



Enhanced FAST Report

PUBLIC

Project Number: 56137-001
June 2022

Proposed Loan and Technical Assistance Grant Smartchem Technologies Limited Smartchem Climate-Smart High-Efficiency Crop Nutrition Project (India)

This is a redacted version of the document approved by ADB's Board of Directors. The document excludes information that is subject to exceptions to disclosure set forth in ADB's Access to Information Policy.

Asian Development Bank

CURRENCY EQUIVALENTS

		(as of 5 May 2022)
Currency unit	–	Indian rupee/s (₹)
₹1.00	=	\$0.0131
\$1.00	=	₹75.9745

ABBREVIATIONS

ADB	–	Asian Development Bank
capex	–	capital expenditure
DFPCL	–	Deepak Fertilisers and Petrochemicals Corporation Limited
E&S	–	environmental and social
EESF	–	enhanced-efficiency specialty fertilizers
ESMS	–	environmental and social management system
FY	–	fiscal year
NITI Aayog	–	National Institution for Transforming India
NPK	–	nitrogen-phosphorus-potash
OP	–	operational priority
R&D	–	research and development
STL	–	Smartchem Technologies Limited
TA	–	technical assistance

NOTES

- (i) The fiscal year (FY) of Smartchem Technologies Limited ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2023 ends on 31 March 2023.
- (ii) In this report, “\$” refers to United States dollars.

Vice-President	Ashok Lavasa, Private Sector Operations and Public–Private Partnerships
Director General	Suzanne Gaboury, Private Sector Operations Department (PSOD)
Deputy Director General	Christopher Thieme, PSOD
Team leader	Tushna Dora, Investment Specialist, Office of the Director General (OPSD), PSOD
Project advisor	Martin Lemoine, Principal Investment Specialist, OPSD, PSOD ^a
Team members	Genevieve Abel, Principal Transaction Support Specialist (Integrity), Private Sector Transaction Support Division (PSTS), PSOD Elizabeth Alpe, Senior Transaction Support Specialist (Integrity), PSTS, PSOD Edwin David, Senior Investment Officer, OPSD, PSOD Karlo de Asis, Social Development Officer (Safeguards), PSTS, PSOD Laurence Genee, Senior Safeguards Specialist, PSTS, PSOD ^b Annabelle Giorgetti, Senior Economist, PSTS, PSOD Justine Padiernos, Economics Officer, PSTS, PSOD Rhea Reburiano-Javier, Social Development Officer (Safeguards), PSTS, PSOD Amanda Satterly, Senior Social Development Specialist (Gender and Development), PSTS, PSOD Mriga Solanki, Counsel, Office of the General Counsel Matthew Young, Senior Investment Officer, OPSD, PSOD

^a Outposted to the ADB Singapore Office.

^b Outposted to the ADB Thailand Resident Mission.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
PROJECT AT A GLANCE	
I. INTRODUCTION	1
II. THE PROJECT	1
A. Project Identification and Description	1
B. Development Impact, Outcomes, and Outputs	4
C. Alignment with ADB Strategy and Operations	5
D. Project Cost and Financing Plan	5
E. Implementation Arrangements	5
F. Projected Financial and Economic Performance	6
G. Unique Features	6
III. THE PROPOSED ADB ASSISTANCE	6
A. The Assistance	6
B. Value Added by ADB Assistance	6
C. Risks	6
IV. POLICY COMPLIANCE	7
A. Safeguards and Social Dimensions	7
B. Anticorruption Policy	8
C. Investment Limitations	8
D. Assurances	8
V. THE PRESIDENT'S DECISION	9
APPENDIXES	
1. Design and Monitoring Framework	10
2. List of Linked Documents	13

