

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

A. Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Nepal has undergone many years of political turmoil, including an armed conflict that ended in 2006. The country also suffered a destructive earthquake in 2015 but is now on a path to political stability and economic recovery. However, Nepal remains one of the poorest countries in Asia—in FY2018 gross domestic product per capita was \$993.90, and an estimated 18.7% of the population lived in poverty, mostly in rural areas. In 2019 agriculture contributed 27.0% of gross domestic product (GDP), and engaged 55% of the working age population.¹ Over 61% of women are involved in agriculture.² Annual growth in agriculture GDP (at constant prices) has increased from 0.2% in FY2016 to an average of 4.3% from FY2017 to FY2019, as a result of a favorable monsoon resulting in large harvests in FY2017 and FY2019. Agriculture still relies mostly on subsistence farming—less than 10% of farm holdings sell their produce in markets, and they are affected by the increasingly fragmented land ownership structure.³

2. Despite its recent agricultural growth, Nepal's agricultural productivity remains the lowest in South Asia.⁴ For example, cereal yield was 2,796 kilogram per hectare (kg/ha) in 2017, compared to 4,411 kg/ha in Bangladesh and 3,371 kg/ha in Bhutan.⁵ The key structural constraints of Nepal's agriculture and food distribution system that suppress its productivity include (i) the dominance of subsistence farming; (ii) poor adoption of suitable on-farm and post-harvest technology; (iv) the lack of timely supply of quality inputs such as fertilizer, feeds, and seeds; and (v) limited financial services and infrastructure, such as irrigation and roads. Gender barriers also prevent women and marginalized groups from accessing resources and opportunities to improve agricultural productivity.⁶ While quality seeds alone can increase agricultural production by 15%–20%, most farmers in Nepal use locally available seeds retained from previous cropping seasons because of poor penetration of formal seed markets in rural areas, inadequate seed multiplication, and the lower cost of locally available seeds, resulting in

¹ Government of Nepal, Central Bureau of Statistics. 2019. *Report on the Nepal Labour Force Survey, 2017/18*. Kathmandu; and Central Bureau of Statistics. 2019. *National Accounts 2018/19*. Kathmandu. A total of 11.4 million (55%) Nepalese over 15 years of age are involved in subsistence foodstuff production and processing. The poverty figure for FY2018 is an estimate; actual poverty rates will be determined after the next National Living Standards Survey, which is likely to be completed in 2020.

² Of the 7.1 million people employed in FY2018, over 60% were men. However, men are mostly employed in the construction, manufacturing, and transport industries, while women are mostly employed in agriculture, forestry, and fishing. In addition to those “employed” formally or informally, the survey also reports “on other forms of work,” which includes producing and/or processing agricultural products for one’s own use.

³ Half of the population involved in agriculture produce only for their own consumption, and 39% sell only when they have a surplus. A disproportionate share of women (61.3%) are engaged in subsistence agricultural production and processing for own consumption, compared to 47.2% of men. Gender disparities are evident.

⁴ A 34-year study (1980–2013) revealed that Nepal had the lowest agricultural productivity growth rate in South Asia (0.06%, compared to 1.05% in Bangladesh, 0.52% in India, and 0.38% in Pakistan). A.R. Anik, S. Rahman, and J.R. Sarker. 2017. *Agricultural Productivity Growth and the Role of Capital in South Asia (1980–2013)*. Basel: Multidisciplinary Digital Publishing Institute.

⁵ World Bank. *Databank: World Development Indicators* (accessed 20 August 2019).

⁶ ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Nepal for the Commercial Agriculture Development Project*. Manila (completed in 2014); ADB. 2011. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Nepal for High Mountain Agribusiness and Livelihood Improvement Project*. Manila (completed in 2018); and ADB *Nepal: Raising Incomes of Small and Medium Farmers Project*. Manila (closing in 2019).

less than 10% of farmers currently purchasing seeds for major cereal crops.⁷ The public sector dominates in seed multiplication of cereal crops, although private seed companies are increasingly involved in seed multiplication, especially vegetable seeds.⁸ The amendment of the Seed Act and standards-setting for seed testing are critical steps in creating an enabling policy environment to encourage the private sector to engage in seed multiplication, distribution, and collaborative varietal development.

