



Report and Recommendation of the President to the Board of Directors

Project Number: 53264-001
September 2021

Proposed Loan, Technical Assistance Grant, and Administration of Technical Assistance Grant India: Maharashtra Agribusiness Network Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 3 August 2021)

Currency unit	–	Indian rupee/s (₹)
₹1.00	=	\$0.01347
\$1.00	=	₹74.24

ABBREVIATIONS

ADB	–	Asian Development Bank
COVID-19	–	coronavirus disease
FIL	–	financial intermediation loan
FPO	–	farmer producer organization
GDP	–	gross domestic product
GESI	–	gender equality and social inclusion
ha	–	hectare
JFPR	–	Japan Fund for Poverty Reduction
MAGNET	–	Maharashtra Agribusiness Network
MSAMB	–	Maharashtra State Agricultural Marketing Board
NIPHT	–	National Institute of Post-Harvest Technology
PAM	–	project administration manual
TA	–	technical assistance
VCO	–	value chain operator

NOTES

- (i) The fiscal year (FY) of the Government of India and its agencies ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2022 ends on 31 March 2022.
- (ii) In this report, “\$” refers to United States dollars.

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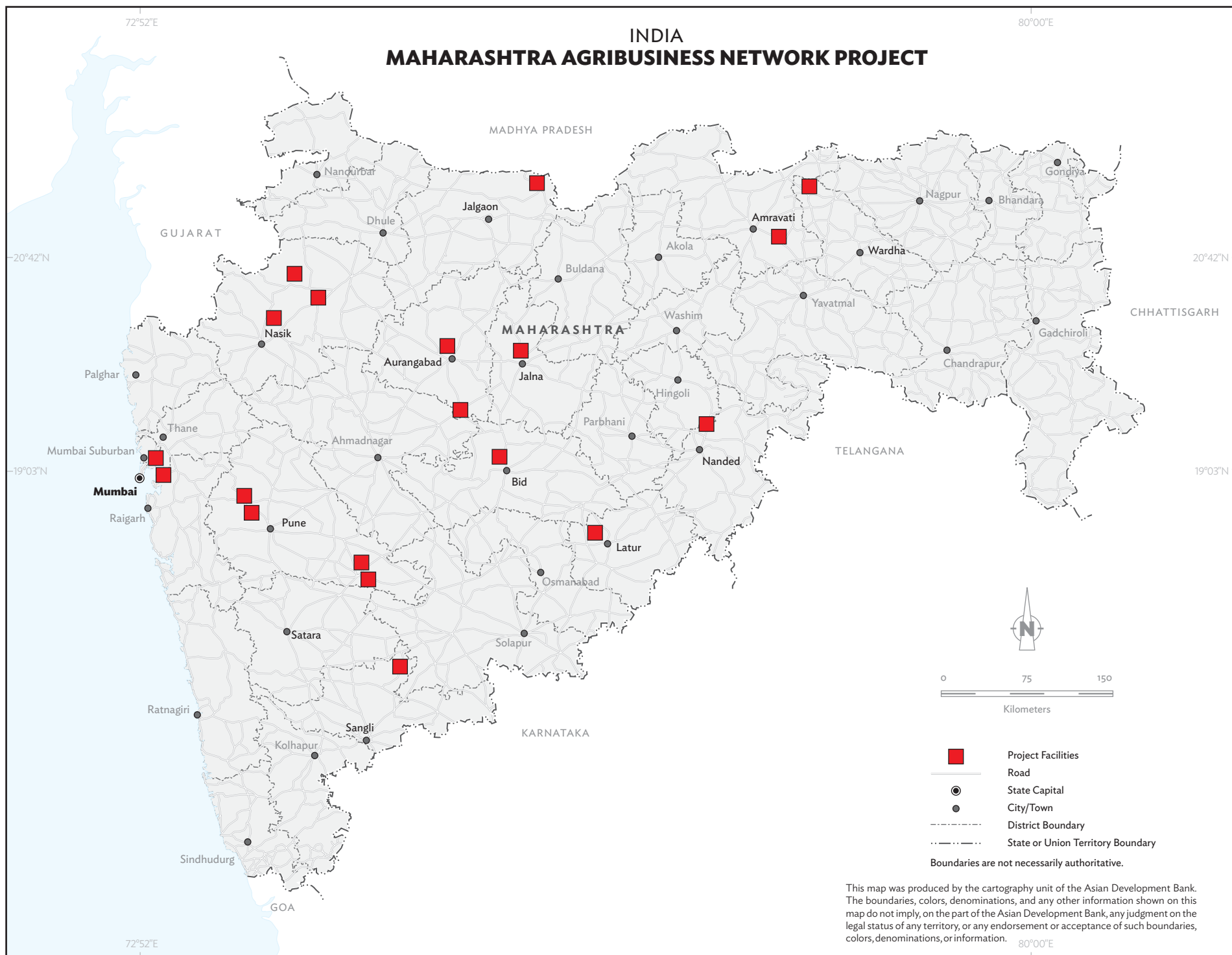
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PROJECT AT A GLANCE

1. Basic Data		Project Number: 53264-001	
Project Name	Maharashtra Agribusiness Network Project	Department/Division	SARD/SAER
Country	India	Executing Agency	Maharashtra
Borrower	India		Agribusiness Network - MAGNET Society
Country Economic Indicators	https://www.adb.org/Documents/LinkedDocs/?id=53264-001-CEI		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=53264-001-PortAtaGlance		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✔ Agriculture, natural resources and rural development	Agricultural policy, institutional and capacity development		20.00
	Agro-industry, marketing, and trade		60.00
	Rural market infrastructure		20.00
	Total		100.00
3. Operational Priorities		Climate Change Information	
✔ Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	423.000
✔ Accelerating progress in gender equality		Climate Change impact on the Project	Medium
✔ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		ADB Financing	
✔ Promoting rural development and food security		Adaptation (\$ million)	0.23
✔ Strengthening governance and institutional capacity		Mitigation (\$ million)	0.14
✔ Fostering regional cooperation and integration		Cofinancing	
		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	0.00
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 1.1		Effective gender mainstreaming (EGM)	✔
SDG 2.3, 2.a, 2.c			
SDG 5.a		Poverty Targeting	
SDG 8.2		General Intervention on Poverty	✔
SDG 9.1, 9.3			
SDG 10.1			
SDG 12.3			
SDG 13.a			
4. Risk Categorization:		Complex	
5. Safeguard Categorization		Environment: B Involuntary Resettlement: C Indigenous Peoples: B	
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		100.00	
Sovereign Mixed DFI-project (Regular Loan): Ordinary capital resources		100.00	
Cofinancing		0.00	
None		0.00	
Counterpart		42.90	
Government		42.90	
Total		142.90	
Note: An attached technical assistance will be financed on a grant basis by the Technical Assistance Special Fund (TASF-OTHERS) in the amount of \$500,000; Japan Fund for Poverty Reduction in the amount of \$2,000,000.			
Currency of ADB Financing: US Dollar			



I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to India for the Maharashtra Agribusiness Network Project. The report also describes proposed technical assistance (TA) for the Enhancing Market Linkages for Farmer Producer Organizations, and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, approve the TA.¹

2. The project will increase the incomes of small and marginal farmers in Maharashtra in line with the state government's Vision 2030 by providing holistic agribusiness and value chain support in horticulture.² The project will enhance (i) the capacities of agribusiness institutions and farmer producer organizations (FPOs), (ii) access to finance of FPOs and value chain operators (VCOs), and (iii) horticulture value chain infrastructure.³ The infrastructure will use designs that are responsive to gender and people with disabilities, and include climate adaptation and mitigation financing.