PROJECT AT A GLANCE

1. Basic Data		Project Number: 56137-001	
Project Name	Smartchem Climate-Smart High-Efficiency Crop Nutrition Project	Department/Division	PSOD/OPSD
Country	India		
Borrower	Smartchem Technologies Limited		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=56137-001-PortAtaGlance		
2. Sector		Subsector(s)	ADB Financing (\$ million)
✓ Agriculture, natural resources and rural development		Agro-industry, marketing, and trade	30.000
		Total	30.000
3. Operational Priorities		Climate Change Information	
✓ OP1: Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	0
✓ OP2: Accelerating progress in gender equality		Climate Change impact on the Project	Low
✓ OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		ADB Financing	
✓ OP5: Promoting rural development and food security		Adaptation (\$ million)	26.100
		Mitigation (\$ million)	1.180
		Cofinancing	
		Adaptation (\$ million)	0.000
		Mitigation (\$ million)	0.000
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 1.5		Effective gender mainstreaming (EGM)	✓
SDG 2.4			
SDG 7.3		Poverty Targeting	
SDG 10.2		General Intervention on Poverty	✓
SDG 13.a			
4. Nonsovereign Operation Risk Rating			
Obligor Name		Obligor Risk Rating	Facility Risk Rating
Smartchem Technologies Limited			
5. Safeguard Categorization Environment: B Involuntary Resettlement: C Indigenous Peoples: C			
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		30.000	
Nonsovereign SOFR Based Loan (Regular Loan): Ordinary capital resources		30.000	
Cofinancing		0.000	
None		0.000	
Others^a		2.530	
Total		32.530	
Currency of ADB Financing: US Dollar, Indian Rupee			

^a Derived by deducting ADB financing and Cofinancing from Total Project Cost.

I. INTRODUCTION

1. This is an eligible transaction under the Enhanced Faster Approach to Small Nonsovereign Transactions (FAST) framework.¹ The transaction involves a proposed loan of up to \$30,000,000 (or its equivalent in Indian rupees) to Smartchem Technologies Limited (STL) for the Smartchem Climate-Smart High-Efficiency Crop Nutrition Project in India and (ii) proposed technical assistance (TA) for Building Capacity for Climate Resilience and Soil Nutrition Management among Smallholder Farmers.²

2. The project will finance capital expenditure (capex) and research and development (R&D), and training related to STL's enhanced-efficiency specialty fertilizer (EESF)³ business. It will also finance energy efficiency and health and safety-related capex. The project will support farmers to adopt EESFs, such as slow- and controlled-release fertilizers and water-soluble fertilizers, which will aid increased food production toward increased farmer income and food security in India. Higher efficiency in nutrient delivery will result in increased agricultural productivity, reduced water and soil contamination, and improved resilience to climate change. The project will also support gender inclusion. The project is fully aligned with the Government of India's goals to enhance agricultural productivity and increase farmers' incomes. The TA will focus on building the climate-resilient soil management skills and financial literacy of 1,800 farmers.⁴

II. THE PROJECT

A. Project Identification and Description

3. **Project identification.** Agriculture in India is plagued by issues such as fragmented landholdings, low national productivity with high regional variations, and low remunerative prices for farmers. It is also vulnerable to climate change risks. To increase productivity and improve resilience to climate change, progress is required along three dimensions: (i) quality and judicious use of inputs such as water, seeds, fertilizers, and pesticides; (ii) judicious and safe exploitation of modern technology; and (iii) a shift to high-value commodities such as fruits, vegetables, flowers, fisheries, animal husbandry, and poultry.⁵

4. India's inland waterways are subjected to significant nutrient loads, with fertilizer-related runoff being the primary contributor.⁶ Excess nutrient loading as a result of continued use of single-nutrient fertilizers in waterways leads to algal blooms and eutrophication, which has resulted in hypoxia and fish kills.⁷ The indiscriminate use of urea (since it is cheaper) has led to

¹ Asian Development Bank (ADB). 2022. *Enhanced Faster Approach to Small Nonsovereign Transactions*. Manila.

² \$225,000 will be provided by the Technical Assistance Special Fund (TASF-income transfer) of the Asian Development Bank. The project team is also seeking additional funding from external donors.

³ EESFs have a tailored chemical composition combining primary nutrients (the three most important plant nutrients: nitrogen-phosphorus-potash [NPK]); secondary nutrients (other essential nutrients required in smaller quantities such as sulfur, calcium, and magnesium); and tertiary nutrients (micronutrients that are optional but help improve yield further, such as iron, zinc, and copper) and unique features, such as controlled release fertilizers, water-soluble fertilizers (used in drip irrigation), and customized soil- and crop-specific solutions.

⁴ The number of farmers trained could be increased to 4,000, if additional TA funding is secured.

⁵ Government of India, National Institution for Transforming India (NITI Aayog). 2015. *Raising Agricultural Productivity and Making Farming Remunerative for Farmers*. New Delhi.

⁶ S. Pedde et al. 2017. Modelling sources of nutrients in rivers draining into the Bay of Bengal—a scenario analysis. *Regional Environmental Change*. 17. pp. 2495–2506.

