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COUNTRY FACT SHEET ON FOOD AND AGRICULTURE POLICY TRENDS

Socio-economic context and role of agriculture

Indonesia, a large archipelago nation of more than 17 000 islands and 256 million inhabitants, has achieved impressive economic growth since the Asian financial crisis of the late 1990s, becoming the largest economy in Southeast Asia. The country's gross national income per capita rose steadily from US$2 642 in 2007 to US$3 834 in 2015 (in constant 2010 US dollars). Today, Indonesia is the world's fourth most populous nation and the world's tenth largest economy in terms of purchasing power parity.[1]

Indonesia is a leading producer of palm oil and a major global producer of rubber, copra, cocoa and coffee. It is the second marine fisheries producer in the world, after China.[2] Large plantations cultivate export crops on about 15 percent of the total agricultural area, but the majority of farmers (68 percent) are smallholders operating on less than one hectare.[3] The country is a net importer of grains, horticulture and livestock produce.[4]

Indonesia is a fast-growing middle-income country that has dramatically reduced poverty, contributing greatly towards the achievement of the Millennium Development Goal (MDG) 1 poverty reduction target. While the poverty rate declined by 1 percent annually from 2007 to 2011,

	Selected indicators		2007	2011	2015
SOCIO-ECONOMIC	GDP (current billion US$) *		432.2	893.0	861.9
	GDP per capita (current US$) *		1 860.6	3 647.6	3 346.5
	Agricultural value added (percent of GDP) *		13.7	13.5	13.5
	Agricultural value added (annual percent growth)	(Average 2007-2015)	4.0		
		(2015)	4.0		
	Total population (thousand)		232 296	241 613	257 563
	Rural population (percent of total)		52	49.3	46
	Employment in agriculture (percent of total employment)*		40.4 (2008)	36.2	33.5
	Human Development Index **	(2015)	0.689 (113	5.01	
AGRICULTURAL PRODUCTION & TRADE	Per capita cultivated land (ha)		0.180	0.188	0.178
	Area equipped for irrigation (ha)		6 722 000 (2014)		
	Value of total agriculture production (current million US$)		54 927.4	141 115.9	126 046.8 (2013)
	Value of cereals production (current million US$)		18 341.9	63 925.0	59 275.6
	Yield for cereals (kg/ha)		4.5	4.9	5.01
	Top 3 commodities	Production quantity (2013)	Palm oil fruit; rice, paddy; sugar cane		
		Production value (2013)	Rice, paddy; palm oil; rubber		
		Import quantity (2013)	Wheat; soybeans, cake; Sugar raw centrifugal		
		Import value (2013)	Wheat; soybeans, cake; Sugar raw centrifugal		
		Export quantity (2013)	Palm oil; palm kernel cafe; rubber natural dry		
		Export value (2013)	Palm oil; rubber natural dry, fatty acids		
FOOD SECURITY & NUTRITION	Top 3 commodities available for consumption		NA		
	Per capita food supply (kcal/capita/day)		2522	2712	2777 (2013)
	General (g) and Food (f) CPI (2000=100)		187.8 (g), 180.4 (f)	239.3 (g), 268.1 (f)	282.5 (g), 338.9 (f) (2014)
	People undernourished (million)		42.7 (2006-2008)	26.9 (2010-2012)	19.4 (2014-2016)
	Prevalence of undernourishment (percent)		18.5 (2006-2008)	11.1 (2010-2012)	7.6 (2014-2016)
	Global Hunger Index ^	(2016)	21.9 (serious)		
	Access to improved water sources (percent of population)*		83	85.1	87

Source: FAOSTAT; *Source: WB; **Source: UNDP; ^ Source: IFPRI (accessed on 12 March 2017).

1 World Bank. 2016. Indonesia overview (available at http://www.worldbank.org/en/country/indonesia/overview). Accessed December 2016.

