

## SECTOR ASSESSMENT (SUMMARY): AGRICULTURE, NATURAL RESOURCES, AND RURAL DEVELOPMENT

### Sector Road Map

#### 1. Sector Performance, Problems, and Opportunities

1. Following adoption of the Doi Moi (economic reforms) in 1986, agriculture productivity in Viet Nam has more than tripled, enabling the country to become one of the world's leading exporters of several agricultural commodities. This remarkable growth contributed towards Viet Nam's graduation to lower middle-income status,<sup>1</sup> and the reduction of poverty from 58% in 1993 to about 9.9% in 2016.<sup>2</sup> Agricultural growth resulted from an expansion of agricultural area through investment in irrigation, and scaling up of production.<sup>3</sup> However, the growth rate has declined, with an average annual growth rate during 2008–2016 of 2.8%, compared with the gross domestic product (GDP) growth rate of 6.0%. The agriculture, natural resources, and rural development (ANR) sector contributed about 18.3% of GDP during 2008–2016, down from a high of 38.7% in 1990. Nevertheless, the ANR sector plays a vital role to the country's development—it employs 44% of the labor force, and serves as the main source of livelihood for two thirds of the population, especially in rural areas, where 90% of the poor live.<sup>4</sup>

2. Rapid economic growth and a rising middle class are increasing the pressure on Viet Nam's natural environment and resources. Urban expansion and infrastructure development combined with expansion of agriculture have contributed to the decline of natural forest cover. Nevertheless, total land area under forests has increased from 9.4 million hectares (ha) in 1990 to 14.3 million ha in 2016, mainly through an increase in forest plantations. The country's water resources are under growing pressure, particularly from rising demand and increased pollution. Agriculture uses about 82% of available freshwater. Non-point source pollution from poor agricultural practices and urban and industrial pollution are the leading causes of increased pollution. Most (60%) of Viet Nam's river flows originate outside its borders, and water security is a growing concern that has repercussions for long term investment planning. Reduced river flows pose serious threats to coastal areas (such as the Mekong delta) from increased saline intrusions and coastal erosion, and contribute to increased and unsustainable use of groundwater, which has resulted in depletion of the groundwater table in some areas (especially the central highlands), and contributes to coastal salinity intrusion.

3. Since the 1970s, most public investment (80% of all capital expenditure) in the agriculture sector has focused on irrigation and flood protection infrastructure. As a result, around 4.5 million ha (or 50% of the cultivated land area of 9 million ha) in Viet Nam is served by over 8,000 irrigation systems, resulting in one of the highest irrigation coverage rates in the Southeast Asia region. However, over half of Viet Nam's irrigation systems operate below their potential capacity. On average, only 68% of the irrigation design area is irrigated because of incomplete development of distribution networks and malfunctioning infrastructure. Irrigation water productivity in Viet Nam is well below levels in comparable countries in Southeast Asia.

4. Viet Nam is highly vulnerable to climate change, including the effects of changing seasonal weather patterns, rising temperatures, increasing frequency and intensity of extreme

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<sup>1</sup> World Bank Data. Lower Middle Income. Accessed 5 July 2018.

<sup>2</sup> General Statistics Office of Viet Nam. 2017. *Statistical Yearbook of Viet Nam 2016*. Hanoi.

<sup>3</sup> Agricultural sector statistics include crops, livestock, fisheries and forestry products.

<sup>4</sup> General Statistics Office of Viet Nam. 2016. *Report on Labor and Employment Survey 2015*. Hanoi.

weather events, and rising sea level.<sup>5</sup> The impact of climate-induced natural disasters is largest on the incomes and lives of the poor and vulnerable. The central coastal region is one of the regions most exposed to climate change, and the central highlands region is one of the most sensitive regions to climate change impacts.<sup>6</sup> Agriculture, natural ecosystems and biodiversity rely on stable agro-ecological and climatic conditions, making them particularly vulnerable to climate change. Agriculture contributes significantly to greenhouse gas (GHG) emissions, and this contribution is expected to increase. Climate-friendly agricultural practices—such as measures to convert agriculture waste into energy—could reduce emissions. Water resources are affected by increasingly unreliable river flow patterns, increasing dependence on ground water. Fisheries and coastal resources are also highly vulnerable to climate change because of temperature changes, increased inundation, and salinity intrusion. Climate change affects biodiversity, especially native plant species and important timber plants.

