conducted by Nepal Office: July, 2024

Country Name	Sindhuli Road Corridor Commercial Agriculture Promotion Project
Nepal	Smanan Road Corridor Commercial Agriculture Fromotion Froject

# I. Project Outline

1. 1 Toject Outline						
Background	In the mountainous and hilly regions of Nepal, where agriculture has been practiced on steep slopes and small-scale farmlands, there was high potential for production and supply of vegetables, fruits, and livestock products, taking advantage of diverse agro-meteorological and regional characteristics. However, in these areas, production and distribution infrastructure, such as irrigation facilities and farm roads, have been underdeveloped. Also, access to markets and high-quality production inputs such as fertilizers and seeds have been limited. Amidst this situation, the construction of the Sindhuli Road, which began in 1995, was expected to address some of these issues. Particularly in the four districts of Kavre, Dolakha, Ramechhap, and Sindhuli, which were considered low-development poverty areas in the mountainous and hilly regions, the completion of the entire Road in 2015 was anticipated to improve access to the main consumption area, Kathmandu. Under these circumstances, JICA implemented the "Project for the Master Plan Study on High Value Agriculture Extension and Promotion in Sindhuli Corridor (2011-2014)." Findings of the Study revealed that linkages between farmers and distributors/markets were weak in the four districts. Farmers were producing small amounts and low-quality agricultural products without understanding the market needs, which made it difficult for distributors to efficiently					
Objectives of the Project	Project increasing the agricultural income for the farm households in SRC area through agricultural commercializat  1. Overall Goal: Agricultural income for the farm households in SRC area is increased through agricultural commercialization.					
Activities of the Project	<ol> <li>Project Purpose: Value-chains for high-value commodities function to bring stakeholders profit along SRC.</li> <li>Project Site: 4 districts along the Sindhuki Road (Kavre, Dolakha, Ramechhap, and Sindhuli districts)         Main Activities: (1) Training of Subject Matter Specialists (SMS) and Junior Technicians/Junior Technical         Assistants (JT/JTA) on the Sindhuli Road Corridor Commercial Agriculture Promotion Project (SRC-CAP)         approach¹ and support to SMS/JT/JTA for technical transfer to farmer groups; (2) Support to SMS/JT/JTA for         transferring marketing skills to farmer groups; and (3) Formulation and distribution of the Operational         Guidelines for the Ministry of Agriculture and Livestock Development (MOALD) and the Department of         Agriculture (DOA) of the federal governments, Ministry of Land Management, Agriculture and Cooperatives         (MOLMAC), the provincial government of Province No.3, and the local governments.</li> <li>Inputs (to carry out above activities)</li> <li>Japanese Side         1) Staff allocated: 3 persons assigned permanently to         the federal government (with periods of absence); 4</li> </ol>					
	3) Equipment: Vehicles, office equipment (computers, printers, etc.), office desks and chairs  4) Project operating costs	persons total, or transition to f extension officer governments  2) Project office 3) Facilities and equi	ne in each district (before the rederalism); 17 administrative is and extension staff in local appearance.			
Project Period Implementing	(ex-ante) February 2015 – February 2020 (60 months)Project Cost (Japanese side only)(ex-ante) 550 million yen (actual) 610 million yen					
Agency	Central level: MOALD (former central government: Ministry of Agricultural Development) Local level: MOLMAC (former central government: District Agriculture Development Office)					
Cooperation Agency in Japan	None					

### II. Result of the Evaluation

# 1 Relevance/Coherence

[Relevance]

<Consistency with the Development Policy of Nepal at the Time of Ex-Ante Evaluation >

The project was consistent with the development policy of Nepal at the time of ex-ante evaluation. The Agriculture Development Strategy (ADS) (2015-2030), which was in the process of being formulated at the time of ex-ante evaluation, set the goal of increasing agricultural productivity, especially in high-value agricultural products such as vegetables and fruits, by introducing technologies adapted to local conditions and modernizing through strengthening value chains.

<sup>&</sup>lt;sup>1</sup> SRC-CAP approach: An approach to promote commercial agriculture developed under the project based on the Smallholder Horticulture Empowerment and Promotion (SHEP) approach.

<Consistency with the Development Needs of Nepal at the Time of Ex-Ante Evaluation >

The project was consistent with the development needs of Nepal at the time of ex-ante evaluation. In four districts of Kavre, Dolakha, Ramechhap, and Sindhuli, which were considered low-development poverty areas, farmers were producing small quantities and low-quality agricultural products without understanding the market needs. Therefore, there were expectations to produce high-value agricultural products. Additionally, with the full opening of the Sindhuli Road in 2015, access to Kathmandu, a major consumption area, was expected to be improved.

