



# Report and Recommendation of the President to the Board of Directors

---

Project Number: 51162-001  
January 2018

## Proposed Loan Spayka Limited Liability Company High-Efficiency Horticulture and Integrated Supply Chain Project (Armenia)

This is an abbreviated version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communications Policy 2011.

Asian Development Bank



## CURRENCY EQUIVALENTS

(as of 7 January 2018)

Currency unit	–	dram (AMD)
AMD1.00	=	\$0.0021
\$1.00	=	AMD484.10

## ABBREVIATIONS

ADB	–	Asian Development Bank
ha	–	hectare
kg	–	kilogram
m <sup>2</sup>	–	square meter
UAE	–	United Arab Emirates

## NOTE

In this report, “\$” refers to United States dollars.

<b>Vice-President</b>	Diwakar Gupta, Private Sector and Cofinancing Operations
<b>Director General</b>	Michael Barrow, Private Sector Operations Department (PSOD)
<b>Director</b>	Christopher Thieme, Deputy Director General, PSOD
<b>Team leader</b>	Xiaole Wang, Investment Specialist, PSOD
<b>Project advisor</b>	Martin Lemoine, Principal Investment Specialist, PSOD
<b>Team members</b>	Genevieve Abel, Principal Transaction Support Specialist, PSOD Areg Arcady Barseghyan, Energy Specialist, CWRD Edwin David, Investment Officer, PSOD Enerelt Enkhbold, Investment Officer, Mongolia Resident Mission, East Asia Department Sheila Estacion, Senior Operations Assistant, PSOD Lars Johannes, Senior Results Management Specialist, PSOD Ma. Amora Manabat, Senior Investment Officer, PSOD Nicholas Moller, Principal Counsel, Office of the General Counsel Jocelyn Erlinda Munsayac, Senior Safeguards Specialist, PSOD Arlene Porras, Senior Safeguards Officer, PSOD Marife Principe, Social Development Officer, PSOD Arman Seissebayev, Senior Investment Officer, Kazakhstan Resident Mission, PSOD

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

	<b>Page</b>
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Project Identification and Description	1
B. Development Impacts, Outcome, and Outputs	4
C. Alignment with ADB Strategy and Operations	5
D. Project Cost and Financing Plan	5
E. Implementation Arrangements	6
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	7
C. Risks	7
IV. POLICY COMPLIANCE	7
A. Safeguards and Social Dimensions	7
B. Anticorruption Policy	8
C. Investment Limitations	8
D. Assurances	8
V. RECOMMENDATION	8
APPENDIXES	
1. Design and Monitoring Framework	9
2. List of Linked Documents	11



## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 51162-001</b>	
<b>Project Name</b>	High-Efficiency Horticulture and Integrated Supply Chain Project	<b>Department/Division</b>	PSOD/OPSD
<b>Country</b>	Armenia, Republic of		
<b>Borrower</b>	Spayka Limited Liability Company		
<b>2. Sector</b>		<b>ADB Financing (\$ million)</b>	
✓ Agriculture, natural resources and rural development	Agricultural production		32.00
		<b>Total</b>	<b>32.00</b>
<b>3. Strategic Agenda</b>		<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive Global and regional transboundary environmental concerns Pillar 2: Trade and investment	Adaptation (\$ million)	18.80
Environmentally sustainable growth (ESG)		Climate Change impact on the Project	Medium
Regional integration (RCI)			
<b>4. Drivers of Change</b>		<b>Gender Equity and Mainstreaming</b>	
Private sector development (PSD)	Promotion of private sector investment	Effective gender mainstreaming (EGM)	✓
<b>5. Poverty and SDG Targeting</b>		<b>Location Impact</b>	
Geographic Targeting	No	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG2, SDG8, SDG13		
<b>6. Nonsovereign Operation Risk Rating</b>			
<b>Obligor Name</b>		<b>Obligor Risk Rating</b>	<b>Facility Risk Rating</b>
Spayka Limited Liability Company			
<b>7. Safeguard Categorization</b>			
Environment: B		Involuntary Resettlement: C	Indigenous Peoples: C
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>32.00</b>	
Nonsovereign LIBOR Based Loan (Regular Loan): Ordinary capital resources		32.00	
<b>B-Loans</b>		<b>0.00</b>	
None		0.00	
<b>Official Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Others</b>		<b>4.80</b>	
<b>Total</b>		<b>36.80</b>	





## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan of up to \$32,000,000 to Spayka Limited Liability Company for the High-Efficiency Horticulture and Integrated Supply Chain Project in Armenia.

2. The project will support the development of 30 hectares (ha) of climate-controlled greenhouses<sup>1</sup> equipped with drip irrigation systems<sup>2</sup> to produce tomatoes and bell peppers. The products will be exported to the Russian Federation and the United Arab Emirates (UAE), leveraging Spayka's existing supply chain and client network. The project is fully aligned with the Government of Armenia's goals to boost agricultural productivity, exports, and employment.

## II. THE PROJECT

### A. Project Identification and Description

#### 1. Project Identification

3. **Importance of agriculture in Armenia.** Agriculture has been deeply embedded in the socioeconomic development of Armenia since the country's economic transition in 1991, when it became independent from the former Soviet Union. Armenian agriculture sector represented 15.9% of the country's gross domestic product<sup>3</sup> and 23.5% of its total merchandise export value<sup>4</sup> in 2016. Armenia's farmers (of whom more than half are women) represent one-third of the country's work force.<sup>5</sup>

4. **Low agricultural productivity.** The Armenian agriculture sector suffers from low productivity due to multiple factors, including limited irrigated land, inadequate infrastructure, limited access to finance, a lack of efficient technology, vulnerability to natural hazards, and underdeveloped market mechanisms. Further, a water shortage in some parts of Armenia—made worse by climate change—threatens the country's irrigation system. In November 2017, the government set a goal to increase agricultural productivity by introducing modern technologies, promoting high value-added agriculture, expanding export volumes, and providing favorable conditions to farmers.<sup>6</sup>

5. **Horticulture development.** Armenia has a natural competitive advantage in horticulture due to a large number of sunny days. High-efficiency horticulture (based on climate-controlled greenhouses, drip irrigation, and other advanced technologies) is identified as a priority investment area to increase agricultural productivity, cope with the risks of climate change, and fully leverage Armenia's competitive advantage in both domestic and export markets. The

---

<sup>1</sup> Climate-controlled greenhouses ensure stable and optimal growing conditions for fruits and vegetables. In an enclosed environment, temperature can be controlled by shading, ventilation, and heating (in the winter). Humidity is also controlled through ventilation and dehumidifiers.

<sup>2</sup> Drip irrigation systems can provide exact amounts of water and fertilizer for each plant at the different growth stages to optimize the plants' growth by strictly controlling the nutrient supply.

<sup>3</sup> National Statistical Service of the Republic of Armenia's ARMSTAT Database.

<sup>4</sup> World Trade Organization. *WTO Statistics Database*. <http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E> (accessed 24 November 2017).

<sup>5</sup> Food and Agriculture Organization of the United Nations. 2017. *Gender, Agriculture and Rural Development in Armenia*. Budapest.

<sup>6</sup> 2017. We Have Set a Goal to Increase Farming Productivity in Armenia—Premier Karapetyan. *Armenpress*. 8 November. <https://armenpress.am/eng/news/911712/we-have-set-a-goal-to-increase-farming-productivity-in-armenia%C2%A0%E2%80%93-premier-karapetyan.html>.

country's total greenhouse area increased nearly 2.5 times in 5 years, from 510 ha in 2011 to 1,220 ha in 2016.<sup>7</sup> Vegetables account for nearly two-thirds of greenhouse production (the rest includes fruits and flowers). However, modern greenhouses still represent less than 10% of the total greenhouse area. Around 75% of modern greenhouses use climate-controlled technologies, whereas most smallholder farmers still rely on traditional greenhouse technologies with less advanced operational and disease control systems.<sup>8</sup>