5. **Development constraints.** The ANR sector's development constraints reflect the challenges of transitioning to modern practices capable of sustaining long-term economic growth. State-owned enterprises, especially those supplying agriculture inputs and exporting commodities (rice and rubber) hinder innovation and competitiveness by crowding out private sector firms and stifling the role of smallholder producer groups (e.g. farmer organizations). The limited availability of arable land and water, combined with growing demand for water for urban and industrial uses, are major constraints to agricultural expansion. Constraints to expansion include significant migration of labor from farms to urban and industrial centers, and the relatively low productivity of farm labor. An emphasis on quantity rather than quality has resulted in the excessive use of substandard agricultural inputs, which has heightened concerns over the safety of agricultural products.<sup>7</sup>

6. Infrastructure constraints include incomplete and poorly constructed irrigation systems with inadequate maintenance, relatively low rural access road densities, and limited post-harvest handling and storage facilities. These have contributed to higher production and marketing costs and lower farm-gate prices due to poor product quality. Small, fragmented rural land holdings limit adoption of modern technologies and large-scale mechanization.<sup>8</sup> Value chains are fragmented, with limited collective action at the farmer level, and weak linkages between farmers, agro-processors, traders, and distributors that result in higher transaction costs for the large number of small-scale producers. Incentives to produce and maintain quality produce are lacking because of weak enforcement of sanitary and phytosanitary standards, and low awareness among consumers. Technology and skills constraints also impact quality. The weak financing and investment environment also constraints sector growth. Public investment has been concentrated in expanding irrigation infrastructure, whereas credit facilities for small-scale farmers and small and medium-sized agro-processors are limited.

7. Constraints for irrigated agriculture are summarized as (i) premature degradation of irrigation infrastructure because of poor construction supervision, an overreliance on cost norms, and inadequate maintenance; (ii) poor water governance, largely because of weak enforcement of regulations and the lack of accountability in service delivery; (iii) the lack of

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<sup>5</sup> IPCC. 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. L. Parry et al, eds. Cambridge: Cambridge University Press.

<sup>6</sup> The World Bank Group. 2010. *Economics of Adaptation to Climate Change – Vietnam*. Washington, DC.

<sup>7</sup> Input composition (active ingredients) and concentrations are often questionable because of weak regulation enforcement.

<sup>8</sup> General Statistics Office of Viet Nam. 2011. *Results of the 2011 Rural, Agricultural, and Fishery Census*. Hanoi. (accessed 12 September 2018). The average agricultural land holding area in the Mekong Delta is 0.94 ha/household, and 1.83 ha/household in the Central Highlands; the national average is 0.85 ha/household.

information and sound decision-support tools to facilitate water resource availability assessments and allocations for agriculture; and (iv) limited incentives and appreciation of the need for the adoption of water-efficient application technologies. The overriding limitation is that irrigated agriculture has been developed largely for rice production systems, whereas high-value crops requires a higher level of service (i.e. greater flexibility, reliability, and accessibility). The government has prioritized an irrigated area of about 1.4 million ha for modernization at a cost of around \$7 billion by 2050.

8. Opportunities exist for sustained economic growth in the agriculture sector over the long term by shifting to modern, competitive practices that can meet the growing demand for safe food products in both domestic and international markets in an environmentally sustainable manner. This requires a greater focus on improving resource use efficiency and diversifying into products with higher quality and value, while maintaining a focus on environmental sustainability. Resource use efficiency can be improved by recognizing the economic value of natural resources, modernizing the production base, and promoting applied research on innovation. Diversification into higher-value products can be achieved through improved rural infrastructure and measures to meet quality requirements and improve food safety. Growing competition for water resources dictates the need for improved water use efficiency and rationalized allocation between sectors. Simultaneously, water quality needs to be addressed through waste management in agriculture, agro-processing, and industrial and urban development.

## **2. Government's Sector Strategy**

9. The June 2013 Agricultural Restructuring Plan (ARP) of the Ministry of Agriculture and Rural Development (MARD) requires agricultural development to be market-led and consumer-driven rather than state-directed and production-led, with government assuming a facilitating role for the private sector.<sup>9</sup> MARD's development objectives for 2016–2020 include (i) an efficient and modernized ANR sector with greater value addition; (ii) greater proportions of “new rural” residents with higher incomes and improved standards of living;<sup>10</sup> and (iii) expanded rural infrastructure development, improved capacity for natural disaster prevention and mitigation, together with sustainable protection of natural resources and the environment. A major thrust of the ARP is to diversify production into high-value crops and promote opportunities for increased agriculture value addition. In this connection, MARD has developed an irrigation restructuring strategy to upgrade irrigation infrastructure, strengthen management, and modernize and improve irrigation system safety while protecting against natural disasters.<sup>11</sup> A complementary decision (Decision No. 1788/QD-BNN-TCTL of 2015) by MARD aims to develop advanced water-saving irrigation practices on 500,000 ha of upland crops by 2020.<sup>12</sup> The corresponding Law on Hydraulic Works (approved by the National Assembly in June 2017) requires the adoption of economic efficiency criteria in the allocation of water among competing uses, including irrigation. The introduction of water pricing for irrigation services under this law creates the enabling conditions to address the systemic problem of inadequate funds for maintenance of systems and promotes public–private partnerships in irrigation management.