<Appropriateness of Project Design/Approach>

The project design/approach was highly appropriate. At the time of the project planning, recognizing the large number of women engaged in agriculture, it was envisioned that women's involvement and participation in the project activities would be encouraged. In the project, efforts were made with a gender perspective, including the formulation of guidelines that required the participation of both spouses in activities such as development of action plans and market research. As a result, it is considered that the participation of many women was promoted, contributing to the empowerment of women and the improvement of their status. Additionally, in the project, to ensure the continuous and proper use of materials for irrigation facility construction and agricultural machinery purchased by the project even after project completion, a condition was adopted that farmers would bear half of these costs, and that the use of project financial support would not be decided by the project but by the farmer group members themselves based on their own action plans developed from the results of market research. These approaches aimed to foster ownership among the farmer group members. Furthermore, the project promoted a shift from conventional agricultural crop cultivation based on subsidized benefits to market-oriented crop cultivation. This transition contributed to increased farmers' profits. Even though the subsidies reduced cultivation costs, the conventional farming practices did not lead to an expansion of crop sales, and thus it was an appropriate approach to promote sustainable and commercial agriculture with development potential.

<Evaluation Result>

In light of the above, the relevance of the project is  $3^2$ .

#### [Coherence]

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with the Japan's ODA policy to Nepal at the time of ex-ante evaluation. In the "Country Assistance Policy for Nepal" (2012), social infrastructure and institutional development for poverty reduction, sustainable and balanced economic growth in rural and regional areas were identified as priority areas. As the project aims to improve the farmers' income, it is in line with these priority areas.

<Collaboration/Coordination with JICA's other interventions>

The collaboration/coordination between the project and JICA's Agricultural Development Adviser dispatched as an individual expert was planned at the time of ex-ante evaluation and was implemented, but the concrete effects of the collaboration/coordination were not confirmed at the time of ex-post evaluation. On the other hand, although not initially planned at the time of ex-post evaluation, collaboration/coordination was made between the project and JICA's "Project for the Promotion of Irrigated Agriculture in Terai Plain (PIAT)" (2019-2025), and the positive effects were confirmed at the time of ex-post evaluation. The experiences and lessons learned from the project were shared with PIAT, which led to the introduction of the SRC-CAP approach into winter and spring vegetable cultivation in PIAT, contributing to the dissemination of the SRC-CAP approach.

<Cooperation with other institutions/ Coordination with international framework>

The cooperation/coordination with the United Nations Development Programme (UNDP) planned during the project period was confirmed to have the positive effect at the time of ex-post evaluation. In the agricultural development project<sup>3</sup> implemented with the support of UNDP, small vehicles were provided to cooperatives to assist in transporting vegetables to markets in Kathmandu, Bhaktapur, and Kavre. Since the support under the project mainly focused on technical assistance in the cultivation phase, the enhancement of transportation to the markets by UNDP complemented the strengthening of the value chain, and synergistic effects were generated in terms of expanding vegetable deliveries to the markets.

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

#### 2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

At the time of project completion, the Project Purpose was achieved beyond the plan. Target farmers improved their capacities in both marketing and agricultural skills, resulting in significant effects on farmers' net profits, which increased by an average of 70% (Indicator 1). Additionally, the Operational Guidelines<sup>4</sup> developed to promote agricultural commercialization under the project were approved in January 2020, and the Nepali and English versions were distributed to federal, provincial, and local government officials (Indicator 2). <Continuation Status of Project Effects at the Time of Ex-Post Evaluation>

By the time of ex-post evaluation, the project effects have continued. It was observed that the number of farmer groups utilizing the SRC-CAP approach for vegetable cultivation has increased in four out of the 10 municipalities, and their net profits have also increased. Furthermore, there has been a rise in the number of farmer groups investing the increased profits to install equipment (plastic tunnels) for tomato cultivation. On the other hand, in the other four municipalities, the SRC-CAP approach has not been sustained. No information on net profits was available from the remaining two municipalities (Indicator 1). Regarding the Operational Guidelines, they continue to be used through trainings such as the Training of Trainers (ToT) conducted by DOA for extension workers affiliated with provincial and local governments (Indicator 2).

 $<sup>^{2}</sup>$  4 : very high, 3 : high, 2 : moderately low, 1 : low

<sup>&</sup>lt;sup>3</sup> Value Chain development of Fruit and Vegetables Project (2018-2022)

<sup>&</sup>lt;sup>4</sup> It consists of three documents: (1) "CAP Approach: Guidelines for Local, Provincial and Federal Governments," (2) "Manual for Training to Extension Staff to Promote the CAP Approach," and (3) "CAP Approach Handbook for Extension Staff."

#### <Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

By the time of ex-post evaluation, the Overall Goal has been achieved as planned. Replication or partial replication of the SRC-CAP approach was observed in six of the 10 municipalities (Indicator 1). According to DOA, although the SRC-CAP approach is being continued, some farmer groups are facing difficulties in efficient marketing and increasing production. In addition, while some targeted farmer groups have seen improved agricultural income, some farmer groups in remote areas are facing challenges due to lack of irrigation facilities and access to relatively large markets, hindering expansion of cultivation and sales. As mentioned earlier, the SRC-CAP approach is not being sustained in the remaining four municipalities.