**6. The Government of Armenia's strong support for greenhouse development.** The government has prioritized the development of greenhouses, especially climate-controlled greenhouses, as a key area of agricultural development, and is extending support to companies and smallholder farmers to improve land access to build greenhouses. To promote investments, the government has, since 2015, exempted from value-added tax the imports of greenhouse equipment and of several resources used in greenhouse crop production, such as seeds and planting materials. In 2016, the government decided to lower the tariff of natural gas consumption for the agriculture sector, including greenhouses. Driven by government support, the total greenhouse area and the share of climate-controlled greenhouses within the total area are both likely to continue to increase in the foreseeable future.

**7. High potential for greenhouse vegetable export.** In 2011–2016, Armenia's exports increased at an annualized rate of 21.2%, from \$1.34 billion in 2011 to \$1.79 billion in 2016.<sup>9</sup> Vegetables were the fastest-growing commodity among Armenia's top 10 export categories, up by 5,589% from 2009 to 2016 (mainly driven by tomato exports). The Russian Federation is the largest consumer of Armenia's fruits and vegetables. In 2016, 91.4% of Armenia's fruit and vegetable export was shipped to the Russian market.<sup>10</sup> In addition to favorable weather conditions and a geographic proximity to the Russian Federation, Armenia benefits from being of a member of the Eurasian Economic Union since January 2015, meaning that Armenian exports to the Russian Federation are exempted from any custom duties.

**8. Project selection.** Spayka is the leading food producer, processor, exporter, and logistics company in Armenia. The project team identified Spayka as a suitable candidate for the Asian Development Bank (ADB) to support because of (i) Spayka's leading position in Armenia's agricultural export market and satisfactory financial performance; (ii) Spayka's extensive logistics and transportation business as well as strong sales network with top Russian supermarkets since 2011; (iii) Spayka's diversified product mix, encompassing greenhouse vegetable production, fruit and vegetable sourcing from contract farms, canned food, and packaging products; and (iv) a committed management with a solid track record in agricultural export and logistics, and market knowledge in the destination markets.

## 2. Project Design

**9.** The project supports the expansion of Spayka's greenhouse production and export of fresh vegetables. As part of a vertical integration strategy, Spayka plans to expand its high-efficiency greenhouses and construct an additional 30 ha of climate-controlled "semi-closed" greenhouses<sup>11</sup> in Yerevan to produce tomatoes and bell peppers. These vegetables will be

<sup>7</sup> World Bank Group. 2016. *Export Supply Chain of Greenhouse Crops: Armenia*. Washington, DC.

<sup>8</sup> International Finance Corporation. 2016. *Export Supply Chain of Greenhouse Crops: Armenia*. Washington, DC.

<sup>9</sup> International Monetary Fund, World Economic Outlook Database (accessed 8 April 2017).

<sup>10</sup> ADB estimates based on Customs Statistics of the Republic of Armenia.

<http://www.petekamutner.am/DefaultCs.aspx?sid=cs> (accessed 26 July 2017).

<sup>11</sup> For this project, Spayka intends to invest in "semi-closed" greenhouses, which have axial fans blowing in outside air through cooling pads into an air distribution corridor to distribute air and create overpressure in the greenhouse. The

exported to the Russian Federation and the UAE by taking advantage of Spayka's existing transportation and logistics business and established client network in these countries.

10. Spayka started greenhouse operations in 2014 to secure its supply of fruits and vegetables and achieve its value chain integration strategy by connecting greenhouse production to its food production, processing, packaging, transportation, and logistics businesses. Besides the 30 ha of semi-closed greenhouses to be funded by ADB, Spayka is currently operating 35 ha of closed greenhouses,<sup>12</sup> constructing 20 ha of closed greenhouses, and plans to construct another 20 ha of semi-closed greenhouses. By the end of 2018, Spayka will own and operate a total of 105 ha of greenhouses.