2 Copra is the dried meat, or dried kernel, of the coconut used to extract coconut oil.

3 IFAD. 2012. *Republic of Indonesia Country strategic opportunities programme*. Rome.

4 ADB (Asian Development Bank). 2015. *Summary of Indonesia's Agriculture, Natural Resources, and Environment Sector Assessment*. ADB Papers on Indonesia No. 8, October 2015. Mandaluyong City, Philippines (available at https://www.adb.org/sites/default/files/publication/177036/ino-paper-08-2015.pdf).

since 2012 the average slowed to only 0.3 percent annually. In 2015, Indonesia also met the MDG 1 hunger target of cutting by half the proportion of people who suffer from hunger. Although the prevalence of undernourishment has declined, child chronic malnutrition rates are still high: 8.4 million children under five (37.2 percent) are stunted.[5]

The Government of Indonesia is committed to reducing poverty by stimulating economic growth in a socially inclusive and environmentally sustainable way. Its efforts are hampered mainly by inadequate infrastructure (particularly for transport, electricity and irrigation) and weaknesses in governance, although there has been some improvement in recent years.[6] The decreasing pace of job creation is a major concern, as employment growth is now slower than population growth.[7]

1. Government objectives in agriculture and food and nutrition security

Indonesia's economic planning follows a 20-year development plan from 2005 to 2025, segmented into five-year medium-term plans (**Rencana Pembangunan Jangka Menengah Nasional – RPJMN**), each with different development priorities. The 2010–2014 RPJMN had a nutrition focus and included a specific target to reduce stunting from 37 to 32 percent, while the current 2015–2019 RPJMN stresses infrastructure development and social assistance programmes related to education and health. This RPJMN also highlights two distinct goals for the agriculture sector: to increase rice production for food security and to develop higher-value cropping to improve rural livelihoods.

In 2013, Indonesia formulated its first long-term agricultural development plan, the **Grand Strategy of Agricultural Development 2013–2045**. Its primary objective is promoting sustainable agroindustry. In the medium term, and in line with the RPJMN, the **Strategic Plan of the Ministry of Agriculture 2015–2019** has an overall objective to achieve food sovereignty and enhance the welfare of farmers. Accordingly, extensive investment in infrastructure, extension services and adaptation to environmental risks will be put in place. At the same time, the **Law on Farmers' Protection and Empowerment (2013)** aims to secure farmers' welfare by improving access to land, finance and markets; providing protection against weather events; and strengthening farmers' organizations.

In 2011, the Indonesian Government launched its third **National Plan of Action on Food and Nutrition (RAN-PG 2011–2015)**, recognizing stunting as a significant nutrition problem for the first time. The country joined the Scaling Up Nutrition (SUN) Movement and developed the **SUN Framework in 2012**, together with a new food law to strengthen food sovereignty and self-reliance. The fourth **National Plan of Action on Food and Nutrition (RAN-PG 2015–19)** includes the Sustainable Development Goals and the outcomes of the second International Conference on Nutrition.[8] This plan has been strengthened by the Government Regulation on Food and Nutrition Security (No. 17/2015). In addition, the **Strategic Policy and Action Plan on Food and Nutrition** has been finalized as of December 2016 and a Presidential Decree for it has been proposed as well. Other nutrition-relevant policies are the **Policy on Scale-Up of Food Diversification Consumption of Local Food (2009)** and the **Guidelines on Food and Nutrition Surveillance System (2010)**.

2. Trends in key policy decisions (2007 to 2016)

2.1 Producer-oriented policy decisions

Indonesia's top agriculture priority in recent years has been rice self-sufficiency. To achieve this, the government provides farmers with significant market price support and fertilizer subsidies. A rice insurance scheme is being piloted and will soon be scaled up to the national level. Fisheries are expanding rapidly, increasing availability of and access to proteins and to diversified sources of income.

