

## Revitalizing Agriculture in Indonesia

### Key Messages

**Agriculture plays an important role in Indonesia's economy** but since the 1990s the sector has been characterized by stagnation and low productivity due to years of declining private- and public sector investment. The recent increase (in real terms) in public spending on agriculture is largely a reflection of poorly targeted subsidies.

**There is a vital need for a rural income and employment strategy based on the promotion of agricultural diversification into high value commodities, coupled with efforts to raise productivity** and stimulate the growth of non-farm rural enterprises to create jobs and reduce poverty.

### Key Actions

1. **Raise productivity** by prioritizing investments that improve the quality and management of irrigation systems.
2. **Accelerate the titling of agricultural parcels** to increase land security and improve farmers' ability to access credit and make productive investments in technology.
3. **Promote diversification** through improved agricultural services (R&D, extension), and facilitate smallholder involvement in high-value commodities that are attractive to domestic- and export markets.

**This will necessitate policy and institutional changes that:**

1. **Shift the composition of current spending and phase out the fertilizer subsidy.** Increased spending on agriculture in real terms over the past decade has failed to increase productivity. Resources are being directed towards supporting private inputs through poorly targeted subsidies rather than providing public goods and services.
2. **Improve coordination between central and local governments and** develop fiscal incentives that enable MoA to work collaboratively with sub-national governments to promote agricultural programs, and foster reforms that improve service delivery. MoA will need to bring stronger management and discipline to the approach (e.g., stronger strategy foundations, identified outcome objectives, monitoring, accountability).
3. **Establish a comprehensive monitoring and evaluation (M&E) system** that allows the government to assess the impact of its transfer programs and make design corrections needed to maximize increases in agriculture productivity and reduce rural poverty.

## Where Indonesia Stands Now

**Agriculture plays an important role in Indonesia's economy, employing over 40 percent of the workforce including two-thirds of the country's poor, and contributing 17 percent of GDP.** Increases in agricultural productivity are credited with reducing poverty in Indonesia during the 1970s and 1980s.

**Agricultural production has not increased despite increased public spending in real terms.** Between 2001 and 2008, national spending on agriculture<sup>1</sup> increased from Rp11 trillion to Rp53 trillion, an average of 11

<sup>1</sup> Includes expenditure by MoA, sub-national government spending on agriculture and irrigation, irrigation expenditure under the Ministry of Public Works and central government subsidies closely related to agriculture (e.g. fertilizers), but excludes expenditure on fisheries and forestry and rural roads.

percent annually, in real terms. Agriculture's share of total government spending doubled from three percent in 2001 to six percent by 2008, reaching one percent of GDP mostly due to increased subsidies.

**Significant increases in employment and a remarkable reduction in poverty were achieved by focusing on staple food crops such as rice, corn, sugarcane and soybeans.**

However, productivity gains for most food crops are slowing significantly because the majority of farmers work plots less than one-half hectare in size. With farms this size these staples offer little potential for generating additional employment and income growth. Low levels of both private and public investment have caused agricultural productivity to stagnate since the 1990s.

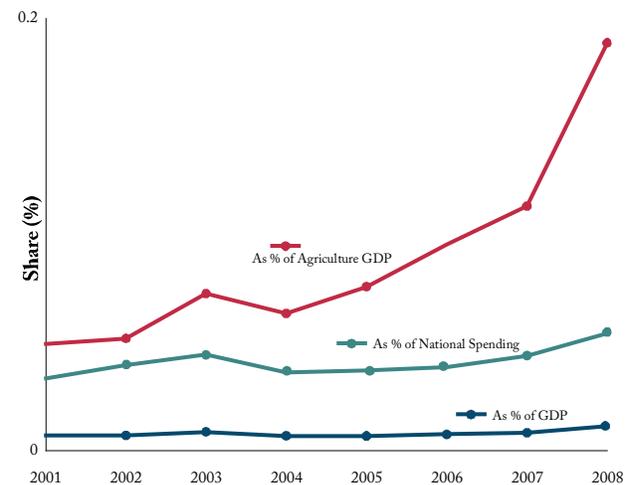
**Over the past three decades Indonesia's capacity in agricultural R&D has increased significantly, but still remains low by middle-income country standards.**

By 2007, public spending on R&D was only half that expended on the seed subsidy. After adding in private sector agricultural R&D spending, the intensity with which Indonesia invested in agricultural research<sup>2</sup> (0.27 percent) was roughly the same as Lao PDR (0.24 percent) and much lower than Malaysia (1.92 percent) or the Philippines (0.46 percent). Further public investments in R&D, rural infrastructure and irrigation are necessary complements to private investments in agriculture.

**By contrast, government allocates a large and increasing share of resources to input subsidies in an effort to increase the production of food crops.** Often this focus comes at the expense of other high-value products, reflected for example in the decreasing share in the budget of Directorate General of Horticulture from six percent in 2003 to three percent in 2009.

**Much of the current focus of agricultural policy remains centered on the production of staple food crops.** Self-sufficiency in staple foods remains a priority, driven in part by food security concerns and exacerbated by the food price crises of 2008. While staples will continue to be important for socio-economic and political reasons, an opportunity exists to assist policymakers in designing a rural income and employment strategy based on the promotion of high value commodities such as fruits, vegetables, aquaculture, livestock products, and smallholder estate crops (e.g., cocoa, cashews and spices).