11. Spayka has extensive experience in greenhouse development and management. It has developed and customized its greenhouses to take full advantage of location and climate conditions. The project's projected yield is around 45 kilograms (kg) per square meter (m<sup>2</sup>) for tomatoes and 22 kg per m<sup>2</sup> for bell peppers annually. Tomatoes and bell peppers were selected because of the high demand for these products in export markets and their long shelf-life. Demand remains constant throughout the year although vegetable supply from open-field horticulture is seasonal and dependent on weather conditions. Therefore, expanding greenhouse will reduce the seasonality of production and secure stable production and exports throughout the year.

12. Following a vertically integrated value chain approach, sales of greenhouse vegetables will be through Spayka's existing logistics and transportation chain, including Spayka's fleet of 215 trucks and 250 contracted trucks, three warehouses in Yerevan, and advanced refrigerated cold storage facility at the Armenia–Georgia border. Products will be sold in high-quality packaging produced by Spayka Plastics. Spayka transports agricultural products from Armenia via Georgia to the Russian Federation. Spayka has established strong sales channels with large supermarket chains in the Russian Federation since 2011.

13. The semi-closed greenhouse technology was invented in the United States in 2005 and has been widely used in Europe and North America, especially for growing tomatoes. The semi-closed technology creates the optimal microclimate environment inside the greenhouse due to its advanced ventilation and shading system. Air exchange takes place through two air distribution corridors where air is mixed with outside air and pumped back into the greenhouse. Overall, semi-closed greenhouses have two to three times higher yields and are three to four times more water-efficient than traditional open-field horticulture because they can control temperature, humidity, carbon dioxide and pest population, and are equipped with advanced drip irrigation systems. Semi-closed technology can decrease operational costs by (i) reducing heating costs as internal and external air is mixed in the corridors to reach the suitable temperature; and (ii) reducing agricultural treatment cost because there is almost no access for pests to enter the greenhouse.

14. Climate-controlled semi-closed greenhouses have higher climate adaptation benefits than the greenhouses typically used by Armenian farmers, as these cannot appropriately control weather conditions during the entire year and are also more exposed to damage climate change risks such as flooding, extreme temperatures, and excessive snow loading. The incremental cost

---

semi-closed greenhouse technology provides active and optimal air conditioning and cooling inside the greenhouse during hot seasons, and moisture and cool climate conditions during cold seasons.

<sup>12</sup> Closed greenhouses represent the older generation of climate-controlled greenhouses, in which the only way to control the temperature is to open the ventilation windows and exchange air with the outside air. Insects come into the greenhouse together with the exchanging air, making it more difficult to control diseases.

to achieve higher climate adaptation benefits is around 59% of the total ADB loan amount, which is equivalent to \$18.8 million.<sup>13</sup>

### 3. Borrower

15. Spayka was established in 2001 in Armenia as a freight forwarding company. Its business gradually grew into trading and exporting fresh fruits and vegetables to the Russian Federation, the rest of the Commonwealth of Independent States,<sup>14</sup> and Europe. Spayka is the largest exporter of agrarian production with more than 90% market share in tomato and pepper exports from Armenia. In addition to exporting fruits and vegetables, Spayka has been engaged in trading dairy products, producing canned food, packaging production and vehicle services to achieve the vertical integration strategy. As of 2017, the company has 886 employees, including 60% women.

16. Spayka's senior management team consists of national and international specialists with substantial industry knowledge and experience. They have broad experience in finance, agronomy, marketing and sales, greenhouse management, and engineering. Davit Ghazaryan, the chief executive officer and founder of Spayka, has over 16 years of management experience.