⁷ S. Kundu et al. 2015. Phosphate from detergents and eutrophication of water ecosystems of India. *Current Science*. 108 (7). pp. 1320–1325.

significant deterioration of soil health, thereby affecting crop productivity.⁸ Runoff from urea use has also been the largest contributor of nitrogen to India's waterways, leading to increased frequency of algal blooms and eutrophication. Bulk compound nitrogen-phosphorus-potash (NPK) fertilizers are preferable to single-nutrient fertilizers, as they provide all the three primary nutrients together and preserve soil balance better.⁹ However, these are generic fertilizers that are applied in bulk and not specific to crops or soils, and hence are not as efficient in nutrient delivery as the new EESFs. Compared to these single-nutrient and generic bulk fertilizers, EESFs reduce nutrient loading to waterways by 60%¹⁰ and thereby improve water quality by ensuring (i) those nutrients needed by crops are provided and (ii) they are better absorbed, minimizing wastage and runoff.

5. Given agriculture's contribution to poverty reduction and improved rural livelihoods, the Government of India continues to prioritize agricultural modernization by promoting the use of compound NPK fertilizers to increase crop yields. Initiatives, such as (i) a policy requiring 100% neem coating of urea to stem the illegal diversion of subsidized urea and to enable lower consumption of urea without hampering productivity and (ii) introduction of soil health cards to promote a balanced use of fertilizers, have focused on de-emphasizing the use of urea and improving the uptake of compound fertilizers. The Strategy for New India @ 75 of the National Institution for Transforming India (NITI Aayog) identifies doubling farmers' income through modernizing agriculture as a driver. The project contributes to the objectives of (i) modernizing agricultural technology and increasing productivity, efficiency, and crop diversification; (ii) generating income and employment through a paradigm shift that ensures food security while maximizing value addition; and (iii) improving the resilience of agriculture to existing and future climate change risks.¹¹

6. Climate change in the form of increased temperature, changes in the amount and timing of precipitation, and an increase in extreme weather events like droughts and floods is impacting agricultural productivity in India. Adapting to the impacts of climate change is critical for farmers. Water and soil management is a key element of climate-resilient production practices. In addition to reduced water pollution, EESFs contribute to improved soil management by improving soil nutrients and supporting a long-term transition to natural and organic soil composition. These interventions enable crops to better cope with droughts and heat-induced pest outbreaks, and contribute to climate-resilient production.

7. To address improvement in agricultural development and to help farmers adapt to climate change, private sector investment in agriculture is critical. Fertilizer companies need to be at the forefront of this endeavor given the high impact that correct usage of fertilizers can have in increasing productivity and improving resilience. The private sector also plays a leading role in (i) innovating by bringing in more advanced fertilizer products to the market, (ii) investing in local manufacturing to reduce reliance on imports, and (iii) training farmers.

8. STL is one of India's leading fertilizer companies and engaged in the manufacturing and marketing of compound NPK fertilizers. The project team identified STL as a suitable candidate for Asian Development Bank (ADB) support because of its (i) leading market position in the EESF segment, with advanced technical capability and satisfactory financial performance; (ii) growth

⁸ Urea is one of the most commonly used single nutrient (nitrogenous) fertilizers. In India, urea has been heavily subsidized to encourage utilization of fertilizers in a bid to increase productivity.

⁹ NPK fertilizers combine nitrogen, phosphorus, potassium, the three primary nutrients (and occasionally other secondary nutrients) in a single product.

¹⁰ L. Shan et al. 2015. Nitrogen surface runoff losses from a Chinese cabbage field under different nitrogen treatments in the Taihu Lake Basin, China. *Agricultural Water Management*. 159. pp. 255–263.

¹¹ Government of India, NITI Aayog. 2018. *Strategy for New India @ 75*. New Delhi.

potential from the enhancement of fertilizer production capacity to provide quality inputs; and (iii) actions to encourage application of EESFs, which will support the sustainable transformation of agriculture in India while improving its resilience to climate change.

9. **Project design.** The project will (i) finance capex at one of STL's EESF manufacturing plants to increase production efficiency (Confidential information deleted), (ii) finance energy efficiency and health and safety-related capex for STL's fertilizer business, and (iii) support R&D toward new product development and digital initiatives to increase uptake of these fertilizers.