3. **Low levels of agriculture commercialization.** Agribusiness in Nepal is diverse and involved in poultry, dairy, spices, fruits, tea, ginger, cardamom, coffee, and honey, among other commodities. It is dominated by millions of small landholdings and many thousands of small agribusinesses and traders. Given the limited arable land per capita, fragmented and small-scale agribusinesses cannot leverage advantages of scale. Lessons from recent ADB projects in Nepal suggest policies and regulatory reforms are needed that facilitate better land use planning, land consolidation, and contract farming to allow the agriculture and food system to respond effectively to increasing market demand. Commercialization is further constrained by the limited capacity of farmers to prepare bankable business proposals to seek formal financing (footnote 6). By addressing some of these key constraints, the program will create synergies with other agriculture financing and value chain initiatives being financed by ADB and other key development partners and support subsequent investment projects planned by ADB to support the agriculture subsector.⁹

4. **Weak food quality testing and monitoring system is impeding exports.** Meeting the food quality standards of destination markets is the fundamental requirement for increasing export of agricultural produce. Despite its membership in the World Trade Organization, Nepal has not been able to adopt all international standards on sanitary and phytosanitary measures because of inadequate resources.¹⁰ The National Food and Feed Reference Laboratory in Kathmandu is the only laboratory in Nepal with international accreditation. These limitations hamper smooth movement of agricultural commodities between India and Nepal, which is a major trading partner.¹¹ Exporters face significant delays because they are subject to multiple tests on both sides of the border.

5. **Food safety and quality is also an emerging domestic issue.** The Constitution of Nepal, in Article 36, considers food to be a fundamental right of the people.¹² Regulatory activities related to food safety are necessary to accord the people with this fundamental right. Food safety is a concern in terms of consumer health, farmer safety (they are the users of hazardous inputs), and the potential for agricultural commercialization. Toxic residues in vegetable samples exceed the thresholds permitted by the European Union by a factor of 4 for eggplants, 17 for tomatoes, and 49 times for chilis.¹³ In view of the growing concern regarding food safety, the government

⁷ International Food Policy Research Institute. 2017. *The Nepalese Seed Sector*.

⁸ Access to Seeds Index. 2019. *Country Profile for Nepal*.

⁹ The draft Nepal country operations business plan, 2020–2022 includes the Rural Enterprise Financing Project (2020), the Targeted Value Chain Development Project (2021), the Mechanized Irrigation Innovation Project (2022), and the Rural Connectivity Improvement Program (2022).

¹⁰ As a member of the World Trade Organization, Nepal is bound to enforce sanitary and phytosanitary measures based on the standards, guidelines, and recommendations of the Codex Alimentarius Commission, International Animal Health Organization, and International Plant Protection Convention.

¹¹ In FY2018, India accounted for 57.4% of Nepal's exports and 65.3% of Nepal's imports.

¹² Article 44 (1) of the Constitution states "every consumer shall have the right to obtain quality goods and services" and Article 44 (2) states "a person who has suffered injury from any substandard goods or services shall have the right to obtain compensation in accordance with law."

¹³ G. Bhandari et al. 2019. Pesticide Residues in Nepalese Vegetables and Potential Health Risks. *Environmental Research*. 172, p. 511–521.

recently made the testing for pesticide residue mandatory for fruits and vegetables imported from India. However, this led to considerable loss of perishable produce at the border because of delays in import clearance because of the lack of testing facilities within Nepal. The supply was affected, and prices rose, causing the government to later rescind its decision. This has led to a memorandum of understanding signed between the two countries on recognition of laboratory reports for certain food items.¹⁴ The government is attempting to (i) establish national safety standards and a system to test and assess against set Indian standards; (ii) introduce a surveillance system (including sanitary and phytosanitary standards, systemic inspection and sampling), and (iii) regulate the distribution and use of hazardous inputs (border control, registration and licensing of distributors, proper labeling, education of farmers, distributors and local regulators). USAID and the World Bank are providing support to build government capacity through their projects, but further reforms of the laws and regulations that regulate the production, and sale and management of pesticides, as well as establishment of a monitoring system, particularly at the provincial level, are required in Nepal.