17. Integrity due diligence was conducted.<sup>15</sup> No significant or potentially significant integrity risks were identified. Tax integrity due diligence was not required.<sup>16</sup>

### B. Development Impacts, Outcome, and Outputs

18. **Impacts.** The project is aligned with the following impacts and consistent with key objectives of the Armenian Development Strategy 2025: (i) the development of a modern agriculture sector through "industrialization" (including through the application of modern technologies like greenhouses), (ii) the promotion of exports of agricultural products in support of an export-oriented economy and the integration of the Armenian economy into regional cooperation formats and the international economy in general, and (iii) increased employment and a minimum salary through the creation of quality and well-paid jobs as one of the main conditions to eradicate poverty and redistribute income.<sup>17</sup>

19. **Outcome.** The project will have the following outcome: the promotion of high-efficiency, environmentally sound, and export-oriented horticultural production based on climate-resilient technologies such as semi-closed greenhouses and drip irrigation systems. Annual production from this project is expected to reach 6.4 million kg of tomatoes and 1.1 million kg of bell peppers by 2022. The project will create about 275 full-time jobs, including 35 management team members and agronomists and 240 workers for nursing, plantation, and pickup.

20. **Outputs.** (i) increased greenhouse operations, (ii) increased contribution of horticulture to the local economy, and (iii) increased and improved employment and training opportunities for female employees. Indicators are included in the design and monitoring framework (Appendix 1).

<sup>13</sup> The total costs of semi-closed greenhouses and Armenian farmers' greenhouses are \$1,228,000 per ha and \$507,600 per ha, respectively. The incremental cost to achieve higher climate adaptation benefits is around 59%.

<sup>14</sup> The Commonwealth of Independent States includes Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Uzbekistan, and Ukraine.

<sup>15</sup> ADB. 2003. *Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism*. Manila. Further information is provided in Client Information (accessible from the list of linked documents in Appendix 2).

<sup>16</sup> More information is available in footnote 2 of Client Information (accessible from the list of linked documents in Appendix 2).

<sup>17</sup> Government of Armenia. 2014. *Armenia Development Strategy 2025*. Yerevan (April).

### C. Alignment with ADB Strategy and Operations

21. **Consistency with ADB strategy and country strategy.** The project promotes the improvement of agricultural productivity through investments in research and development, water infrastructure, and agribusiness, which are emphasized by ADB's Midterm Review of Strategy 2020.<sup>18</sup> ADB's Armenia country partnership strategy is based on three development pillars: (i) high and sustainable economic growth, (ii) broadened access to economic opportunities, and (iii) strengthened social protection.<sup>19</sup> The project supports pillars (i) and (ii) since Spayka transports goods to the Russian Federation through Georgia, owns logistics assets in Georgia, and sources products from Georgian farmers. The project is also fully consistent with ADB's Operational Plan for Regional Cooperation and Integration, which under its "Operational Direction 2: Raising Competitiveness in Connected Markets" calls for "improved growth and business competitiveness in regional markets through new opportunities in cross-border trade, investment, technology, finance, and labor mobility."<sup>20</sup>

22. **Consistency with the sector strategy and relevant ADB operations.** The project is aligned with the four priorities of ADB's Operational Plan for Agriculture and Natural Resources, as follows: (i) increasing the productivity and reducing pre- and post-harvest losses of food crops; (ii) improving market connectivity and value chain linkages; (iii) enhancing food safety, quality, and nutrition; and (iv) enhancing the management and climate resilience of natural resources.<sup>21</sup> The project will complement two Armenian sovereign investment projects north-south road corridor and Armenia-Georgia border regional road (M6 Vanadzor-Bagratashen)<sup>22</sup> which aim to develop more accessible, higher quality, and more frequent road transport; and create more business opportunities for private sector companies in rural areas, particularly in agribusiness and services.<sup>23</sup>

### D. Project Cost and Financing Plan

23. The estimated total project cost is \$36.8 million. Table 1 presents the cost breakdown.

**Table 1: Project Cost**

Item	Amount (\$ million)	Share of Total (%)
Greenhouse construction, civil work	11.0	30.0
Semi-closed system	12.5	34.1
Heating system	5.6	15.2
Drip irrigation and drain	3.3	9.0
Other capital and operating expenditures	4.3	11.7
<b>Total</b>	<b>36.8</b>	<b>100.0</b>

Note: 1. Numbers may not sum precisely because of rounding.