10. In 2017, STL commissioned additional EESF fertilizer capacity to grow (Confidential information deleted) to (i) meet increased demand and (ii) enable production of a wider suite of products. While the capex was completed, (Confidential information deleted) additional capex (to cover items such as additional bagging facilities, and debottlenecking for loading and unloading) is required to ensure that maximum capacity utilization can be attained. (Confidential information deleted). The end products will be sold to farmers through the company's large distribution network across its key states of Maharashtra, Gujarat, and Karnataka in western India and nine other states.¹²

11. The project will support increased production of EESFs, as opposed to urea or other bulk compound fertilizers, which form the majority of the Indian market. STL will focus on two EESF categories. The first is slow- and controlled-release NPK formulations supplemented with secondary and tertiary nutrients. These allow better bioavailability of the nutrient, reduce soil binding, help develop profuse root systems, and increase yields. These fertilizers can be used for cereals, beans, vegetables, and fruits. The second category is water-soluble and liquid fertilizers, which can be applied through drip and micro irrigation systems or used in fertigation systems. This category of fertilizers helps to optimize nutrient application while irrigating crops, and minimizes nutrient losses by leaving much less residue in soil and water. These are relevant for high-value horticultural crops like fruits and vegetables, and benefit crops with increased productivity, better size, and color as a result of a focus on secondary and tertiary micronutrients.

12. The project will also help the company to strengthen partnerships with farmers and enhance digital initiatives to increase the uptake of EESFs. Farmers will gain access to (i) best agronomic practices for their specific soil types and crops through the company's agronomists, (ii) uninterrupted mobile application and educational videos, and (iii) real-time assistance on the usage of fertilizers. A team of 300 agronomists will advise farmers and guide them on proper use of EESFs. Along with the proprietary nature of the fertilizers and the higher prices of EESFs relative to alternatives, this training will act as a controlling mechanism against the overuse of EESFs. About 100,000 additional farmers will get access to these new varieties of fertilizers, reducing their net cost of production, and thereby providing economic benefits.

13. The project will also include climate change mitigation. Improvements through dedicated investments, including the purchase of more energy-efficient factory machinery, will reduce STL's energy consumption and hence greenhouse gas emissions.

14. **Gender equality.** Women's workforce participation in India, is already one of the lowest in the world; in 2019 it was just 21% versus 74% for men.¹³ In contrast, women's role in agriculture is increasing as a result of increasing migration of men from rural to urban areas. The feminization

¹² Andhra Pradesh, Chhattisgarh, Haryana, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu, Telangana, and Uttar Pradesh.

¹³ World Bank. [World Development Indicators](#). (accessed 29 April 2021).

of agriculture means that women require enhanced access to inputs (such as fertilizers) and agronomy-related information to increase agricultural productivity and household incomes.¹⁴

15. **Borrower.** STL is a 100% held subsidiary of Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL), which is an operating company listed on the Bombay Stock Exchange with 52.4% public shareholding. The balance of 47.6% is held by the promoters (directly as well as indirectly through other promoter-owned entities).¹⁵ Sailesh Mehta is the chair of the DFPCL group and is a second-generation entrepreneur. STL was formed in 2015, when the group reorganized its business verticals, transferring the fertilizer and part of the chemical businesses into STL, to enable increased focus on growing the group's fertilizer business.

16. Established in 1979 as an ammonia producer, the DFPCL group is one of India's leading fertilizer and chemical businesses, with leading market shares in each of its individual businesses.¹⁶ (Confidential information deleted).

17. The group is headquartered in Pune, Maharashtra. Each of its business lines has an independent management team, sales and marketing team, finance team, and R&D team. However, several functions are also centralized at the group's headquarters, including the group treasury, which manages overall fund raising; the projects team, which manages all new projects during the initial stages of construction and commissioning; corporate strategy; and the manufacturing team, human resources, and information technology. Each of the businesses is headed by a president who (i) is responsible for the business's overall financial contribution and growth and (ii) reports directly to the chair and the board of directors.

18. ADB conducted integrity due diligence on the borrower, its management and shareholders, and its significant contracting entities. They do not appear to constitute a significant or potentially significant integrity risk since no unresolved or substantiated adverse media or other relevant information related to them exists. ADB has obtained reasonable assurance that the borrower was not established and is not being used for money laundering or terrorism financing in the project jurisdiction. Tax integrity due diligence was not required.¹⁷

B. Development Impact, Outcomes, and Outputs

19. **Impact.** The project is aligned with the following impact: agricultural progress supported by advancing farmers' livelihoods and protecting and improving land, water, biodiversity, and genetic resources toward sustainable farming.¹⁸

20. **Outcomes.** The project will have the following outcomes: (i) sustainable food production promoted, and (ii) support to livelihoods of smallholder farmers achieved by enhanced production and usage of EESFs by farmers and the increased number of farmers trained.