II. THE PROJECT

A. Rationale

3. **Maharashtra's economy and agriculture.** Maharashtra is India's largest economic contributor, accounting for 13.8% of the country's gross domestic product (GDP). However, the state's economic development is concentrated around major cities. The state has India's fourth largest rural population and share of people living below the poverty line.⁴ In rural Maharashtra 24.2% of the population still lived below the poverty line in 2011,⁵ and it is estimated that the share of rural poor is even higher in 2018.⁶ The rural poverty rate is as high as 40%, especially in poor northern and eastern districts. The average income per capita in the poorest rural district is 28% of that in Mumbai, the state's district with the highest income. In rural areas, 72.2% of working population earn below the recommended national minimum wage. Agriculture contributes 15% of Maharashtra's GDP, and 68% of the rural labor force is engaged in the sector (footnote 5). The GDP growth rate for agriculture (2.9%) was outpaced by other sectors during fiscal year (FY)2013–FY2020 compared to the state average of 6.6%. The total area for agricultural production has remained at around 20 million hectares (ha) since the 1970s, but the average size of operational holdings has steadily declined, from 4.3 ha in FY1971 to 1.3 ha in FY2016. As a result, the number of small and marginal farmers was 12.1 million in FY2016, which is 79.5% of Maharashtra's farmers.⁷

4. **Horticulture subsector.** India is the second largest producer of fruits and vegetables in the world. Through various programs and initiatives since the 1990s, Maharashtra has

¹ Of which (i) \$0.5 million will be provided by Asian Development Bank (ADB) Special Funds and (ii) \$2.0 million will be provided by the Japan Fund for Poverty Reduction (JFPR) and administered by ADB.

² State Government of Maharashtra, Planning Department. 2017. [Vision 2030](#). Mumbai.

³ VCOs targeted in the project include aggregators, processors, exporters, retail organizations, and agri-technology organizations.

⁴ World Bank. 2017. [Maharashtra Poverty, Growth and Inequality](#). Delhi.

⁵ State Government of Maharashtra, Directorate of Economics and Statistics. 2021. [Economic Survey of Maharashtra 2020–2021](#). Mumbai. The poverty line was estimated at ₹967 per capita per month in rural areas.

⁶ It is estimated that the share of rural poor rose to 48.8%, more than double the share in urban areas (20.4%) in 2018 based on the Household Usual Monthly Consumer Expenditure (Source: Government of India, Ministry of Statistics and Programme Implementation, National Statistical Office. 2020. [Annual Report on Periodic Labour Force Survey \(July 2018–June 2019\)](#). Delhi.). The poverty line used in this estimate was ₹1,435 per capita per month in rural areas.

⁷ Small and marginal holding farmers are defined as farmers with a landholding size of 2 ha or less (footnote 5).

transitioned to become one of India's largest producers and exporters of horticulture products.⁸ The state produced 25.9 million tons of fruits and vegetables in FY2020, of which 0.2 million tons worth \$169 million were exported. The area under fruit crops increased by 341% during FY1991–FY2018. The demand for fruits and vegetables is expected to increase by 4%–7% annually during 2015–2025, driven by the increasing and diversifying demand from the middle-income population.⁹ Maharashtra is also among the leading producers of flowers such as roses, gerberas, carnations, and marigolds. It accounts for about 8% of total floriculture exports from India and production grew at 7.7% annually during 2015–2019. The state government has supported horticultural production to improve the productivity of mainly rain-fed cultivated land.¹⁰ Agricultural productivity of horticulture, in terms of value per gross crop area, is almost 50% higher than for food grains.¹¹ Also, horticulture production is often accompanied by processing, which provides year-round employment opportunities, especially for women.

5. Fresh fruits, vegetables, and flowers are highly perishable. Almost 40% of these crops are lost or wasted in different stages of the existing value chains, and 60% of such waste happens between the farm and the end consumer (footnote 9). The losses can be reduced by proper post-harvest practices and value chain facilities, especially through cold chains.¹² Cold chain development is challenging because of high initial investment requirements for refrigeration units and land, limited supporting infrastructure for power supply and transport, and inadequate capacity in handling perishable produce. Enhancing FPO and VCO networks with storage and cold chain facilities can significantly reduce agriculture wastage and greenhouse gas emission while increasing business opportunities and contributing to food safety and security.

6. Despite ample opportunities for growth of horticulture in Maharashtra, most smallholding farmers still practice subsistence farming. They do not utilize recent agriculture and marketing technologies, nor grow produce in volume to sell in the markets because of a fragmented land ownership structure. Most FPOs do not have (i) sufficient capital to start operations at meaningful scale;¹³ and (ii) direct access to emerging high-value markets, and instead rely on traditional marketing channels involving multiple layers of traders and preharvest contracts.

7. **Government's agriculture strategies.** In 2017, the Government of India launched a strategy for doubling farmers' income by supporting agribusiness development as a vehicle to increase farming incomes and integrate marginal holding farmers into an efficient food supply system.¹⁴ The Ministry of Agriculture and Farmers' Welfare issued guidelines including support schemes for agribusiness models, production and post-harvest infrastructure, innovation and agri-enterprise development, and promotion of FPOs. In September 2020, India enacted three farm reform bills to benefit the farming community through efficient supply chains and reduced

⁸ Such programs and initiatives include Government of Maharashtra. 1996. *State Agriculture Policy*. Mumbai; Government of India. *National Horticulture Mission*. 2004. New Delhi; Government of India, Ministry of Agriculture and Farmers' Welfare. 2014. [Mission for Integrated Development of Horticulture](#). New Delhi; and Government of Maharashtra. 2015. *Maharashtra Agriculture Policy 2015*. Mumbai.

⁹ McKinsey and Company. 2017. [Harvesting Golden Opportunities in India Agriculture: from Food Security to Farmers' Income Security by 2025](#). New York.

¹⁰ Irrigation covers only 17.0% in Maharashtra (footnote 5).

¹¹ In terms of value, while the share of food grain areas was 60.0%, its contribution to agriculture state domestic product was only 25.5%. In contrast, fruits and vegetables, which accounted for only 5.6% of gross cropped area, accounted for as much as 24.0% of agricultural state domestic product.