<sup>18</sup> ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

<sup>19</sup> ADB. 2014. *Country Partnership Strategy: Armenia, 2014–2018*. Manila.

<sup>20</sup> ADB. 2016. *Operational Plan for Regional Cooperation and Integration: Promoting Connectivity, Competitiveness, Regional Public Goods, and Collective Action for Asia and the Pacific (2016–2020)*. Manila.

<sup>21</sup> ADB. 2015. *Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020*. Manila (p. 15).

<sup>22</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranches Financing Facility and Administration of Cofinancing to the Republic of Armenia for the North–South Road Corridor Investment Program*. Manila; and ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Armenia for the Armenia–Georgia Border Regional Road (M6 Vanadzor–Bagratashen) Improvement Project*. Manila.

<sup>23</sup> ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Republic of Armenia for the Rural Road Sector Project*. Manila.

2. Land value is not included in the project cost because the land was donated to Spayka by the Municipal Government of Yerevan Municipality to support greenhouse expansion.  
Sources: Spayka Limited Liability Company and Asian Development Bank estimates.

24. Table 2 identifies the corresponding sources of funds.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Loan Asian Development Bank	32.0	87.0
Equity Internally generated cash flow	4.8	13.0
<b>Total</b>	<b>36.8</b>	<b>100.0</b>

Sources: Spayka Limited Liability Company and Asian Development Bank estimates.

## E. Implementation Arrangements

25. Table 3 summarizes the implementation arrangements.<sup>24</sup>

**Table 3: Summary of Implementation Arrangements**

Aspects	Arrangements
Regulatory framework	Spayka Limited Liability Company is subject to the general laws and industry-specific rules and regulations in Armenia. Agricultural activity in Armenia is exempt from profit tax. The Government of Armenia is promoting the development of greenhouses through an array of incentives (para. 6).
Management	Spayka has a management team led by Davit Ghazaryan, chief executive officer and founder of the company. <sup>a</sup>
Performance monitoring	Spayka will report quarterly on financial and operational key performance indicators, and annually on safeguard and development indicators (i.e., output and outcome targets).

<sup>a</sup> The management structure is described in Client Information (accessible from the list of linked documents in Appendix 2).

Sources: Spayka Limited Liability Company and Asian Development Bank.

## F. Projected Financial and Economic Performance

[Redacted]

## G. Unique Features

26. The project will support an internationally competitive, climate-resilient, and inclusive business model for high-quality vegetable production in Asia.<sup>25</sup> It is ADB's first nonsovereign project in the agriculture sector in Armenia and the South Caucasus.

## III. THE PROPOSED ADB ASSISTANCE

### A. The Assistance

27. ADB will extend a loan of up to \$32,000,000 to Spayka. Terms and conditions have been agreed with Spayka.

<sup>24</sup> Details of Implementation Arrangements (accessible from the list of linked documents in Appendix 2).

<sup>25</sup> The project is an inclusive business assistance because it provides decent employment and income opportunities to low-income workers and farmers. Spayka's greenhouse employees will earn more than the average salary in the agriculture sector. Spayka sources from 5,000 farmers, the majority of them in the bottom 60% of income distribution.

## B. Value Added by ADB Assistance

28. ADB assistance will add value on several fronts:
- (i) **Long-term financing.** ADB will provide long-term debt which is not readily available in Armenia. ADB is in a unique position to offer such financing because of its understanding of the agriculture sector and experience in greenhouse horticulture financing in other countries.
  - (ii) **Promotion of high-efficiency technology.** ADB's support will encourage the use of semi-closed greenhouse technology that is productivity-enhancing and environmentally sound (reducing the use of land, water, energy, and other inputs).
  - (iii) **Safeguard best practices.** ADB will help Spayka develop a robust environmental and social management plan following the best international safeguard practices, and will monitor the company's progress during project implementation.