21. **Outputs.** The project will have the following outputs: (i) EESF production capacity expanded and energy efficiency of STL operations improved; (ii) agriculture modernization,

¹⁴ I. Pattnaik et al. 2017. [The feminization of agriculture or the feminization of agrarian distress? Tracking the trajectory of women in agriculture in India](#). *Journal of the Asia Pacific Economy*. 23 (1). pp. 138–155.

¹⁵ BSE India. Stock Information for DFPCL. Shareholding as of March 2022. [Deepak Fertilisers Petrochemicals Corporation Ltd Live Stock Price , Deepakfert Live Share Price, 500645 | BSE \(bseindia.com\)](#).

¹⁶ The DFPCL group includes the parent operating company, DFPCL, and its subsidiaries.

¹⁷ ADB. 2003. *Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism*. Manila.

¹⁸ Government of India, NITI Aayog, Task Force on Agriculture Development. 2015. *Raising Agricultural Productivity and Making Farming Remunerative for Farmers*. New Delhi.

gender equality, sustainable agriculture, and climate change resiliency promoted; and (iii) company's sales outreach to female farmers enhanced.

C. Alignment with ADB Strategy and Operations

22. **Consistency with ADB strategy and country strategy.** The project is consistent with Strategy 2030's operational priority (OP) 1 (addressing remaining poverty and reducing inequalities) by improving incomes of farmers and creating employment opportunities for people, OP 2 (accelerating progress in gender equality) by promoting gender equality through the gender action plan¹⁹, OP 3 (tackling climate change and enhancing environmental sustainability) by promoting adoption of advanced technologies to ensure sustainable use of land and water resources and building farmers' climate resilience, and OP 5 (promoting rural development and food security) by providing quality farm inputs to farmers to improve agricultural production.²⁰ The project is also aligned with the Operational Plan for Private Sector Operations, 2019–2024, which calls for focusing on the agricultural inputs subsector and mobilizing funds for “more environmentally sustainable” subsectors and climate-adapted agribusiness projects.²¹ The project is also aligned with ADB's country partnership strategy for India, 2018–2022, which (i) identified supporting investments in rural infrastructure to improve agricultural productivity, (ii) stated that ADB will focus on government priorities to double farmers' incomes, and (iii) stated that ADB will provide support to intensify and diversify agricultural production.²²

23. **Consistency with sector strategy and relevant ADB operations.** The project is consistent with Strategy 2030 Operational Plan for Priority 5, which stresses that “over/misuse of fertilizers and pesticides is contaminating soil, water, and marine resources” (para. 3) and that “smallholder farmers' access to modern inputs, (...) is quite limited.”²³ The plan further calls for ADB to mobilize investments to “sustainably increase farm productivity and incomes” (para 29) and promote “better-quality farm inputs.” (para. 31)²⁴ The project was processed with the South Asia Department employing the One ADB approach, and will also complement ADB's Maharashtra Agribusiness Network Project, whose beneficiaries will also benefit from access to these better quality inputs.²⁵

D. Project Cost and Financing Plan

(Confidential information deleted)

E. Implementation Arrangements

(Confidential information deleted).

¹⁹ Gender Action Plan (accessible from the list of linked documents in Appendix 2).

²⁰ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

²¹ ADB. 2019. *Operational Plan for Private Sector Operations, 2019–2024*. Manila.

²² ADB. 2016. *Country Partnership Strategy: India, 2018–2022—Accelerating Inclusive Economic Transformation*. Manila.

²³ ADB. 2019. *Strategy 2030 Operational Plan for Priority 5: Promoting Rural Development and Food Security, 2019–2024*. Manila. p. 2 and p. 4.

²⁴ Footnote 23, p. 11.

²⁵ ADB. 2021, *Report and Recommendation of the President to the Board of Directors: Proposed Loan, Technical Assistance Grant, and Administration of Technical Assistance Grant to India for the Maharashtra Agribusiness Network Project*. Manila.