6. Transition from unitary to federal structure of government. In 2015, a new constitution was approved to establish Nepal as a federal state with three levels level of government—federal, provincial, and local—that are empowered to enact laws, prepare budgets, and mobilize their own resources. The mandates pertaining to the agriculture and allied sectors have been largely delegated to the provincial and local governments, increasing their decision-making powers and responsibilities for effective delivery of public goods and services. However, there are overlaps in the functioning of the agriculture authorities at the three levels of the government: (i) Ministry of Agriculture and Livestock Development (MOALD) at the federal level; (ii) Ministry of Land Management, Agriculture, and Cooperatives (MOLMAC) in the provinces; and (iii) municipal governments. The absence of clear procedures and standards associated with the devolution, and the lack of technical and human resource capacity of the nascent provincial and local governments present acute challenges for agriculture performance. Previously adopted national policies, and the ADB-assisted Agriculture Development Strategy (ADS) need to be adapted to the subnational context,¹⁵ new regulations need to be formulated, and newly inaugurated offices require institutional building and capacity development. The system of intergovernmental fiscal transfers from federal to subnational governments is still evolving.¹⁶

2. Government's Sector Strategy

7. The government's 14th periodic plan (FY2017–FY2019), 15th five-year plan (FY2020–FY2024), and Envisioning Nepal 2030 have highlighted modernization and commercialization of the agriculture as a national development priority in light of the need to reduce dependence on imports, and the Nepal's aspiration to attain middle-income status by 2030.¹⁷ The second Nepal Trade Integration Strategy (2016) identifies four agro-based commodities with high export

¹⁴ The Himalayan Times. 2019. *Nepal and India agree to validate each other's food laboratory reports.*

¹⁵ ADB. 2013. Nepal (TA7762): *Preparation of the Agricultural Development Strategy.* Manila; Government of Nepal, Ministry of Agriculture Development. 2014. *Agricultural Development Strategy 2015–2035.* Kathmandu.

¹⁶ Subnational governments are dependent on transfers from the federal government. The federal budget allocation for agriculture, forestry, and fisheries for FY2020 is NRs79.8 billion, equivalent to 5.2% of the total federal budget allocation; NRs12.1 billion (15.2%) is allocated to the provinces, and NRs1.7 billion (2.1%) to local governments.

¹⁷ Government of Nepal, National Planning Commission. 2016. *An Approach Paper of Fourteenth Plan, FY2016/2017–FY2018/2019.* Kathmandu; Government of Nepal, National Planning Commission. 2018. *An Approach Paper of Fifteenth Plan, FY2019/2020–FY2023/2024.* Kathmandu; Government of Nepal, National Planning Commission 2016. *Envisioning Nepal 2030: Proceedings of the International Seminar.* Kathmandu; and Asian Development Bank. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific.* Manila.

potential: cardamom, tea, ginger and medicinal and aromatic plants.¹⁸ Together with other development partners, ADB has supported the government in formulating the ADS, 2015–2035, a strategic sector development vision that serves as a basis for ongoing policy dialogues, roadmap development, and sector investments by development partners such as the USAID and the World Bank. The strategic framework of the ADS envisages four outcomes (i) improved governance, including coordination and effective planning among different stakeholders (government, private sector, civil society, development partners); (ii) higher productivity, with effective agricultural research and extension, efficient use of agricultural inputs, sustainable use of natural resources, and technology adoption to increase farmers' resilience against climate change; (iii) profitable commercialization, with a focus on the entire value chain; and (iv) increased competitiveness, with focus on strong public–private partnerships.