Protecting farmers through domestic procurement

Indonesia is the third largest rice producer in Asia after China and India, with 75.4 million tonnes produced in 2015.[9] To incentivize farmers, the government pays a procurement price higher than the international market price through the Bureau of Logistics (BULOG), a state-owned enterprise. The rice procured serves two purposes: to sell subsidized rice to poor families through the **Subsidized Rice for the Poor Programme (Beras untuk Rakyat Miskin – RASKIN)** (see section 2.2); and to stabilize the price of rice at the retail level. At the same time, the Ministry of Agriculture (MoA) has recently established toko tani (farmer's shops), which buy agricultural products (including rice) directly from the farmers. In 2015, 36 shops were established and by the beginning of 2017 there will be 1 000 more. This policy framework, coupled with rice import control, has kept the domestic price of rice higher than the

5 World Bank. 2015. *The Double Burden of Malnutrition in Indonesia* (available at http://www.worldbank.org/en/news/feature/2015/04/23/the-double-burden-of-malnutrition-in-indonesia).

6 ADB/ILO/IDB (Islamic Development Bank). 2010. *Indonesia: Critical Development Constraints* (available at https://www.adb.org/sites/default/files/publication/27497/indonesia-critical-development-constraints.pdf).

7 World Bank, 2016. (Op cit.)

8 Ruducha, J. 2016. *Nutrition Upstream. Improving Policies, Programmes, and Partnerships for Maternal and Child Nutrition in Asia*. Kathmandu, UNICEF Regional Office for South Asia.

9 FAO. 2015. FAOSTAT. Accessed December 2016.

world market price (except for in 2008–2009).[10] Thus rice farmers have enjoyed large protection at the expense of consumers. To limit this protection, ceiling prices are set at the beginning of each season. However, since market prices are higher, this measure is having only a limited impact.

Expanding fertilizer subsidies

To foster self-sufficiency and increase yields, Indonesia provides farmers with significant fertilizer subsidies as part of its agricultural development strategy. This important growing scheme is Indonesia's largest farm support programme and accounts for around half of the agriculture budget. In 2016, fertilizer subsidies amounted to Rp30.1 trillion (US$2.27 billion), a 25 percent increase over 2014. The subsidies allow small-scale farmers with 2 hectares or less of land to buy government-supported fertilizer at around 50–75 percent of the market price. The quantity depends on the demand raised by the **Farmers Group Definitive Demand Plan (Rencana Definitif Kebutuhan Kelompok – RDKK)**, to which farmers need to be subscribed. However, the success of this measure has been limited, as annual rice yields have barely risen, despite a 60 percent increase in subsidies.[11] Different reports have highlighted the need to phase out fertilizer subsidies and use these budgetary outlays instead to provide agricultural public goods with higher returns, such as irrigation, extension services, risk management tools, or even targeted cash transfers to small farmers.[12]

Introducing an insurance scheme for rice

Rice production in Indonesia is risky due to the recurrence of natural calamities, such as drought (in the dry season), flooding (in the wet season), pests and diseases, which lead to lower production or even to total harvest failure (known as puso).[13] In 2011 the government started to provide crop protection,[14] covering rice farmers' losses through a fund called **Puso Rice Alleviation Aid (BP3)**.[15] BP3 evolved into a more complex agricultural insurance pilot programme between 2012 and 2015, also involving state-owned insurance companies and state-owned fertilizer companies. The Rice Crop Insurance Pilot Project was conducted in five provinces with support from the Japanese International Cooperation Agency (JICA). The fertilizer companies pay 80 percent of the premium through a state subsidy, while farmers pay the remaining 20 percent. By the 2014/15 planting season, the government was fully in charge of the programme; by the end of 2016, it had expanded the programme to 16 provinces (approximately 1 million hectares), and expects to scale it to all paddy fields by 2019.[16]