**Agriculture Spending in Indonesia, 2001-2008**



Source: DiBi-BNPB

## How Indonesia Can Move Ahead

Going forward, there is a need to prioritize investments in the provision of public goods and services that effectively support farmers and improve the climate for private investment. This is necessary to strengthen agricultural productivity, diversify the agro-production and rural economic base, and manage resources sustainably. The following key policy directions and actions support these objectives:

- ◆ **Change the focus of public spending on agriculture.** Subsidies now account for 60 percent of the MoA's budget: the fertilizer subsidy alone accounts for 0.3 percent of GDP. Phasing out the fertilizer subsidy over the next five years will free up valuable public resources that can be re-directed to investments in rural infrastructure, research and extension, and irrigation systems.
- ◆ **Shift from low value staples to higher value-added crops and livestock.** The shift toward high value agriculture is already underway: the number of horticulture farmers nearly doubled to 38 percent of all farm households between 1993 and 2003. Diversified farming is the solution for small-scale farmers working poor quality land. Small farmers will need public/private sector technical assistance if they are to respond successfully to new market opportunities. Indonesian smallholders' access to export markets can be significantly enhanced through greater facilitation of public private partnerships.
- ◆ **Facilitate smallholder involvement in high-value commodity markets.** This entails strengthening

<sup>2</sup> R&D expenditure as a share of total agriculture output.

vertical integration by (i) building the capacity of farmer organizations like cooperatives, associations, and other entities, (ii) improving the regulatory framework for contract farming, (iii) extending extension support to farmer groups beyond a production focus to include market access, information and capacity building, (iv) increasing communication channels between consumers and farmers by investing in market and information systems, and (v) promoting public-private partnerships as a means to coordinate farmer training, modernize traditional value chains (e.g., cocoa in Sulawesi) and develop new market opportunities.

◆ **Prioritize investments in irrigated agriculture.**

The government needs to ensure the integrity of the infrastructure by complementing current maintenance efforts by water users associations with the necessary large-scale investments to improve the efficiency of water use and achieve more “crop per drop”. Existing physical irrigation assets are in a mediocre state and are inadequate to meet development needs. Irrigation networks on the outer islands languish uncompleted and are unable to underpin the longer-term geographic shift of agriculture beyond Java. A strategy is urgently needed to retire, replace and/or upgrade existing irrigation infrastructure.

◆ **Substantially accelerate titling of agricultural parcels to increase land security** and help farmers participate in active land markets. Indonesia has one of the lowest shares of titled land in Southeast Asia. Insecure title reduces access to credit, discourages investment in productivity-enhancing technology, and biases farmers’ choices away from longer-term activities such as tree crops.

◆ **Improve farm technology, quality assurance, processing technologies and postharvest activities.**

Food processing is still dominated by traditional technologies that cannot meet the grading, quality control and processing standards demanded by the rapidly growing number of supermarkets. Direct involvement by the government should be restricted to applied research in the form of public-private partnerships in well-defined, urgently needed areas that the private sector alone will not address.

◆ **Address issues around access to, and sustainable use of land and other natural resources, for sustainable agricultural and rural development.**

The intensification of agricultural production in irrigated and rain-fed environments is aggravated by inappropriate policies like the fertilizer subsidy that promote flawed incentives that cause environmental degradation. Soil fertility losses alone are worth an estimated US\$0.5 billion annually. In addition, questionable forestry policies have caused large-scale deforestation in the outer islands and in the catchment

areas of Java, resulting in land degradation, soil erosion, unreliable water supplies, severe flooding, and decreased water quality levels. There is a need to design and implement a cross-cutting strategy for containing and managing present and future costs, and improving land and other natural resource usage practices.

◆ **Establish a comprehensive M&E system** that allows the government to evaluate the impact of its transfer programs, make design corrections, and maximize the effectiveness of its efforts to increase agricultural productivity and reduce rural poverty.

## How The World Bank Can Help

The World Bank has been a partner in strengthening Indonesia’s agricultural sector, with particular focus on institutional and human resource development, irrigation and water resource management, public-private partnerships, and agriculture financing through the following:

1. **Investments for improving the quality of agricultural support services**

This will be done through the ongoing Farmer Empowerment through Agricultural Technology and Information project (FEATI) – 2007-2012.

This project strengthens and deepens innovations to improve agricultural services initiated under earlier projects. The proposed Sustainable Management of Agricultural Research and Technology Dissemination (SMARTD) project will improve the institutional and human resource capacity of the Indonesian agricultural research system.

2. **Investments for improving irrigation and water management**

The Water Resources and Irrigation Sector Management Program (WISMP) is now entering its second phase of implementation. The World Bank has provided support to the government since 1999 on the sector-wide legal, regulatory and administrative reform of its water resources and irrigation sector in collaboration with other donors, to achieve sustainable and equitable management of surface water resources and their infrastructure. The new **Dam Operations Improvement and Safety Project (DOISP)** will consolidate the institutional and policy achievements of the earlier Dam Safety Project by supporting the further development and the implementation of comprehensive regulatory and administrative frameworks for dam management.

### 3. **Technical Assistance in Public Expenditure Management**

**Agriculture Public Expenditures Analysis.** The World Bank is working closely with the Ministry of Finance (MoF), the State Ministry for National Development Planning (BAPPENAS), MoA and the Coordinating Ministry for Economic Affairs to analyze public expenditures in agriculture. This work is being undertaken within the framework of the Initiative for Public Expenditure Analysis, a joint effort by BAPPENAS, MoF, donors (the Netherlands, and EC) and the World Bank. The sub-sectoral analyses carried out under this framework will inform the ongoing and future agriculture policy dialogue between the government and the World Bank and will provide recommendations on how resources could be more efficiently used.

The World Bank will continue to provide technical and financial assistance in the above areas and will extend its engagement in the policy dialogue on improving irrigation and water resources management in parallel with its climate change and disaster management programs.

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