¹² Cold chain maintains temperature, relative humidity, and atmosphere around fruits, vegetables, and flowers in a specific range required to keep them fresh, edible, and safe for a longer period than in normal ambient conditions.

¹³ 86% of FPOs have paid-up capital of less than ₹1 million (R. Govil, A. Neti, and M. R. Rao. 2020. [Farmer Producer Companies—Past, Present and Future](#). Bangalore).

¹⁴ Government of India. 2017. [Doubling Farmers' Income—Rationale, Strategy, Prospects and Action Plan](#). New Delhi.

trade barriers.¹⁵ In 2000–2009, Maharashtra had already started creating an enabling ecosystem by proactively introducing policy reforms by (i) delisting fruits and vegetables from mandated trading in regulated markets, (ii) issuing direct trading licenses to more than 1,000 FPOs and VCOs, and (iii) initiating contract farming to give farmers some price assurances.¹⁶ Maharashtra recognizes agriculture as the backbone of the state and aims to transform the sector to be profitable by improving the yield and quality of horticulture products and filling infrastructure and other gaps in transport, storage, market links, cold chain, and agro-processing (footnote 2).

8. In 2020, Maharashtra initiated the *Vikel Te Pikel* ("grow that sells") program to support farmers and FPOs to grow crops based on market demand and connect with value chains.¹⁷ This initiative, together with the central government's reform bills, will promote drastic shifts from the incumbent layered and controlled marketing structures to more direct and efficient marketing. The state aims to achieve an average annual growth rate of more than 5% for the agriculture sector by 2030 and finds it necessary to support farmers by providing quality inputs, investing in post-harvest technology for value addition, promoting FPOs, establishing value chains through public–private partnerships, extending credit lines, and promoting direct marketing and alternative markets. The Government of India included an ambitious target of forming 10,000 new FPOs in 5 years from FY2020. By the end of FY2019, Maharashtra state government was able to support registration of 1,940 FPOs and operated several subsidy schemes. However, FPOs' institutional, technical, and financial capacities are limited in farming, post-harvest handling, and marketing, and their decision-making is typically dominated by men.

9. **Coronavirus disease.** As of August 2021, Maharashtra was the worst-hit state in India by the coronavirus disease (COVID-19) pandemic. It has caused severe disruptions to the Maharashtra economy, which affected the agriculture food supply chain and resulted in food inflation during the first 7 months of 2020. Lockdowns interrupted harvests by farmers and machinery operators, and intermittently closed markets, affecting farmers' incomes. Wage laborers migrated from urban areas to villages, but current small-scale landholdings and traditional farming practices limited the sector from taking in additional labor. Monthly unemployment rates sharply increased, from 8.8% in March 2020 to 23.5% in May 2020.¹⁸ Approximately a half of women agricultural laborers went without a single day of paid work during the lockdown months of March–June 2020. In Maharashtra, 43% of low-income households reported to have lost 100% of their income and 81% of their pre-crisis income, the highest loss recorded across the fifteen states assessed.¹⁹ Returning rural migrants are often highly skilled, and they can play a key role in modernizing the agriculture sector. Despite the challenges, the sector has started to grow again, with an advance estimate of 11.7% growth in FY2021 (footnote 5). The project will provide opportunities for small and medium-sized enterprises through start-up loans and creating off-farm jobs in agriculture marketing, processing, and managing FPOs. This in turn will help Maharashtra absorb additional laborers and boost the rural economy.

¹⁵ These bills are expected to be made effective upon clearance from the Supreme Court of India.

¹⁶ Government of Maharashtra. 2017. *Agriculture Produce and Livestock Marketing (Promotion and Facilitation) Act*. Mumbai; and Government of Maharashtra. 2007. *Amendment to Agricultural Produce Market Committee Act*. Mumbai.

¹⁷ Government of Maharashtra; Agriculture, Animal Husbandry, Dairy Development and Fisheries Department. 2020. *Vikel Te Pikel* (grow that sells). G.R. No.2020/P.R.138/3A, 27 October 2020. Mumbai.

¹⁸ Centre for Monitoring Indian Economy. [Unemployment Rate in India](#).

¹⁹ The study covered 47,000 low-income households in Assam, Bihar, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Telangana, Uttar Pradesh and West Bengal. The rate of income loss was higher in Maharashtra than in all other surveyed states: Dalberg. 2020. [Efficacy of Government Entitlements for Low-Income Families during Covid-19](#). New York.

10. **Lessons learned.** Evaluation reports of the Asian Development Bank (ADB) call for the enhancement of comprehensive agribusiness and agricultural value chain approaches by identifying key constraints and necessary links among transport, market, and other infrastructure.²⁰ The project will build on the sector wide evaluation, recent agribusiness projects in other developing member countries, and more specific lessons learned from ADB's earlier agriculture operations in Maharashtra including (i) applying global best practices of vertical integration of agribusiness value chains and supply chain finance for sustainable food security; (ii) avoiding the design flaws of a multitranche financing facility program, in which the use of public-private partnerships did not match the demands of private agribusiness investors; and (iii) scaling up successful implementation of a Japan Fund for Poverty Reduction (JFPR) project, which supported the creation of FPOs and their marketing activities.²¹ Past Maharashtra projects have also suggested the need for a holistic approach combining capacity building and infrastructure support, and the importance of providing easier access to affordable finance to FPOs.²²

11. **Alignment with government and ADB strategies.** The project is aligned with the state government's Vision 2030, ADB's Strategy 2030, and ADB's country partnership strategy for India.²³ The project will address ADB's Strategy 2030 operational priorities of promoting rural development and food security; addressing remaining poverty and reducing inequalities; accelerating progress in gender equality; tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; strengthening governance and institutional capacity; and fostering regional cooperation and integration.²⁴ A combined financing modality of project loan and financial intermediation loan (FIL) is selected to effectively address the holistic needs of policy guidance, capacity enhancement, access to finance, and infrastructure improvement. The project is also aligned with ADB's private sector agribusiness strategy by supporting farmers along the agribusiness value chain, and beneficiary FPOs and VCOs may potentially access ADB's direct nonsovereign support for their further growth. The project is included in ADB's country operations business plan for India, 2021–2023.²⁵

B. Project Description

12. The project is aligned with the following impacts: average agriculture sector growth rate of 5% achieved; export of agricultural produce promoted; and fair, competitive, and accessible agriculture markets established (footnote 2). The project targets 200 FPOs and 100 VCOs and is expected to benefit 200,000 farmers.²⁶ The project will have the following outcome: Maharashtra's horticultural production values increased, and post-harvest losses reduced.²⁷

²⁰ ADB. 2018. [Sector-wide Evaluation: ADB's Support for the Agriculture, Natural Resources, and Rural Development Sector](#). Manila; and ADB. 2013. [Learning Lessons: Agricultural Value Chains for Development](#). Manila.