F. Projected Financial and Economic Performance

(Confidential information deleted)

G. Unique Features

24. Through this project, new advancements like slow- and controlled-release fertilizers and water-soluble fertilizers will be implemented. The project supports inclusive business as it will help 100,000 additional farmers to increase incomes by way of higher productivity and a net reduction in input costs. Part of the project will receive the innovative “ocean finance” tagging.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

25. The ADB assistance consists of a senior debt facility of up to \$30 million or its equivalent in Indian rupees with a tenor of up to 5 years for each disbursement. The loan will benefit from a corporate guarantee from DFPCL until required security interest is created and perfected.

B. Value Added by ADB Assistance

26. ADB assistance will add value on three fronts:

- (i) **Ocean finance tagging.** Of the loan proceeds, \$27 million will be tagged as “ocean finance.”²⁶ This novel tagging will improve STL’s future access to financing from investors with stringent environmental, social and governance mandates, and therefore adds value by lowering costs and better addressing risks. ADB will explore mobilizing risk participation into this uniquely tagged loan.
- (ii) **Encouraging best safeguards practices.** ADB will promote higher environmental and social (E&S) standards, especially with respect to health and safety processes, pollution controls, stakeholder engagement, and grievance redressal.
- (iii) **Promoting gender inclusion.** ADB will promote gender equality through a gender action plan that seeks to improve women’s employment and gender equality among farmer communities and at the corporate level.

C. Risks

(Confidential information deleted).

D. Technical Assistance

27. The TA of \$225,000 will focus on improving climate resilience of farmers through training in a broad range of climate smart farming solutions and technologies as well as functional financial literacy.²⁷ STL will assist in farmer identification and selection and will provide in-kind contributions

²⁶ ADB. 2022. [Ocean Finance Framework](#). Manila. The use of EESF is consistent with the framework’s eligibility criteria, under Focus Area B. Pollution Control and Ocean Objective 3. Non-point source (NPS) pollution management, as it can potentially reduce chemical pollutants to coastal and marine environments. The identified amount of the loan to be tagged is based on pro-rata share of the company’s sales within eligible geographies, i.e., within 200 km of the ocean or within 50 km of rivers (and their tributaries) that flow to the ocean.

²⁷ Including climate resilient pest management, use of light filtration for climate management, soil nutrient and texture management, and irrigation and water use practices.

in the form of providing a training venue, transportation, and accommodation. The TA will address gaps in women farmers' access to agricultural information and training.

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

28. ADB has categorized the investment in compliance with ADB's Safeguard Policy Statement (2009) as follows: environment (category B), involuntary resettlement (category C) and indigenous peoples (category C).²⁸

29. ADB has undertaken due diligence and reviewed the potential E&S impacts of the project and the measures to avoid, minimize, mitigate, and compensate for the adverse impacts in the safeguard reports and plans. The E&S measures and the institutional capacity and commitment of STL to manage the project's social and environmental impacts are deemed adequate.

30. **Environmental and social audit findings and recommendations.** For this general corporate finance transaction, a corporate E&S audit of STL's Taloja complex, the NPK plant, and its expansion project was undertaken in 2019 by a third party in accordance with the Safeguard Policy Statement. The audit included a site visit to the Taloja complex and a review of the corporate environmental and social management system (ESMS).

31. STL did not have a corporate level ESMS at the time of the audit. Rather, individual operations and sites have policies, systems, and procedures that cover environmental, health and safety, and human resources. The audit recommendations were for STL to (i) develop and implement a corporate-level ESMS that meets the Safeguard Policy Statement requirements; (ii) build adequate capacity to implement the ESMS at the corporate level and individual sites; (iii) enhance site selection procedure to include a formal process to screen, categorize, plan, and review future subprojects per ADB's Safeguard Policy Statement; (iv) develop a stakeholder engagement plan and an external grievance redress mechanism per ADB's Safeguard Policy Statement; and (v) provide E&S, health, and safety training to staff and relevant third parties to ensure implementation of the ESMS. The ESMS is to set out requirements, as applicable, for compliance with national labor laws and measures to comply with the internationally recognized core labor standards, pursuant to ADB's Social Protection Strategy (2001).²⁹ The business units and sites are to align their environment, health, and safety and social management systems and procedures with the corporate ESMS.

32. An independent consultant reviewed the company's processes and procedures in place to manage safety risks and potential impacts to workers and surrounding communities. STL has site-level processes and procedures to manage the risks. STL is developing a corporate hazard assessment and risk analysis procedure that covers all hazard and risk assessments associated with its operations. STL will enhance its safety control measures based on results of the quantitative risk assessments. STL will also enhance safety procedures, including emergency response procedures, accidents and incidents investigation, and confined space entry.