Changes in the fisheries sector

Fish and seafood are the leading source of animal protein for Indonesians (about 54 percent of their total animal protein intake). Aquaculture has been rapidly expanding at a 10 percent rate in the last two decades, driving growth in the fishing sector (see Figure 1). However, most of the country's aquaculture is not mechanized. Indonesia has rich marine biodiversity and resources, but these are threatened by illegal, unreported and unregulated (IUU) fishing.[17] In November 2014, following the appointment of a new Minister of Marine Affairs and Fisheries (MMAF), combating illegal fishing became the sector's priority. A one-year moratorium on new licenses for foreign-built vessels was imposed and over 1 000 vessel and company licenses were reviewed.[18] Transhipments at sea – where smaller boats offload their catch onto larger foreign vessels with cold storage facilities – have also been banned in a bid to prevent neighbouring countries from siphoning off fish illegally.[19] In December 2015, the MMAF increased considerably the fees associated with the capture fishing sector. Indonesia has sunk 317 illegal fishing vessels since 2014.

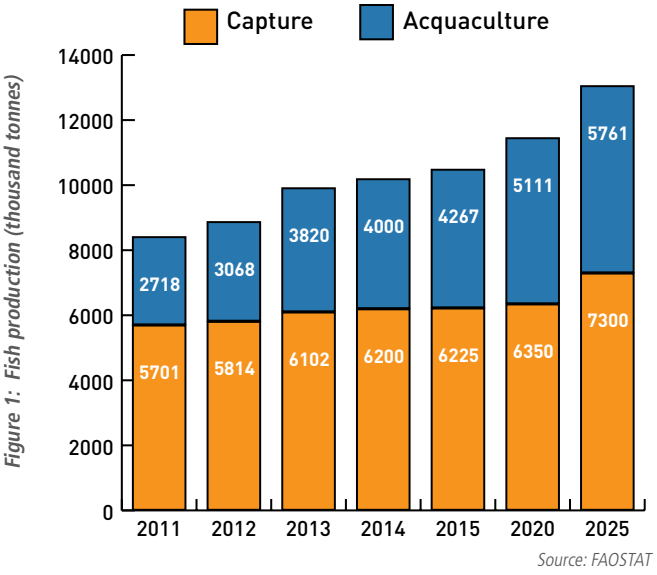

Figure 1: Fish production (thousand tonnes)

Source: FAOSTAT

10 Sudaryanto, T. 2016. *Policy to Achieve Self Sufficiency on Rice Production in Indonesia*. FFTC Agricultural Policy Platform (available at http://ap.fftc.agnet.org/ap_db.php?id=624).

11 OECD. 2015. *Indonesia policy brief* (available at https://www.oecd.org/policy-briefs/indonesia-agriculture-improving-food-security.pdf).

12 IFAD. 2011. Brief 121: *Who Is Benefiting from Fertilizer Subsidies in Indonesia?* Rome (available at https://www.ifad.org/topic/tags/drd/2187642).

13 Rice farming is considered puso if the paddy crop has been planted more than 30 days ago and is affected by pests, diseases, drought, or flooding that have destroyed at least 75 percent of rice farmers' planted area.

14 Pasaribu, S. 2016. *Implementation of Indemnity-Based Rice Crop Insurance in Indonesia*. FFTC Agricultural Policy Platform (available at http://ap.fftc.agnet.org/ap_db.php?id=650).

15 Sayaka, B. & Pasaribu, S. 2011. *Risk Management in Rice Farming in Indonesia: a Pilot Project for Agricultural Insurance*. Forum for Agricultural Risk Management in Development (available at http://www.agriskmanagementforum.org/content/risk-management-rice-farming-indonesia-pilot-project-agricultural-insurance).

16 JICA. 2015. *Rice Crop Insurance Pilot Project in Indonesia* (available at https://www.env.go.jp/en/earth/cc/casestudy/casestudy2_3.pdf).

17 FAO. 2014. *Indonesia Fishery and Aquaculture Country Profile*. Rome (available at http://www.fao.org/fishery/facp/IDN/en).