²¹ Independent Evaluation Department. 2020. [Facility Completion Report: India, Multitranche Financing Facility for Agribusiness Infrastructure Development Investment Program](#). Manila: ADB; ADB. 2010. [India: Improving Small Farmers' Access to Market in Bihar and Maharashtra](#). Manila (grant 9147-IND); and ADB. 2020. [Improving Small Farmers' Access to Market in Bihar and Maharashtra: Maharashtra Implementation Completion Memorandum](#). Manila.

²² ADB. 2017. [Completion Report: Agribusiness Infrastructure Development Investment Program in India](#). Manila.

²³ ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila; and ADB. 2017. [Country Partnership Strategy: India, 2018–2022—Accelerating Inclusive Economic Transformation](#). Manila.

²⁴ Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in [Appendix 2](#)).

²⁵ ADB. 2020. [Country Operations Business Plan: India, 2021–2023](#). Manila.

²⁶ The project will target the FPOs with 250 farmer members and annual turnover of ₹500,000 or more.

²⁷ The design and monitoring framework is in [Appendix 1](#).

13. Output 1: Institutional, technical, and marketing capacities of agribusiness institutions and farmer producer organizations strengthened. The project will provide policy guidance and capacity development support to agribusiness institutions and FPOs through (i) crop-specific, public–private collaboration for achieving higher productivity, better harvest quality and post-harvest handling, and relevant certification; (ii) introducing best practices and latest technologies to improve safety, quality, and productivity; (iii) capacity building of FPOs for sustainable and efficient management of commercial and financial functions, particularly for FPOs owned and led by women; and (iv) supporting digital and direct marketing initiatives by FPOs for generating new business–consumer and business–business trades (including possible exports), and realizing better sale prices. The project will also enhance the institutional capacities of the executing and implementing agencies to ensure the smooth delivery of the project.

14. Output 2: Access to finance of farmer producer organizations and value chain operators strengthened. Key challenges that FPOs face after the incubation period is access to finance to improve their crop quality and volume expectations. The project will provide matching grants and FILs to FPOs and VCOs through 300 subprojects.²⁸ The matching grants will support development of FPOs' post-harvest facilities and finance up to 60% of development costs, subject to a maximum amount of ₹60 million. The FILs will support working capital and infrastructure needs of FPOs and VCOs for domestic and export markets through financial intermediaries.²⁹ Subprojects and sub borrowers will be selected based on the eligibility criteria for the matching grants and FILs set forth in the project administration manual (PAM).³⁰ At least 20% of the financial support will be allocated to FPOs and VCOs owned or led by women.

15. Output 3: Agriculture value chain infrastructure improved and operational for the target horticulture crops. The project will improve 16 existing post-harvest facilities of the Maharashtra State Agricultural Marketing Board (MSAMB) and develop three new ones for the domestic market and export value chains and will improve the facilities of the National Institute of Post-Harvest Technology (NIPHT). The post-harvest facilities are typically located adjacent to local marketplaces and will provide safe and affordable access to farmers and FPOs for precooling, cold storage, ripening chambers, and processing to reduce losses and add value to their crops. The facilities will provide 67,600 tons of handling capacity and handle the produce of 6,200 farmers. Post-harvest facility design will include safe water and sanitation facilities for hand washing and toilets as well as climate mitigation, adaptation, and disaster-resilient features such as rainwater harvesting. The NIPHT is a research and development hub for post-harvest technologies. The project will enhance its training facilities with design features that are responsive to women and people with a disability and use them for FPO capacity-development activities under output 1.³¹

²⁸ Matching grants are defined as one-off, nonreimbursable transfers to project beneficiaries, for particular purposes, based on the condition that the recipient makes a specified contribution for the same purpose or subproject (International Fund for Agricultural Development. 2012. [Matching Grants Technical Note](#). Rome).

²⁹ Initially selected financial intermediaries (the Bank of India and Samunnati Financial Intermediation and Services Private Limited) were cleared by ADB's financial and integrity due diligence. The eligibility criteria and continued compliance requirements for participating financial intermediaries include financial soundness, credit and risk management policies, and compliance with prudential regulations as described in Appendix 2 of the Project Administration Manual (accessible from the list of linked documents in [Appendix 2](#)). The financial intermediaries have strong client bases in Maharashtra's horticulture FPOs and VCOs to deliver effective subprojects with sound environmental and social management system arrangements. The government will relend to the financial intermediaries under on lending agreements to be entered into between the Maharashtra Agribusiness Network (MAGNET) Society and financial intermediaries with terms and conditions satisfactory to ADB.

³⁰ The eligibility criteria are listed in Appendix 3 of the Project Administration Manual (accessible from the list of linked documents in Appendix 2).

³¹ Gender-responsive design assures a safe work environment for women, including separate toilets and quarters, and design responsive to people with a disability includes features such as ramps and accessible toilets.

16. **Lessons incorporated.** ADB has conducted a prefeasibility study and two TA projects to address lessons learned and carefully design the project through close collaboration with the government.³² The target crops were identified based on the state's production values, market demand, and growth potential.³³ Suitable infrastructure design, FPO capacity gaps, and post-harvest handling solutions were studied in a regional TA project, and the project design was finalized through a transaction TA project. The project takes a comprehensive approach to better leverage investments from and partnerships with the private sector by supporting viable business case building for vertical integration in horticulture value chains.

C. Value Added by ADB

17. **ADB's approach.** ADB's approach is to help demonstrate exemplary rural and agricultural transformation through several mutually complementing and interlinking projects in Maharashtra, and replicate this to other states once demonstrated. As part of its efforts to sustain and strengthen ongoing agricultural transformation in Maharashtra, ADB is currently supporting rural connectivity improvement projects, especially in remote and poor areas of the state.³⁴ The project and its beneficiaries will take advantage of the improved trunk and feeder road networks provided through the rural and state road projects.³⁵ ADB's rural energy distribution project will target this project's beneficiaries in piloting the concept of "minimum energy support to maximize incomes sustainably" to address sustainable power supply and its efficient use for water pumps and other uses.³⁶ ADB also supports sustainable shoreline management along the state's coastline facing salinization and erosion, where some target FPOs of this project are based.³⁷

18. The project was processed through One ADB collaboration between the regional and private sector operation departments. It will complement ADB's private sector pipeline projects for developing high efficiency crop nutrition and improving soil and water pollution. The project will also diversify the state's crop varieties and enhance resilience to a changing climate. It will also include safe water and sanitation facilities for handwashing and toilets. Rainwater harvesting systems increase the climate adaptability of the project during dry periods. To collect and store rainwater, harvesting systems will be installed in all facilities in the drought-prone regions of the state. This climate adaptation measure is estimated to collectively harvest 21,000 cubic meters of rainwater annually for the operations of the MSAMB's facilities.