33. STL has commissioned an expert consultant to help it complete the ESMS preparation and implementation, as well as other E&S and health and safety recommendations. These actions have been completed or are underway.

²⁸ ADB. [Safeguard Categories](#).

²⁹ ADB. 2003. *Social Protection*. Manila (adopted in 2001).

34. The project is not expected to result in physical or economic displacement. The land occupied by the Taloja complex is leased from Maharashtra Industrial Development Corporation, which acquired the land. Consultations with local communities indicated the land acquisition did not result in involuntary resettlement. Lands required by STL for its projects are purchased through willing-seller, willing-buyer transactions or leased from industrial zones through open market commercial transactions, and thus do not result in physical or economic displacement. No indigenous peoples impacts are envisaged. STL's facilities are in industrial zones, not in tribal areas. The E&S audit confirmed no indigenous communities are present at the project sites.

35. **Effective gender mainstreaming.** Following ADB's Policy on Gender and Development (1998), STL has incorporated measures to promote gender equality and/or women's empowerment in its business activities. Key features of the gender action plan are as follows: (i) increase the proportion of women employed; (ii) distribute marketing materials to farmers that promote gender equality; (iii) deliver gender sensitization training to sales agents, (iv) pilot the use of women-only groups with female trainer and 100% female participants to deliver STL's extension training; and (v) provide training to women in modern farming, climate-resilient agricultural practices, and financial literacy. STL will submit periodic reports on implementation of gender measures to ADB.

36. STL will comply with national labor laws and, pursuant to ADB's Social Protection Strategy (2001), will take measures to comply with the internationally recognized core labor standards.³⁰ The client will report regularly to ADB on (i) its compliance with such laws and (ii) the measures taken. Information disclosure and consultation with affected people will be conducted in accordance with ADB requirements.³¹

B. Anticorruption Policy

37. STL was advised of ADB's policy of implementing best international practice relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the investment documentation includes appropriate provisions prohibiting corruption, money laundering, and the financing of terrorism; and remedies for ADB in the event of noncompliance.

C. Investment Limitations

(Confidential information deleted).

D. Assurances

38. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),³² ADB will proceed with the proposed assistance upon establishing that the Government of India has no objection to the proposed assistance to STL. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the ADB Board of Directors.

³⁰ ADB. 2003. *Social Protection*. Manila (adopted in 2001).

³¹ Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

³² ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.

