara and Timor Leste; (3) Inland border regions between Papua and Papua New Giunea; and (4) Maritime border regions.

**Inland border regions between Kalimantan and Malaysia.** The priority commodities to be developed in this region are: organic rice, standard rice with premium quality, maize, and leafy vegetables. The action program includes:(1)increase production and cropping intensity with the improvement on irrigation and application of improved technologies; (2) opening new land; (3) reduce losses; and (4) increase farmers' capacity and farmers' economic institution.

**Inland border regions between East Nusa Tenggara and Timor Leste.** East Nusa Tenggara Province endows with abundant land resources which enable the province to supply food commodities to the neighbour such as Timor Leste. The production of staple food commodities such as maize, rice, cassava, mung beans, and ground nut are still low. In the

case of livestock, beef, hog, native chicken, and duck support livelihood of rural household but the production system is still traditional, and the productivity is low.

Based on the existing condition and future prospect, the priority commodities to develop are maize, shallots, and beef. The priority programs are: (1) increase production and productivity of food crops; (2) intensify extension services and strengthen farmers' institution; (3) promote crop-livestock integration system; and (4) develop agricultural mechanization, include pre- harvest and post-harvest.

**Inland border regions between Papua and Papua New Guinea.** Priority commodities to be developed in the province of Papua are rice, sweet potato, maize, soybean, banana, and vegetables to meet local consumption as well as export to PNG. Based on local problems and constraints, the priority programs are: (1) development of frastructures; (2) increase food production and productivity; (3) promote crops-livestock intehration system; (4) empowerment of local community toward economic orientation; (5) development of financial and marketing institutions; and (6) build capacity of extension specialists and farmers.

**Maritime border regions. The priority commodities to be develop vary across provinces.** For instance in the region in border with Malaysia and the Philippines, the commodities are perenial crops, rice, capture fisheries, secondary crops, and vegetables. Based on local problems and constraints, the priority programs are: (1) development of infrastructures; (2) increase production and productivity; (3) increase added value and competitiveness; (4) increase capacity of human resources; and (5) develop financial and marketing institution.

## CONCLUSION

Development of the border regions has been one of the priorities of current administration considering strategic nature in terms of security, economic, and regional development. Current development in the region generally lags behind, but there is great prospects, particularly on food production to meet both local demand and export to the neighbour. In addition to location advantages, residents in the neighbouring countries has developed personal ties for long period of time which can be developed toward more formal and commercial economic cooperation.

The goal to develop food production center and to promote export must be implemented in parallel manner. Priority commodities are decided based on current state of development and future prospects, including trade. To implement strategies and programs in the border region, a coordinating mechanism accross ministries is a must. In promoting export market, in addition to private sector innitiatives, the role of government in strengthening collaboration with the corresponding countries is also required.

## REFERENCES

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