## C. Risks

[Redacted]

## IV. POLICY COMPLIANCE

### A. Safeguards and Social Dimensions

29. **Safeguards.** In compliance with ADB's Safeguard Policy Statement (2009), the project is classified as category B for the environment and category C for involuntary resettlement and indigenous peoples. An initial environmental examination report has been prepared to meet ADB's requirements. The project location is devoid of any dense vegetation, structures, or habitation; therefore, no significant site disturbance will occur. The potential environmental and social impacts of the project have been identified during due diligence, and effective measures to avoid, minimize, mitigate, and compensate for the adverse impacts are being incorporated in the environmental and social management plan. The greenhouses will be equipped with Priva process computers that will control and monitor the climate, water quality, and energy consumption to create the most optimal growing conditions for the crops inside the greenhouses. Spayka's institutional capacity and commitment to manage the project's social and environment impacts are deemed adequate.

30. This project will be built on a 47.76 ha plot of land donated by the Government of Yerevan Municipality. In the 1990s, people were issued permits to cultivate the land, which was under the control of Shengavit Community. These permits were canceled in 2008 when a law was passed changing the status of the communities to administrative districts. In 2012, Yerevan Municipality acquired the land to be managed by the Armenian Crop Promoting Centre (a public-private partnership that became a private company in 2014) for the development of a greenhouse facility. The government compensated the remaining users of the community land; however, the greenhouse development did not materialize as some conditions were not met. The land was left unused from 2012 until 2017. In early 2017, Spayka applied to the government for the allocation of a land plot to develop a greenhouse complex. In July 2017, Yerevan Municipality and Spayka signed a donation contract and a property certificate was issued to Spayka. No one is currently living on or using the land, and there are no outstanding complaints with regard to the land.

31. Yerevan is largely a mono-ethnic municipality, with 98.9% of the population being Armenians. The main ethnic minorities are Yazidis (0.3%) and Russians (0.5%). The greenhouse

project is in Yerevan Municipality in Shengavit Administrative District, which is inhabited mostly by Armenians and a few ethnic minorities already mainstreamed into society.

32. **Other social dimensions.** The project is categorized as effective gender mainstreaming. Spayka will implement a gender action plan that includes (i) employing 240 greenhouse workers (65% women); and (ii) improving the company's human resource policy to include provisions ensuring equal opportunities for female employees, including gender equality in recruitment, training, parental leave and childcare provisions, equal pay for equal work, and the prohibition of sexual harassment in the workplace, among others.<sup>26</sup> Spayka 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.<sup>27</sup> Spayka will report regularly to ADB on its and its contractors' compliance with such laws, and the measures taken.<sup>28</sup>

## **B. Anticorruption Policy**

33. Spayka was advised of ADB's policy of implementing best international practices relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the loan 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**

[Redacted]

## **D. Assurances**

34. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),<sup>29</sup> ADB will proceed with the proposed assistance upon establishing that the Government of Armenia has no objection to the proposed assistance to Spayka. 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.

## **V. RECOMMENDATION**

35. 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 up to \$32,000,000 from ADB's ordinary capital resources to Spayka Limited Liability Company for the High-Efficiency Horticulture and Integrated Supply Chain Project in Armenia, with such terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

Takehiko Nakao  
President

12 January 2018

<sup>26</sup> Gender Action Plan (available from the list of linked documents in Appendix 2).

<sup>27</sup> ADB. 2003. *Social Protection*. Manila (adopted in 2001).

<sup>28</sup> Summary Poverty Reduction and Social Strategy; and Safeguards and Social Dimensions Summary (accessible from the list of linked documents in Appendix 2).

<sup>29</sup> ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.