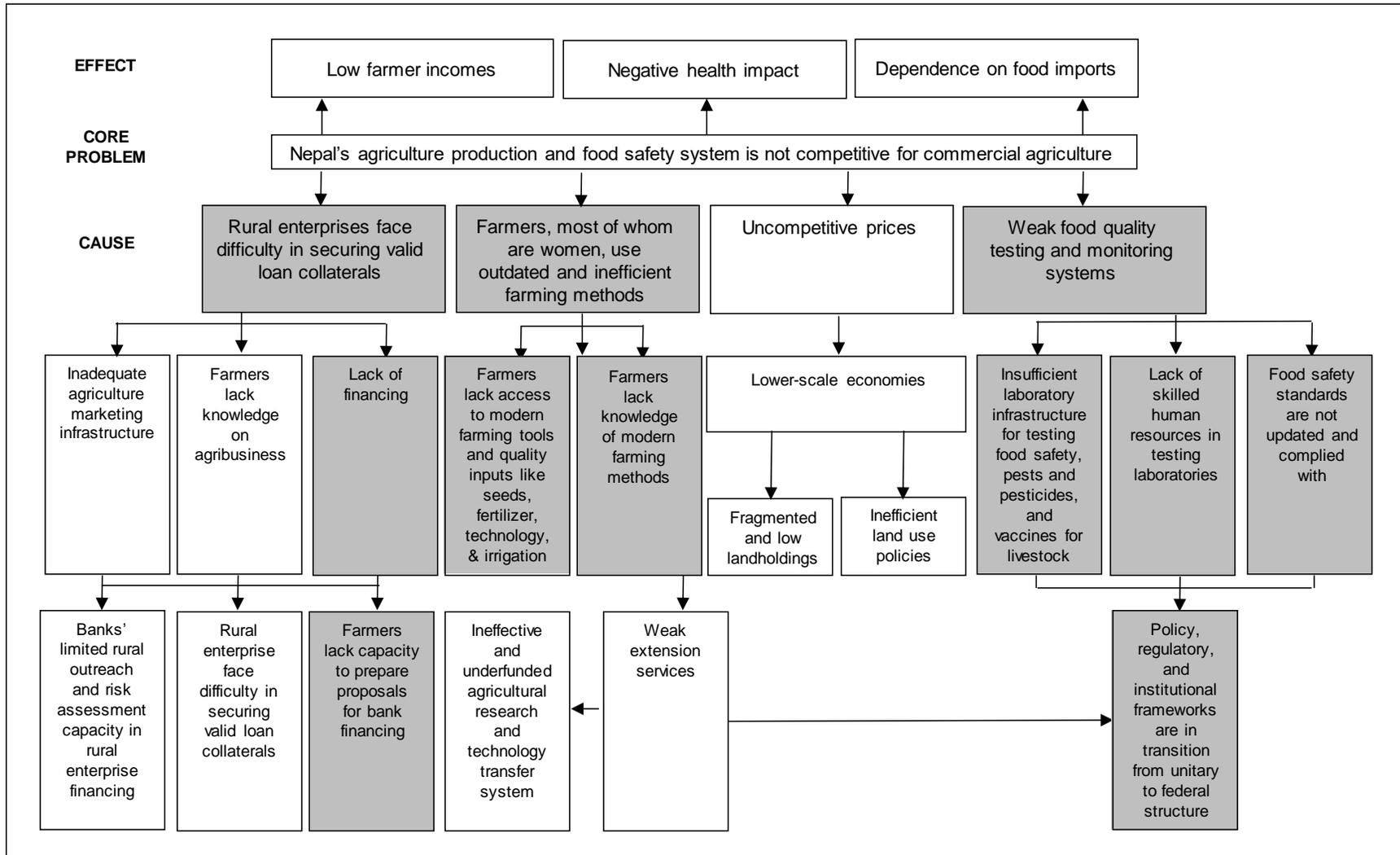
B. ADB Experience and Assistance Program

8. The ADB has been a key development partner in the agriculture, natural resources and rural development sector, beginning in the irrigation subsector in 1971. ADB's country partnership strategy for 2013–2017, focused on support for (i) enhancing agricultural productivity through irrigation, (ii) agricultural value chain development, (iii) improving access to agricultural inputs and markets through rural connectivity, and (iv) policy formulation in the agriculture and integrated water resources management subsectors. Support by other key development partners also focused on promotion of market-led agricultural value chains, providing partial grant financing to farmer groups, cooperatives, and entrepreneurs for demand-driven agribusinesses. Much of this support has been for high value crops, where profitability per unit of land is higher than in cereal production. ADB also invested in expanding irrigation and rural connectivity, including support for preparing a new irrigation master plan and policy reforms towards integrated water resources management.

9. The program focuses on improving food safety and quality monitoring systems, promotion of agriculture commercialization, and strengthening institutional capacity of provincial governments. The program will support Nepal's transition to federalism, building on the lessons from the recent interventions and binding constraints to help Nepal's farmers transition from subsistence to commercialized agriculture. The program targets reforms in pesticide management and control, plant quarantine mechanisms for exports, livestock health management, and food safety quality monitoring, which will help Nepal access international markets and ensure safer food supplies domestically. The program will also target capacity building for improved agricultural practices and agribusiness promotion, assisting farmers to prepare bankable agribusiness proposals, and provincial governments to prepare strategic investment plans for key commodities in which the provinces have comparative advantage.

¹⁸ Government of Nepal, Ministry of Commerce. 2016. *Nepal Trade Integration Strategy, 2016*. Kathmandu. The earlier 2010 trade integration strategy included coffee, fruits and vegetables, honey, and lentils. The 2016 strategy emphasizes a continued focus on implementation of earlier actions in addition to focusing on the four new commodities that have shown accelerated growth following up to the preparation of the 2016 strategy. National sector export strategies are available for coffee, tea, cardamom, and hand-made paper (based on natural fibers).

PROBLEM TREE FOR THE AGRICULTURE, NATURAL RESOURCES, AND RURAL DEVELOPMENT SECTOR



Source: Asian Development Bank.