19. **Delivery and replication of innovative elements.** Following the above approach in paras 17–18, the project will comprehensively address capacity, financial, and infrastructure bottlenecks to boost small and marginal farmers' incomes and welfare and reduce food losses. ADB will enhance its value addition through the project and attached TA in the following areas: (i) applying innovative technologies; (ii) creating centers of excellence networks for target horticulture crops comprising the NIPHT, associated research centers, and anchor FPOs on good

³² ADB. 2015. [Building Sustainable Food and Nutrition Security in Asia and the Pacific \(Phase 1\)](#). Manila (TA 9054-REG); Deloitte Touche Tohmatsu India LLP. 2018. *Final Report: Mapping Study on Agribusiness Industry and Value Chain Players in the State Of Maharashtra*. New Delhi; and ADB. 2019. [Technical Assistance to India for Strengthening Capacity to Design and Implement Water and Rural Infrastructure Facility](#). Manila (TA 9738-IND).

³³ Identified focus crops include bananas, custard apples, green and red chilies, guavas, okra, oranges, pomegranates, sapotas, strawberries, sweet limes, and flowers.

³⁴ ADB. 2020. [Maharashtra State Road Improvement Project](#). Manila; ADB. 2019. [Maharashtra Rural Connectivity Improvement Project](#). Manila (loan 3805-IND); and ADB. 2021. [Maharashtra Rural Connectivity Improvement Project—Additional Financing](#) (loan 4097-IND).

³⁵ ADB. 2020. [Maharashtra State Road Improvement Project](#). Manila (loan 3911-IND).

³⁶ ADB. 2020. [Maharashtra Rural High Voltage Distribution System Expansion Program](#). Manila (loan 3917-IND).

³⁷ ADB. 2010. [Sustainable Coastal Protection and Management Investment Program](#). Manila (MFF 0049-IND).

agricultural practices, new crop varieties, and other technical innovations; (iii) developing exemplary FPO-led value chains which successfully link with rapidly growing retailers and bring a higher FPO share in sales revenues; (iv) transforming the MAGNET Society into a value chain accelerator to enhance brand values of Maharashtra's horticulture crops; and (v) mainstreaming gender, social inclusion, and poverty reduction through a gender equality and social inclusion (GESI) action plan.³⁸ ADB conducted a cross-regional webinar on the project's FIL design and will actively replicate and disseminate these innovative elements within and outside India through the capacity development resource center in ADB's India Resident Mission, project workshops, and regional forums including ADB's Rural Development and Food Security Forum.³⁹

20. **Development coordination.** ADB has coordinated and will continue to closely coordinate with the following development partners and projects during the project preparation and implementation: (i) the State of Maharashtra Agri-Business and Rural Transformation Project financed by the World Bank, (ii) a women's empowerment project funded by the International Fund for Agricultural Development through Mahila Arthik Vikas Mahamandal, (iii) the Green Innovation Centre financed by German development cooperation through GIZ, and (iv) horticulture development projects in neighboring states funded by the Japan International Cooperation Agency.⁴⁰

21. **Value for money in procurement.** All procurement will use the open competitive bidding method and contracts will be awarded based on lowest evaluated substantially responsive bids. To ensure efficiency, fairness, and transparency, the national e-procurement system will be used.

D. Summary Cost Estimates and Financing Plan

22. The project is estimated to cost \$142.9 million (Table 1). Detailed cost estimates by expenditure category and by financier are included in the PAM (footnote 30).

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Institutional, technical, and marketing capacities of agribusiness institutions and FPOs strengthened	24.1
2. Access to finance of FPOs and VCOs strengthened	88.5
3. Agriculture value chain infrastructure improved and operational for the target horticulture crops	19.1
Subtotal (A)	131.7
B. Contingencies^c	7.3
C. Financial Charges During Implementation^d	3.9
Total (A+B+C)	142.9

FPO = farmer producer organization, VCO = value chain operator.

^a Includes taxes and duties of \$20.1 million. Such amount does not represent an excessive share of the project cost. The Asian Development Bank will finance taxes and duties of \$14.1 million. The government will finance taxes and duties of \$6.0 million through cash contribution.

^b In mid-2020 prices as of 28 October 2020.

^c Physical and price contingencies and a provision for exchange rate fluctuation are included.

³⁸ Further descriptions on these elements are in the Attached Technical Assistance Report and Gender Equality and Social Inclusion Action Plan (accessible from the list of linked documents in [Appendix 2](#)).

³⁹ ADB. 2021. [Improving Credit Access of Agribusiness Farmer Groups in India](#). Manila.

⁴⁰ World Bank. [State of Maharashtra's Agribusiness and Rural Transformation Project](#). Washington, DC; International Fund for Agricultural Development. [Nav Tejaswini Maharashtra Rural Women's Enterprise Development Project](#). Rome; and GIZ. [Green Innovation Centres for the Agriculture and Food Sector](#). Bonn.

^d Includes interest, commitment, and other charges on all sources of financing.
Sources: State of Maharashtra and Asian Development Bank estimates.

23. The government has requested a regular loan of \$100 million from ADB's ordinary capital resources to help finance the project. The loan will have a 15-year term, including a grace period of 6 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 10.75 years, and there is no maturity premium payable to ADB.

24. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to the FILs, matching grant, works, goods, and consulting services. The state government of Maharashtra assured that any shortfall in the required finances during the implementation of the current project scope will be covered by the government.

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	100.0	70.0
Government	42.9	30.0
Total	142.9	100.0

Sources: State of Maharashtra and Asian Development Bank estimates.

25. Food security investments are estimated to cost \$100 million, financed by an ordinary capital resources loan. The project will contribute to agribusiness, support rural and agricultural finance, and contribute to capacity building in the agriculture and natural resources sector. Climate mitigation is estimated to cost \$190,000 at new facilities. Climate adaptation is estimated to cost \$300,000, comprising rainwater harvesting systems across all the facilities including the NIPHT training facility. ADB will finance 76% of mitigation and 76% of adaptation costs.⁴¹

E. Implementation Arrangements

26. The state of Maharashtra, acting through the MAGNET Society, will be the executing agency. The MAGNET Society was established on 3 November 2020 as a special purpose vehicle for the project based on a government resolution.⁴² A project management unit has been established in the MAGNET Society. Project implementation units have been established in the MSAMB's eight regional offices and two financial intermediaries. Implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 30).

Table 3: Implementation Arrangements

Aspects	Arrangements
Implementation period	October 2021–September 2027
Estimated completion date	30 September 2027
Estimated loan closing date	31 March 2028
Management	
(i) Oversight body	State steering committee chaired by chief secretary Members comprise additional chief secretaries and secretaries of finance; planning; industries; agriculture; women and child development; and cooperation, marketing, and textiles departments

⁴¹ Climate Change Assessment (accessible from the list of linked documents in [Appendix 2](#)).

⁴² State of Maharashtra. 2020. [Government Resolution No. MSAMB/0118/Pr.kr.13/21-S](#) (in Marathi). Mumbai.