V. THE PRESIDENT'S DECISION

39. The President, acting under the authority delegated by the Board, has approved (i) the loan of up to \$30,000,000 or its equivalent in Indian rupees from the ordinary capital resources of the Asian Development Bank (ADB) to Smartchem Technologies Limited for the Smartchem Climate-Smart High-Efficiency Crop Nutrition Project in India; and (ii) the provision of grant-based technical assistance not exceeding the equivalent of \$225,000 to Smartchem Technologies Limited for Building Capacity for Climate Resilience and Soil Nutrition Management among Smallholder Farmers, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Agricultural progress supported by advancing farmers' livelihoods and protecting and improving land, water, biodiversity, and genetic resources toward sustainable farming ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>Outcomes (i) Sustainable food production promoted, and (ii) support to livelihoods of smallholder farmers achieved by enhanced production and usage of EESFs by farmers and the increased number of farmers trained</p>	<p>a. Production of EESFs^b increased (Confidential information deleted)</p> <p>b. Number of STL farmers purchasing and using EESFs increased (Confidential information deleted)</p> <p>c. At least (Confidential information deleted) local jobs created in producing EESFs (Confidential information deleted)</p> <p>d. Number of smallholder^c farmers receiving extension training on better agricultural practices provided by STL per annum increased (Confidential information deleted)</p> <p>e. Quantity of crops produced, in metric tons per hectare, increased (Confidential information deleted)</p>	<p>a.–e. STL's annual development effectiveness monitoring report</p>	<p>R: Demand for EESFs may be lower than expected</p> <p>R: Price fluctuations and cyclicity of agri-commodities affect operations</p> <p>A: Demand for agriproducts remains strong and no disruptions to the food supply chains arise from the pandemic, political violence, and/or international trade restrictions</p>
<p>Outputs 1. EESF production capacity expanded and energy efficiency of STL operations improved</p> <p>2. Agriculture modernization, gender equality, sustainable agriculture, and climate change resiliency promoted</p>	<p>1a. Average capacity utilization rate of EESF production increased (Confidential information deleted)</p> <p>1b. Energy-efficient technologies of (Confidential information deleted) implemented by 2025 (2021 baseline: 0)</p> <p>2a. At least (Confidential information deleted) smallholder farmers,^e of which at least (Confidential information deleted) are women, trained in modern farming, climate-resilient agricultural practices, and financial literacy (Confidential information deleted)</p>	<p>1.–3. STL's annual development effectiveness monitoring report</p>	<p>R: Activities are delayed or canceled because of pandemic outbreak (continued or new)</p> <p>A: Loan financing is disbursed as scheduled</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
3. Company's sales outreach to female farmers enhanced	<p>2b. At least (Confidential information deleted) training groups pilot the use of training sessions only for women to deliver functional financial literacy by 2025 (Confidential information deleted)</p> <p>2c. At least (Confidential information deleted) farms^f using EESFs to demonstrate modern farming and climate-resilient agricultural practices are set up^g (Confidential information deleted)</p> <p>2d. Share of female workers employed in the fertilizer business increased (Confidential information deleted)</p> <p>3a. At least (Confidential information deleted) farming households reached with marketing materials aimed at enhancing gender equality among farmers (Confidential information deleted)</p> <p>3b. A gender sensitization training module developed and piloted with (Confidential information deleted) sales agents with the intention to improve outreach to female farmers, including specific approaches for selling products to women (Confidential information deleted)</p>		
<p>Key Activities with Milestones</p> <p>1. EESF production capacity expanded and energy efficiency of STL operations improved</p> <p>1.1 Execute loan agreement with STL by Q2 2022</p> <p>1.2 Commence development and preconstruction works for EESF production expansion by Q1 2023</p> <p>2. Agriculture modernization, gender equality, sustainable agriculture, and climate change resiliency promoted</p> <p>2.1 Identify farmers participating in modern farming, climate-resilient agricultural practices, and financial literacy trainings by Q1 2023</p> <p>2.2 Identify and mobilize participants in groups only for women for extension training by Q1 2024</p> <p>2.3. Identify demonstration farms to use EESFs by Q2 2023</p> <p>2.4 STL increases the proportion of female workers employed in its fertilizer business by Q1 2024</p>			

3. Company's sales outreach to female farmers enhanced

3.1 STL develops marketing material aimed at enhancing gender equality among farmers by Q1 2024

3.2 STL sources or develops gender sensitization training module and plans a pilot by Q1 2024

Inputs

Asian Development Bank: \$30 million (loan)

Asian Development Bank: \$225,000 (technical assistance)

STL: \$2.53 million (internally generated cash flows)

A = assumption, EESF = enhanced-efficiency specialty fertilizer, OP = operational priority, Q = quarter, R = risk, STL = Smartchem Technologies Limited.

- ^a Government of India, National Institution for Transforming India (NITI Aayog), Task Force on Agriculture Development. 2015. *Raising Agricultural Productivity and Making Farming Remunerative for Farmers*. New Delhi.
- ^b EESFs have a tailored chemical composition combining primary nutrients (the three most important plant nutrients of nitrogen, phosphorus, and potassium); secondary nutrients (other essential nutrients required in smaller quantities such as sulfur, calcium, and magnesium); and tertiary nutrients (micronutrients that further improve yield, such as iron, zinc, and copper) and unique features, such as controlled release fertilizers, water-soluble fertilizers (used in drip irrigation), and customized soil- and crop-specific solutions.
- ^c Smallholder farmers include marginal (fewer than 3 acres) and small (3–5 acres) farmers, and form about 50% of target farmers.
- ^d Output productivity when compared with current or traditional practices.
- ^e The number of farmers trained could be increased to 4,000 if additional technical assistance funding is secured.
- ^f The number of demonstration farms developed could be increased to 4 if additional technical assistance funding is secured.
- ^g Gender sensitization training aims to improve outreach to female farmers, including specific approaches for selling products to women.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this project will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/FastReport/?id=56137-001>

1. Contribution to Strategy 2030 Operational Priorities
2. Country Economic Indicators
3. Summary Poverty Reduction and Social Strategy
4. Attached Technical Assistance Report
5. Environmental and Social Management System: Audit Findings and Details of Arrangement
6. Gender Action Plan