10. Viet Nam's response to climate change is linked to sustainable development that

<sup>9</sup> Prime Minister Decision No.899/QD-TTg dated 10 June 2013 on approving the “Agricultural restructuring towards raising added values and sustainable development” project.

<sup>10</sup> Communes and villages are classified “new rural” if they satisfy the 19 criteria developed under the National Target Program on New Rural Development.

<sup>11</sup> Decree No. No: 794/QD-BNN-TCTL the Restructuring Scheme for the Irrigation Sector, 2014, Hanoi.

<sup>12</sup> MARD Decision No. 1788/QD-BNN-TCTL on promulgating the Action Plan for the Development of Advanced and Water Saving Irrigation for Upland Crops to Assist Water Resources Sector Restructuring. (19 May 2015).

requires a transition towards a low carbon economy and the progressive introduction of adaptation and mitigation measures. The National Green Growth Strategy (2012) aims to reduce the intensity of GHG emissions, including through the development of sustainable organic agriculture and improving the competitiveness of agricultural production.<sup>13</sup> It proposes accelerated afforestation (led by the private sector) in production forests to increase forest cover to 47% by 2020, and improve carbon sequestration by increasing the standing biomass.

### **3. ADB's Sector Experience and Assistance Program**

11. Since 1993, ADB has invested \$1.9 billion, or 14% of its total lending to Viet Nam, in the ANR sector. During 2011–2015, the sector accounted for 24% of ADB's total lending portfolio. ADB has 12 ongoing loans amounting to \$536 million that focus on rural infrastructure (rural roads, irrigation, markets and flood protection), water resources and large-scale irrigation development, food quality and safety, environmental protection and trade facilitation. ADB has maintained a geographic focus on areas where poverty persists—the northern and northeast mountains and the central highlands.

12. Lessons from prior projects reinforce the need to simplify project administration arrangements to avoid implementation delays. By nature, ANR sector projects involve community engagement and large numbers of relatively small contract packages. Adopting output-based contracts and larger procurement packages can help streamline implementation. Decentralized implementation arrangements promote ownership, but capacity constraints, especially at the provincial level, need to be addressed, with corresponding capacity development technical assistance. Systemic problems such as start-up delays and slow disbursement will be addressed through better project design and readiness measures. Experience suggests that project investment loans are time-consuming to prepare and administer, imposing high overhead costs. Programmatic lending using modalities such as multi-tranche financing facilities could reduce processing time and costs.

13. Given the significant role of the ANR sector in supporting the country's economy, ADB's continued support ensures a strong focus on inclusive economic growth while strengthening environmental sustainability and resilience to climate change. ADB's strategy, in line with the government's ARP, is to maintain the sustainable growth of the sector by improving efficiency and competitiveness, and enhancing rural living standards and resilience to climate change. ADB's support centers on three key areas: (i) provision of essential rural infrastructure to strengthen connectivity and modernize rural productive assets; (ii) water resource management and watershed protection to sustain the country's natural capital; and (iii) promoting agribusiness development with private sector linkages to strengthen the country's agricultural competitiveness, both domestically and internationally. In terms of geographic targeting, assistance is focused on the Northern Mountain, Central Coastal and Central Highland provinces.

14. The focus on the ANR sector complements investments in other areas, including urban development, transport, energy, and finance. Synergies with the education sector will also be identified to address skills development through tertiary education networks. Collaboration with the finance sector is considered important because agricultural finance is a critical gap, especially in stimulating growth opportunities for small- and medium-sized enterprises. Finally, synergies with regional programs, especially under the Greater Mekong Subregion, will be maximized.

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<sup>13</sup> Government of Viet Nam. 2012. *Prime Minister Decision No. 1393/QĐ-TTg Approval of the National Green Growth Strategy*. Hanoi. (25 September 2012).

## Problem Tree for Agriculture, Natural Resources, and Rural Development Sector