18 California Environmental Associates. 2016. *Indonesia Fisheries: 2015 Review*. Prepared for the David and Lucile Packard Foundation (available at https://www.packard.org/wp-content/uploads/2016/09/Indonesia-Fisheries-2015-Review.pdf).

19 The regulation of small-scale fisheries (vessels under 5 GT), which make up 95 percent of Indonesia's fishing fleet, is considered a politically sensitive and complex pursuit given the decentralized government structure and remoteness of numerous fishing communities.

2.2 Consumer-oriented policy decisions

The consolidation of the RASKIN programme, the introduction of cash transfer programmes, and the (near) abolishment of fuel subsidies have constituted the basis for strengthening social protection in Indonesia. However, the persistently high number of undernourished people – despite the country's impressive economic growth – continues to be a concern. To better address the problem and reduce inefficiencies, in 2013 the government began using an identification card programme (through Social Protection Cards, or KPS) to grant access to the different social protection programmes.

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Workers stacking sacks of rice seed in a warehouse for storage. These sacks will be distributed to local farmers.

Consolidating the rice subsidy – the Subsidized Rice for the Poor Programme

A significant focus of Indonesia's food security programme is on rice, which constitutes the major source of calories for most of the population. The Subsidized Rice for the Poor Programme (RASKIN) was first implemented in 2002 and constitutes the largest social protection programme in Indonesia. On average, it receives 30 percent of the social protection budget. It evolved from a temporary cross-sectoral national rice subsidy programme, implemented in 1998 after the Asian financial crisis, into a social protection programme for the poor. RASKIN provides every poor household with 15 kg rice/month at 20–30 percent of the market price. In 2015 the government allocated approximately US$1.4 billion for this subsidy, with BULOG distributing 2.7 million tonnes of rice to 15.5 million poor households. However, it has received some criticism, particularly regarding the poor quality of rice, the impact on the local rice market and the inefficient targeting of the programme. For instance, according to the OECD, Indonesia should replace RASKIN with a targeted food voucher and cash transfer programme.[20] Although the programme is still functional, in 2017 the government started implementing an on-cash food subsidy programme (BPNT) for low-income families. BPNT-issued cards, called Prosperous Family Cards (KKS), allow beneficiary families to buy quality rice and sugar at subsidized prices.[21]

Enhancing conditional cash transfers

During the 1997 Asian economic crisis, Indonesia began to introduce social protection programmes for the poor. In 2005, the government launched the **Unconditional Cash Transfers Programme (UCTs)** (Bantuan Langsung Tunai) as an alternative policy instrument to offset the upward spiral in fuel prices. The UCTs cash benefit was Rp100 000 (US$10.50) per month to each target household and covered 15.5 million households. In 2007, the government switched from UCTs to conditional cash transfers through the **Hopeful Family Programme (PKH)**. Under the PKH programme, each household receives Rp1.89 million (US$141.7) per year. To receive benefits, pregnant women and children under six must visit health clinics regularly, enrol in school and maintain attendance at 85 percent. The scheme started out by covering 388 000 households in seven provinces, and by 2010 it covered 816 000 households in 20 provinces. By 2014, 3 million households in 33 provinces were covered and in 2016 the number of households reached 6 million (according to the Minister of Social Affairs). In June 2017, the government announced that the programme will be expanded in 2018 to reach 10 million families.[22]

Boosting development programmes through reduced energy subsidies

To date, the Indonesian Government has used energy subsidies (on gasoline, diesel, kerosene, liquid petrol and electricity) as a core policy instrument to stabilize prices and protect the general welfare of the population.[23] However, over the years, energy subsidies have become less effective and efficient, placing a significant burden on the national budget and becoming a sensitive political issue.[24] In December 2014, Indonesia introduced major reforms to its fossil fuel subsidies, removing subsidies to gasoline and introducing a "fixed" subsidy of Rp1 000 per litre for diesel (which was again halved in 2017). At the same time, world oil prices plummeted. Together, these changes led to a massive fiscal savings of Rp211 trillion (US$15.6 billion) – over 10 percent of state expenditure. Those savings have been translated into major investments in social welfare and infrastructure, including special programmes to boost growth and reduce poverty (Rp148.2 trillion), state-owned enterprises (Rp63.1 trillion) and

20 OECD, 2015. (Op cit.)

21 Each KKS holder is allocated Rp110 000 (US$8.25) a month to buy 10 kg of rice priced at Rp85 000 and 2 kg of sugar at Rp25 000.