Aspects	Arrangements		
(ii) Executing agency	The state of Maharashtra acting through the MAGNET Society		
(iii) Key implementing agencies	Maharashtra State Agricultural Marketing Board and eligible participating financial intermediaries		
(iv) Implementation unit	One project management unit under the MAGNET Society (49 staff), eight PIUs in regional offices (56 staff in total), two PIUs in financial intermediaries		
Procurement	Open competitive bidding (nationally advertised)	7 contracts	\$17.7 million
	Shopping	5 contracts	\$0.2 million
Consulting services	QCBS (90:10)	352 person-months	\$5.3 million
	Individual consultants	TBD	TBD
Retroactive financing and/or advance contracting	Retroactive financing and advance contracting will be used for civil works, goods, and consulting services. Retroactive financing will be provided to finance expenditures incurred before the loan becomes effective, but not earlier than 12 months before the date of signing of the loan agreement and not exceeding 20% of the respective loan amount.		
Disbursement	Disbursement of the loan proceeds will follow ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, MAGNET = Maharashtra Agribusiness Network, PIU = project implementation unit, QCBS = quality- and cost-based selection, TBD = to be decided.

Sources: State of Maharashtra and Asian Development Bank.

III. ATTACHED TECHNICAL ASSISTANCE

27. ADB will provide transaction TA for Enhancing Market Linkages for Farmer Producer Organizations.⁴³ The TA will support the delivery of the project's complex and innovative elements and address poverty reduction as described in para. 189. The TA will also assess gaps to meet safety and quality requirements of domestic and international markets and provide mechanisms and instruments to make value chains more effective. The TA project's outputs will be (i) crop-based center of excellence networks created and capacity development on value chain acceleration conducted, (ii) high-level and innovative technologies in agribusiness and agriculture value chains promoted, (iii) capacity development on post-harvest handling and management conducted, and (iv) asset management and financial management capacities of the MAGNET Society and MSAMB improved. ADB will recruit a consulting firm and individual consultants in accordance with the ADB Procurement Policy (2017, as amended from time to time) to carry out the TA activities. The TA is estimated to cost \$2.5 million, of which (i) \$500,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources) and (ii) \$2.0 million will be financed on a grant basis by the JFPR and administered by ADB. The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, and other in-kind contributions.

IV. DUE DILIGENCE

A. Technical

28. Food loss and waste is expected to be reduced by 8% in the supported value chains during the project life, which will substantially reduce greenhouse gas emissions and natural resource use. Technical specifications of the proposed post-harvest infrastructure reflect global best practices and are fit for the local context to optimize the efficiency and profitability of resource

⁴³ Attached Technical Assistance Report (accessible from the list of linked documents in [Appendix 2](#)).

use.⁴⁴ Some project facilities will adopt innovative technologies such as automated fruit graders. Selection of such technologies is based on the prevailing local standards and business volume as well as the requirements of target beneficiary farmers, particularly female farmers.

B. Economic and Financial Viability

29. **Economic analysis.** The economic analysis was carried out in accordance with ADB's guidelines.⁴⁵ The principal benefits are (i) a reduction in post-harvest losses as systems for the movement and storage of goods are progressively upgraded; (ii) on-farm improvements in productivity resulting in increased yields and incomes; (iii) increased volume of processing and trading, resulting in increased value added, employment, and higher domestic supply; (iv) improved quality of produce; and (v) health benefits through improved hygiene and food safety. The quantitative analysis focuses on the reduction in post-harvest losses because of the investments in FPO practices and post-harvest facilities. The economic analysis indicated that the project is economically viable, with an economic internal rate of return of 16.5%.⁴⁶ Sensitivity analysis indicated robustness of the economic viability. The analysis includes full recurrent expenditure to ensure sustained operations over the analysis period.

30. **Financial analysis.** The financial analysis was conducted in accordance with the ADB guidelines.⁴⁷ The financial intermediaries were assessed as financially sound. As part of the subloans and matching grants to FPOs and VCOs, financial viability and sustainability will be included as subproject selection criteria. The MSAMB facilities to be improved and developed are expected to increase the MSAMB's recurrent costs for operating and maintaining its network of facilities. However, based on the MSAMB's past performance and given its user fee and facility leasing policy, the income generated from the facilities is projected to exceed the recurrent costs throughout the economic life of the assets.

C. Sustainability

31. The project's benefits will be sustained over the long term through various measures. The financial intermediaries will continue to comply with domestic regulations and ADB's financial covenants. FPOs and VCOs will be required to demonstrate their ability to cover the operation and maintenance costs of the subprojects in order to qualify for a subloan or matching grant. The MSAMB's charges applied to its facilities and its leasing practices are assessed as adequate to ensure proper maintenance. In addition, the judicious use of beneficiaries' matching contributions under the matching grant scheme will stimulate the mobilization of private resources as project contributions reduce the investment risks and promote sustainability. The MSAMB is in the process of developing a formal asset maintenance policy targeted at improving its asset management practices and the sustainability of its facility network. ADB will also support the MSAMB to further strengthen its facility management and maintenance practices and systems.

D. Governance

⁴⁴ Extensive analysis of accessible markets, horticultural value chains, and local post-harvest conditions as well as stakeholder consultations were carried out to assess the existing conditions and identify the attainable targets and required interventions during the mapping study, the post-harvest study, and the project processing.

⁴⁵ ADB. 2017. [Guidelines for the Economic Analysis of Projects](#). Manila.

⁴⁶ Economic Analysis (accessible from the list of linked documents in [Appendix 2](#)).

⁴⁷ ADB. 2019. [Financial Analysis and Evaluation Technical Guidance Note](#). Manila; and ADB. 2018. [Financial Due Diligence for Financial Intermediaries: Technical Guidance Note](#). Manila.

32. A financial management assessment was conducted in accordance with ADB's guidelines (footnote 47). The premitigation financial management risk is *substantial* mainly because of (i) the complex project financial management arrangements involving several implementing agencies; (ii) the financial management systems of the MAGNET Society, which have still not been fully set up; (iii) the implementing agencies' lack of knowledge of ADB's financial management requirements; and (iv) some vacant accounting and finance positions. These risks will be mitigated by (i) setting up robust financial management arrangements, (ii) documenting the detailed financial management arrangements in the PAM and project financial management manual, (iii) filling the vacant positions and engaging an expert to support the project management unit, (iv) providing continuous training in ADB's financial management requirements, (v) including comprehensive financial information in the quarterly project progress reports, and (vi) engaging an external firm to conduct internal audits of the project. The project financial statements will be audited annually by an auditor acceptable to ADB, following auditing standards acceptable to ADB.

33. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the national government and the state government. ADB conducted integrity due diligence on the MAGNET Society and financial intermediaries, and their management and shareholders. For one of the financial intermediaries, weaknesses in its anti-money-laundering program and internal control system and procedures were identified. Such integrity risks and mitigating measures are included in Table 4. The specific policy requirements and supplementary measures are described in the PAM (footnote 30).