## DESIGN AND MONITORING FRAMEWORK

<b>Impacts the Project is Aligned with</b>			
<p>Modern agriculture sector developed through “industrialization”, i.e., increased intensity level, compliance with the agro-technical requirements, and the application of modern technologies and management systems.<sup>a</sup></p> <p>Export of agricultural products promoted in support of an export-oriented economy and the integration of the Armenian economy into regional cooperation formats and the international economy in general.<sup>a</sup></p> <p>Employment and minimum salaries increased by creating quality and well-paid jobs, one of the main conditions to eradicate poverty and redistribute income.<sup>a</sup></p>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Risks</b>
<p><b>Outcome</b></p> <p>High-efficiency, environmentally sound, and export-oriented horticultural production promoted</p>	<p>By 2022:</p> <p>a. Annual production of tomatoes and bell peppers by the project reaches 7.5 million kilograms (2017 baseline: 0)</p> <p>b. Spayka’s total annual sales increase to \$200 million (2017 baseline: \$144 million)</p> <p>c. Number of greenhouse workers employed in the project amount to 240 employees (including at least 65% women) (2017 baseline: 60% of total employees currently employed)</p>	<p>a–c. Spayka annual monitoring report</p>	<p>Demand for fresh produce not as strong as expected</p> <p>Crop failure leads to revenue losses</p> <p>Sales from other businesses not as high as expected</p>
<p><b>Outputs</b></p> <p>1. Greenhouse operations increased</p> <p>2. Contribution of horticulture to the local economy increased</p> <p>3. Employment and training opportunities for female employees increased and improved</p>	<p>By 2020:</p> <p>1. Greenhouse cultivation area with drip irrigation reaches 105 ha, of which 30 ha is financed by the project (2017 baseline: 35 ha)</p> <p>2a. Total payments to the government during construction and early operation of the project reach at least \$300,000 (2017 baseline: 0)</p> <p>2b. Total domestic purchases during construction and early operation of the project reach at least \$3 million (2017 baseline: 0)</p> <p>3a. 100% of female greenhouse workers trained in good agriculture practices and techniques, and provided with safety training (2017 baseline: 0)</p>	<p>1–3. Spayka annual monitoring report</p>	<p>Execution of greenhouse construction project delayed</p>

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	<p>3b. Company human resource policy includes a provision ensuring equal opportunities for female employees, including gender equality in recruitment, training, parental leave, childcare provisions, and equal pay for equal work (2017 baseline: no policy)</p> <p>3c. Company code of conduct includes a provision ensuring that pregnant workers and women with children under 1 year of age do not engage in dangerous tasks in harmful conditions. (2017 baseline: not updated)</p>		
<b>Key Activities with Milestones</b>			
<p>Outputs 1 &amp; 2: Greenhouse operations increased &amp; contribution of horticulture to the local economy increased</p> <p>1. The Asian Development Bank executes the loan agreement with Spayka by 31 March 2018.</p> <p>Output 3: Employment and training opportunities for female employees increased and improved</p> <p>1. Training of female greenhouse workers commenced in 2018</p> <p>2. Updated company human resources policy drafted by the end of 2018</p> <p>3. Updated company code of conduct drafted by the end of 2018</p>			
<b>Inputs</b>			
<p>Asian Development Bank: \$32.0 million loan</p> <p>Spayka: \$4.8 million internally generated cash flow</p>			
<b>Assumptions for Partner Financing</b>			
Not applicable			

ha = hectare.

Note: Spayka will be pursuing other expansion projects parallel to the Asian Development Bank-financed project. Targets relate to Spayka's entire operation and expansion plan, unless it is specified to be limited for the project.

<sup>a</sup> Government of Armenia. 2014. *Armenia Development Strategy 2025*. Yerevan (April).

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=51162-001-4>

1. Sector Overview
2. Client Information
3. Details of Implementation Arrangements
4. Contribution to the ADB Results Framework
5. Financial Analysis
6. Economic Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Safeguards and Social Dimensions Summary
10. Gender Action Plan