22 Kwon, H.J. & Kim, W.R. 2015. The evolution of cash transfers in Indonesia: policy transfer and national adaptation. *Asia and the Pacific Policy Studies*, 2: 425–440 (available at http://onlinelibrary.wiley.com/doi/10.1002/app5.83/full).

23 IISD (International Institute for Sustainable Development). 2014. *Indonesia Energy Subsidy Review*. Geneva, Switzerland (available at https://www.iisd.org/gsi/sites/default/files/ffs_indonesia_review_i1v1.pdf).

24 ICCT (International Council of Clean Transportation). 2016. *Biofuels policy in Indonesia: overview and status report*. Washington, DC (available at http://www.theicct.org/sites/default/files/publications/Indonesia%20Biofuels%20Policy_ICCT_08082016.pdf).

transfers to regions and villages (Rp34.7 trillion).[25] The budget savings are also being dedicated to finance the B20 Policy, the new biodiesel expansion plan.[26]

2.3 Trade-oriented and macroeconomic policy decisions

While bilateral trade continues to grow, Indonesia has increasingly adopted trade-restrictive measures in an attempt to fulfil food self-sufficiency goals. Restrictions on agricultural imports have already caused shortages of some commodities, including beef and certain fruits and vegetables, and have exacerbated already high prices of others, such as corn and rice.[27] The recent introduction of an export levy for palm oil exports is expected to contribute funding to the B20 Policy.

Introducing import restrictions on corn

Indonesia's expanding aquaculture and livestock sector is heavily reliant on imported feed ingredients. Feed millers report inelastic demand[28] for imported corn, which constitutes about 50 percent of Indonesian feed energy sources. This means that a limited supply of corn would have a high impact on the cost of feed. Domestic corn production, while increasing, is constrained by inconsistent seasonal supplies and poor post-harvest management, so imports are key in preventing feed cost increases.[29] Since 2002, feed mills could apply for an import recommendation from the MoA only after having signed a corn import contract. In November 2015, the MoA revoked the rule without notice and in March 2016 the Minister of Trade declared BULOG the sole importer of feed corn. This restriction is expected to limit import growth and boost domestic production, in line with Indonesia's corn self-sufficiency target. [30] Recent field observations revealed that high corn prices are indeed driving some farmers to switch to corn. However, the Indonesian National Economic Survey reports that this increase in price is causing human corn consumption to drop by 6.33 percent yearly.[31]

Restricting rice imports

Indonesian regulations restrict rice imports one month prior, during, and two months after the main harvest period. BULOG is only allowed to import medium-quality rice, while private companies can import specialty rice (e.g. jasmine rice, basmati rice).[32] In December 2015, the Minister of Trade stipulated in Regulation 103/2015 that japonica rice was permitted for import into Indonesia. In order for japonica rice imports to resume, the MoA had to agree to issue import recommendations. However, since the end of 2014, the MoA had not permitted any import of japonica rice, citing its similarities with Indonesian varieties.[33] In 2014 Indonesia revised its rice import regulations following findings of non-eligible medium-grain rice in local markets and placed additional limitations on rice imports, revoking the eligibility of private importers holding a general import license to import rice. This set of trade barriers together with high domestic rice prices has provided incentives for illegal rice imports.[34]