E. Poverty, Social, and Gender

34. In rural Maharashtra, the share of poor is approximately 48.8%, more than double the share in urban areas (20.4%). The eastern region has the highest share of rural poor at 73.0%, followed by the inland northern region at 66.7%. Importantly, across all regions, the share of rural poor is considerably higher than urban poor, highlighting the need for interventions to reduce rural poverty (footnote 6). Maharashtra has nearly 20 million poor people and the poverty rate is as high as 40% in poor districts. The COVID-19 pandemic pushed 78 million additional people below the \$1.9 per day international poverty line in developing Asia in 2020, pejoratively in South Asia.⁴⁸ In the past farmers have experienced 40% post-harvest crop losses because of lack of connectivity to markets, and this worsened in lockdown.⁴⁹ The project will benefit farmers, the rural population, agribusinesses, consumers, and service suppliers in the horticulture value chain. The project will have an overall impact on poverty reduction and address a broad span of poverty and gender issues. Access to finance will increase economic opportunities and mitigate vulnerability of the rural population. The infrastructure development component will provide job opportunities, especially during the farming off-season. Vulnerable groups, particularly women, scheduled castes and scheduled tribes, and the poor, will be targeted through the GESI action plan (footnote 38).

35. **Gender (category effective gender mainstreaming).** There is a direct link between gender equality, poverty alleviation, food security, and inclusive growth. Women are estimated to carry out 60%–75% of farming work but are often denied access to knowledge, assets, and markets. Female participation in FPOs is low with 13% membership and 6% board representation

⁴⁸ Y. Sawada and L. R. Sumulong. 2021. [Macroeconomic Impact of COVID-19 in Developing Asia](#). Asian Development Bank Institute Working Paper 1251. Tokyo.

⁴⁹ S. Kesar et al. 2021. Pandemic, Informality, and Vulnerability: Impact of COVID-19 on Livelihoods in India. *Canadian Journal of Development Studies*. Volume 42, Issue 1-2. pp. 145–164.

(footnote 21). India recognizes the increasing feminization of agriculture in all levels of the agricultural value chain, and that gender-specific interventions are required to increase productivity. Project outputs and the GESI action plan are designed to deliver tangible benefits to FPOs and VCOs owned or led by women and other vulnerable groups and directly improve their human capital and access to financial resources, gender-responsive infrastructure, and quality jobs.

F. Safeguards

36. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.⁵⁰ The project's loan component follows the general safeguard requirements of ADB's Safeguard Policy Statement, while the investment of funds through FILs and matching grants will use a tailored approach to address safeguard impacts and risks. The executing agency will submit semiannual environmental and social monitoring reports.

37. **Environment (category B and FI).** The environmental risks and impacts because of the infrastructure development are only site specific and temporary, and an initial environmental examination was prepared.⁵¹ Due diligence and review for an irradiation facility under output 3 was performed and the activity was found to be compliant with the prohibited investment activities list of ADB's Safeguard Policy Statement.⁵² Financial support for FPOs and VCOs will only apply to subprojects that are category B or C. This will be ensured through environmental and social management system arrangements with the MAGNET Society for matching grants and with financial intermediaries for FILs.⁵³

38. **Involuntary resettlement (category C and FI-C).** The project's infrastructure development will not result in physical or economic displacement, as confirmed by the social safeguard due diligence report. The three new post-harvest facilities will be constructed on government land free of encumbrances.⁵⁴ For the FIL component, only subprojects not requiring any involuntary resettlement will be financed. All subprojects under FILs and matching grants will be screened, implemented, and monitored based on the selection criteria and ensured through environmental and social management system arrangements.

39. **Indigenous peoples (category B and FI).** About 15% of Maharashtra's rural population are indigenous peoples, and the majority are part of mainstream society.⁵⁵ The capacity building and financial support will positively impact FPOs that have indigenous peoples as members. Prior to conducting the trainings and providing financial support, consultations will be carried out in a culturally sensitive manner to ensure that genuine suggestions and concerns of the potential beneficiary indigenous peoples communities are incorporated in the design and implementation of training and subprojects. An indigenous people's plan is not prepared as the positive benefits are incorporated in the project design and GESI action plan, including prioritization targets for vulnerable groups.⁵⁶ Financial support for FPOs and VCOs will only apply to subprojects that are category B or C.

⁵⁰ ADB. [Safeguard Categories](#).

⁵¹ Initial Environmental Examination (accessible from the list of linked documents in [Appendix 2](#)).

⁵² Appendix 5 of ADB's Safeguard Policy Statement.

⁵³ Environmental and Social Management System Arrangement documents for the financial intermediaries and matching grant (accessible from the list of linked documents in [Appendix 2](#)).

⁵⁴ Social Safeguards Due Diligence Report (accessible from the list of linked documents in [Appendix 2](#)).

⁵⁵ Government of India, Ministry of Home Affairs. 2011. [Analytical Report on Primary Census Abstract](#). Delhi.

⁵⁶ "Vulnerability" includes scheduled castes, scheduled tribes, people with a disability, and people living below the poverty line.

G. Summary of Risk Assessment and Risk Management Plan

40. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.⁵⁷

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Reimbursement disbursement procedures to financial intermediaries may cause implementation delays.	The executing agency has assured the timely disbursement of financial intermediation loans to financial intermediaries.
The complex financial management arrangements with several implementing agencies and lack of experience with Asian Development Bank (ADB)-financed projects may result in noncompliance with ADB's financial requirements and disbursement delays.	Project-specific mitigation measures are described in para. 32.
The weaknesses in the anti-money-laundering (AML) program and internal control system and procedures of one of the financial intermediaries may pose integrity and reputational risks.	The financial intermediary will improve its AML program and internal control system and procedures, and ADB will monitor the improvements in the AML and financial crime program and internal control system and procedures in addition to overall corporate governance. The project team will offer an anticorruption and integrity awareness briefing and training during inception and review missions.

Source: Asian Development Bank.

V. ASSURANCES

41. The national government and the state government have assured ADB that implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM and loan documents.

42. The national government and the state government have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement and project agreement.

VI. RECOMMENDATION

43. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$100,000,000 to India for the Maharashtra Agribusiness Network Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 15 years, including a grace period of 6 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Masatsugu Asakawa
President

3 September 2021

⁵⁷ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in [Appendix 2](#)).