Increasing palm oil export tax and levies

Indonesia is currently the largest producer and exporter of palm oil worldwide. Driven by increased global demand and higher yields, palm oil cultivation has risen significantly. According to the MoA, the area of palm oil plantations in Indonesia is currently around 8 million hectares, twice as much as in 2000, and is expected to increase to 13 million hectares by 2020. The government charges an export tax for crude palm oil, which ranges between 0 and 22.5 percent (depending on the international price).35 Because the price has been low, the export tax has been zero since October 2014. The government introduced a palm oil export levy in mid-2015, partly as a mechanism to support the consumption of domestic palm biodiesel.36 This new levy imposes US$50 per tonne on crude palm oil and US$30 per tonne of processed palm oil products. Revenues from the levy are expected to reach Rp9.5 trillion (about US$698 million) in 2016.[37]

3. Challenges

Food security improved between 2007 and 2016 in Indonesia, as a result of improvements in a number of food and nutrition security-related factors and policy decisions. While these results are encouraging, major challenges need to be addressed to prevent

25 IISD. 2017. *Indonesia Energy Subsidy News Briefing*. Geneva, Switzerland (available at https://www.iisd.org/gsi/sites/default/files/ffs-indonesia-news-briefing-march-2017-en%283%29.pdf).
26 The Indonesian biofuel mandate is one of the most aggressive in the world, aiming at reaching 20 percent biodiesel blending to non-subsidized diesel by 2016. Indonesia is expected to raise the biodiesel mandate to B30 by 2020. ICCT. 2015. (Op cit.)
27 USDA (United States Department of Agriculture). 2016. Indonesia (available at https://www.fas.usda.gov/regions/indonesia). Accessed December 2016.
28 A situation in which the demand for a product does not increase or decrease correspondingly with a fall or rise in its price.
29 USDA. 2016. *Indonesia Grain and Feed Annual Report 2016* (available at https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual_Jakarta_Indonesia_4-5-2016.pdf).
30 Regulation No. 57/2015.
31 USDA. 2017. *Indonesia Grain and Feed Annual Report 2017* (available at https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual_Jakarta_Indonesia_3-30-2017.pdf).
32 Rice can be classified as either glutinous or aromatic. Aromatic rice is classified as a specialty for its fragrance and aroma. Basmati and jasmine rice are the most common aromatic rice varieties. Glutinous rice includes all rice varieties that become glue-like or sticky when cooked, such as japonica cultivars.
33 USDA. 2016. (Op cit.)
34 USDA. 2016. (Op cit.)
35 The export tax tariff ranges from US$0/tonne, when the international crude palm oil price is below US$750, up to US$200/tonne when the price is above US$1 250.
36 ICCT. 2016. (Op cit.)
37 USDA. 2016. *Indonesia Biofuels Annual 2016* (available at https://www.fas.usda.gov/data/indonesia-biofuels-annual-0).

stagnation. In need of particular attention are the burden of malnutrition in children, the high price of staples in the domestic market and the increasing vulnerability to climate-related hazards, which endangers crops and water availability. Addressing these challenges will present a set of opportunities for Indonesia's development.

Promoting breastfeeding to prevent the double burden of malnutrition in children

The double burden of malnutrition is characterized by the coexistence of undernutrition along with overweight and obesity, or diet-related non-communicable diseases, within individuals, households and populations. Adults who were stunted as children earn 20 percent less than adults who were not, putting a hamper on economic growth. More than one-third of Indonesian children still suffer from stunting – the second highest rate in the Association of Southeast Asian Nations (ASEAN) after the Lao People's Democratic Republic. At the same time, according to a joint report from UNICEF, the WHO and ASEAN, 12 percent of children are overweight.[38] Changing lifestyles owing to urbanization, a higher participation of women in the workforce, and increasing consumption of energy-dense processed foods are some factors identified as causing the increase in overweight children. Breastfeeding in Indonesia only reached 54.3 percent in 2015, far from the Health Ministry's goal of 80 percent. Supporting optimal breastfeeding and complementary feeding practices is critical to addressing all forms of malnutrition, thus protecting children from undernutrition as well as from becoming overweight. Likewise, regulating the marketing of fast food, promoting more agricultural variety and launching nutrition awareness campaigns will improve Indonesian's nutrition status in the medium term.[39]