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with			
Average agriculture sector growth rate of 5% achieved; export of agricultural produce promoted; and fair, competitive, and accessible agriculture markets established (Vision 2030) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Maharashtra's horticultural production values increased, and post-harvest losses reduced	By 2028: a. Production of horticulture crops of participating FPOs increased by 5% (2020 baseline: 17,000 metric tons per FPO ^b) b. At least 10,000 jobs (at least 20% for women) generated by the project (2020 baseline: 0, not applicable) (OP 1.2, OP 2.1) c. Annual profits of the FPOs supported by the project increased by 10% on average (2019 baseline: ₹52,000 per FPO ^c) d. Horticultural food losses reduced by 8% in participating FPOs (2020 baseline: 3,800 metric tons per FPO ^d)	a. MAGNET Society and consultant's quarterly report on FIL and matching grant recipients b. Consultant's surveys to beneficiaries to be included in consultant's quarterly progress reports c. MAGNET Society and consultant's quarterly report on FIL and matching grant recipients d. Consultant's surveys to beneficiaries to be included in consultant's quarterly progress reports	A: Relevant national and state governments' initiatives are substantially implemented.
Outputs 1. Institutional, technical, and marketing capacities of agribusiness institutions and FPOs strengthened	By 2027: 1a. At least 34,000 members of FPOs and VCOs (at least 20% are women) reporting increased knowledge on good agricultural practices and post-harvest management (2020 baseline: 0, not applicable) (OP 2.2) 1b. At least 200 FPOs (at least 20% are owned or led by women) ^e supported by value-chain acceleration and market link services (2020 baseline: 0, not applicable) 1c. Knowledge on best practices from the project shared in two international events, with at least 50 participants each with increased knowledge on international best practices	1a. Survey of workshop participants to be included in consultant's quarterly progress reports 1b–1c. Consultant's quarterly progress reports	A: Government counterpart funds are disbursed in a timely manner based on the project needs.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
2. Access to finance of FPOs and VCOs strengthened	and with at least one other state (2020 baseline: 0, 0, 0) 2. 300 FPOs and VCOs provided with matching grants or FILs, of which at least 40 are owned or led by women ^e (2020 baseline: 0, 0) (OP 1.2.1, OP 1.3.2, OP 2.1.3)	2. Consultant's quarterly progress reports	
3. Agriculture value chain infrastructure improved and operational for the target horticulture crops	3a. Nineteen MSAMB facilities rehabilitated or developed with gender-responsive ^f design to be climate- and/or disaster-resilient and energy efficient ^g (2020 baseline: 0) (OP 1.3.1, OP 3.1.3, OP 3.2.5, OP 5.1.1) 3b. NIPHT facility improved with design that are responsive to gender and people with a disability ^h (2020 baseline: 0) (OP 1.3.1, OP 3.1.3, OP 3.2.5, OP 5.1.1)	3a.–3b. Consultant's quarterly progress reports	
Key Activities with Milestones 1. Institutional, technical, and marketing capacities of agribusiness institutions and FPOs strengthened 1.1 Prepare workshop materials (Q1 2022). 1.2 Conduct workshops for FPO and VCO beneficiaries (Q2 2022–Q3 2027). 1.3 Provide support to MAGNET Society and other staff (Q4 2021–Q3 2027). 2. Access to finance of FPOs and VCOs strengthened 2.1 Approve subprojects and disburse matching grants (Q4 2021–Q3 2027). 2.2 Approve subprojects and disburse FILs (Q4 2021–Q3 2027). 3. Agriculture value chain infrastructure improved and operational for the target horticulture crops 3.1 Conduct works for MSAMB facilities (Q3 2021–Q4 2023). 3.2 Conduct works for NIPHT facilities (Q4 2021–Q4 2023). Project Management Activities <ul style="list-style-type: none"> Recruit and mobilize consultants (Q3 2021). Engage and mobilize contractors for works (Q3 2021–Q4 2022). 			
Inputs Asian Development Bank: \$100.0 million (loan) Government: \$43.2 million (including \$0.3 million in-kind contribution to the technical assistance) Technical assistance: Technical Assistance Special Fund (TASF-other sources): \$0.5 million			

Japan Fund for Poverty Reduction: \$2.0 million

A = assumption, FIL = financial intermediation loan, FPO = farmer producer organization, MAGNET = Maharashtra Agribusiness Network, MSAMB = Maharashtra State Agricultural Marketing Board, NIPHT = National Institute of Post-Harvest Technology, OP = operational priority, Q = quarter, R = risk, VCO = value chain operator.

^a State Government of Maharashtra, Planning Department. 2017. *Vision 2030*. Mumbai.

^b The production baseline data was calculated from the average number of farmers comprising FPO, average landholding per farmer, and average productivity of the FPOs which submitted expression of interest for MAGNET subprojects in July 2021.

^c The profit baseline data was calculated from the median annual profit of the FPOs which submitted expression of interest for MAGNET subprojects in July 2021.

^d The food loss baseline was calculated based on the crop-wise average post-harvest losses between farm and retail for the FPOs which submitted expression of interest for MAGNET subprojects in July 2021.

^e FPOs and VCOs owned by women are those with 100% female membership, and FPOs and VCOs led by women are those wherein a majority of shareholders and board representatives are women.

^f Gender-responsive design assures a safe work environment for women, including separate toilets and quarters.

^g Climate and/or disaster resilience is enhanced by rainwater harvesting, and energy efficiency is enhanced by solar rooftop power generation systems.

^h Design responsive to people with a disability includes accessibility features including ramps and accessible toilets.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in the Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President). In addition to the OP indicators tagged in the design and monitoring framework, this operation will contribute results for

OP 2.1.4: Women and girls benefiting from new or improved infrastructure (number)

OP 3.1.1: Additional climate finance mobilized (\$)

OP 3.1.4: Installed renewable energy capacity (megawatts)

OP 5.1: People benefiting from increased rural investment (number)

OP 5.2: Farmers with improved market access (number)

OP 5.2.1: Wholesale markets established or improved (number)

OP 5.2.2: Storages, agri-logistics, and modern retail assets established or improved (number)

OP 5.2.3: Agribusinesses integrating farmers in efficient value chains (number)

OP 5.3.3: Commercial farming land supported (hectares)

OP 6.1: Entities with improved management functions and financial stability (number)

OP 6.1.1: Government officials with increased capacity to design, implement, monitor, and evaluate relevant measures (number)

OP 6.2.4: Citizen engagement mechanisms adopted (number)

OP 7.2: Trade and investment facilitated (\$)

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=53264-001-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Agriculture, Natural Resources, and Rural Development (Horticultural Agriculture Production)
4. Project Administration Manual
5. Economic Analysis
6. Financial Analysis
7. Summary Poverty Reduction and Social Strategy
8. Risk Assessment and Risk Management Plan
9. Contribution to Strategy 2030 Operational Priorities
10. Attached Technical Assistance Report
11. Climate Change Assessment
12. Gender Equality and Social Inclusion Action Plan
13. Initial Environmental Examination
14. Financial Intermediary (Bank of India): Environmental and Social Management System Arrangement
15. Financial Intermediary (Samunnati Financial Intermediation and Services Private Limited): Environmental and Social Management System Arrangement
16. Matching Grant: Environmental and Social Management System Arrangement

Supplementary Documents

17. Financial Management Assessment
18. Social Safeguards Due Diligence Report
19. Climate Risk and Vulnerability Assessment
20. Strategic Procurement Planning
21. Sector Assessment: Agriculture, Natural Resources, and Rural Development (Horticultural Agriculture Production)
22. Supplementary Data Annex for Financial Analysis