Rice prices remain higher than international prices

As a consequence of policy interventions, domestic prices of some staples have been higher than international prices, which has had a negative effect on the Indonesian population's access to food.[40] The OECD estimates that price support policy has increased the incidence of undernourishment by 2–22 percent points.[41] In addition, rice prices well above world prices over the past ten years have discouraged farmers from diversifying into higher-value or more nutritious crops, such as fruits and vegetables.[42] In fact, Indonesians consume fewer fruits and vegetables than any other country in ASEAN, except Cambodia. A review of the current agricultural policies and food production incentives could help strike a balance between farmer protection and consumer support, as well as give the production of highly nutritious foods, including soybean, vegetables and fruits, the same priority as that of staple foods.[43]

Fighting climate change threats

Climate change poses one of the most serious risks to food and nutrition security in Indonesia, especially for subsistence farming. According to IFPRI, by 2050, total rainfall in Indonesia is expected to increase on average by nearly 10 percent from April through June, but decrease by 10 to 25 percent from July through September.[44] As the climate becomes increasingly erratic, adaptive strategies and appropriate water management will become increasingly necessary to ensure stability and availability of food:

- To mitigate the potential impacts of climate change on food and nutrition security, in 2009 Indonesia launched the **Climate Change Sectoral Roadmap** to provide input for RPJMN 2010–2014, and in 2013 the **National Action Plan for Climate Change Adaptation (RAN-API)**. RAN-API aims to harmonize and coordinate Indonesia's policies on climate change in order to achieve sustainable development that can adapt to climate change. In 2009, Indonesia voluntarily vowed to reduce emissions by 26 percent by 2020; in 2015, this target was increased to 29 percent by 2030.[45]
- The water quality of Indonesian rivers and lakes is poor, due to a combination of untreated domestic sewage, solid waste disposal and industrial effluents.[46] In agriculture, more than 50 percent of the 7.2 million irrigated hectares has damaged irrigation infrastructure. To combat this, Indonesia is implementing the **Water Resources Sector Plan (2015–2019)**, which includes improving irrigation systems, increasing water storage and improving water quality.

38 ASEAN. 2016. *Regional Report on Nutrition Security* (available at www.unicef.org/eapro).

39 UNICEF. 2016. UNICEF connect blog (available at https://blogs.unicef.org/east-asia-pacific/double-crisis-the-dual-burden-of-stunting-and-obesity-in-indonesia/). Accessed January 2017.

40 OECD, 2015. (Op cit.)

41 OECD. 2015. *Managing Food Insecurity Risk: Analytical Framework and Application to Indonesia*. Paris (available at http://www.keepeek.com/Digital-Asset-Management/oecd/agriculture-and-food/managing-food-insecurity-risk_9789264233874-en#.WSwlUet970M#page1).

42 IFPRI. 2017. *Global Food Policy Report*. Washington, DC (available at http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/131085/filename/131296.pdf).

43 WFP. 2015. *Food Security and Vulnerability Atlas of Indonesia 2015*. Rome (available at http://documents.wfp.org/stellent/groups/public/documents/ena/wfp276246.pdf?_ga=1.9927093.1012793423.1486466055).

44 IFPRI. 2011. *The Impact of Global Climate Change on the Indonesian Economy*. Washington, DC (available at http://www.ifpri.org/publication/impact-global-climate-change-indonesian-economy).

45 Republic of Indonesia. 2015. Intended Nationally Determined Contribution (available at http://www4.unfccc.int/submissions/INDC/Published%20Documents/Indonesia/1/INDC_REPUBLIC%20OF%20INDONESIA.pdf).

46 ADB, 2015. (Op cit.)

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