### <Other Impacts at the Time of Ex-Post Evaluation>

In Nepal, despite a significant number of women engaged in agriculture, there persists a strong male-dominated culture. Consequently, at the beginning of the project, most of the participants in workshops and trainings were men. In response, the project developed and implemented guidelines requiring the participation of both spouses in activities such as action planning and market research, thereby promoting the participation of many women in the project activities. As a result, it is considered that both men and women sharing the same household began to jointly discuss vegetable cultivation planning and marketing. Additionally, farmers began to develop farming plans based on market demand, which generated a positive impact in improving the value chain, as it established a pathway for supplying demanded agricultural products to consumers.

#### <Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Achievement of Project Purpose and Overall Goal

Aim	Achievement of Project Purpose and Overall Goal  Aim Indicators Results So							
(Project Purpose)	Indicators  Indicator 1	Status of the Achievement (Status of the Continuation): achieved beyond the plan (partially						
Value-chains for	Average net profit	Status of the Achievement (Status of the Continuation): achieved beyond the plan (partially continued)						
high-value	from vegetable	(Project Completion)						
commodities	_	` .	st cycle farmers: 57% increase					
function to bring	group members		and cycle farmers: 5/% increase					
~	(men and women)		d cycle farmers: 64% increase d cycle farmers: 88% increase					
along SRC.	increases by 30%**.	→Average: 70% increase						
nong sice.	increases by 3070 .	(Ex-Post Evaluation)						
	* Not including fruit	`	ex-Post Evaluation)  n four of the 10 municipalities, it was observed that the number of farmer groups using the SRC					
	trees and flowers,		AP approach for vegetable cultivation has increased and their net profits have also increased.					
	also net profit is	* *	There has been a rise in the number of farmer groups investing the increased profits to install					
	based cost.		equipment (plastic tunnels) for tomato cultivation. On the other hand, the SRC-CAP approach was not continued in the other four municipalities. No information was available from the					
	** Not including the		•	to information was available from the				
	inflation rate.	Districts Municipalities Status of increase in net profit						
		Sindhuli	Kamalamai Municipality	The increase in net profit was confirmed.				
		Sinanan	Golanjor Rural Municipality	Information was not available.				
			Sunkoshi Rural Municipality	SRC-CAP approach not continued.				
		Ramechhap	Khandadevi Rural Municipality	SRC-CAP approach not continued.				
		ramcomap	Sunapati Rural Municipality	SRC-CAP approach not continued.				
		Dolakha	Melung Rural Municipality	The increase in net profit was confirmed.				
		Kavre	Dhulikhel Municipality	The increase in net profit was confirmed.				
		Kavic	Namobuddha Municipality	Information was not available.				
			Roshi Rural Municipality	The increase in net profit was confirmed.				
			Temal Rural Municipality	SRC-CAP approach not continued.				
		Temai Kurai Municipanty SRC-CAP approach not continued.						
	Indicator 2	Status of the Achievement (Status of the Continuation): achieved as planned (continued)						
	Operational		Project Completion)					
	Guidelines for	` .	Operational Guidelines were approved in January 2020 and Nepali and English versions					
	agricultural	distributed to federal, provincial, and local government officials.						
	extension to	(Ex-Post Evaluation) The Operational Guidelines have been continuously used through trainings such as ToT conducted by DOA for extension workers affiliated with provincial and local governments.						
	promote agricultural							
	commercialization							
	is approved and							
	shared with related							
	stakeholders.							

(Overall Goal)	Indicator 1	1			DC	
Agricultural	The SRC-CAP	(Ex-Post Evaluation)				
come of the farm approach is The SRC-CAP approach has been replicated in five of the 10 municipalities, and in one ouseholds in SRC replicated in 50% of municipality it was found to be partially replicated; in four municipalities, the SRC-CAP				*		
				ed; in four municipalities, the SRC-CAP		
area is increased	ea is increased the selected 10 approach was not continued.					
through	Local Governments	Districts	Municipalities	Statu	is of replication of SRC-CAP approach	
agricultural	in 3 years after the	Sindhuli	Kamalamai	Replicated	Many farmers cultivate the crop in	
commercialization.	completion of the		Municipality	_	individual nurseries. Farming records,	
	project				however, were no longer taken.	
			Golanjor Rural	Replicated	Crop cultivation has been practiced based on	
			Municipality	•	market demand because supply is less than	
			1		demand. Farming records have been	
					continuously taken.	
			Sunkoshi Rural	Not	Newly appointed staff are unfamiliar with	
			Municipality	Continued	the SCR-CAP approach.	
		Ramechhap	Khandadevi	Not	Newly appointed staff are unfamiliar with	
			Rural	Continued	the SCR-CAP approach.	
			Municipality			
			Sunapati Rural	Not	Newly appointed staff are unfamiliar with	
			Municipality	Continued	the SCR-CAP approach.	
		Dolakha	Melung Rural	Partially	One farmer group continues vegetable	
			Municipality	Replicated	cultivation using the SCR-CAP approach.	
		Kavre	Dhulikhel	Replicated	Several farmer groups have used the SCR-	
			Municipality	1	CAP approach for vegetable cultivation and	
					marketing. On the other hand, it was	
					observed that some farmers were not	
					successful in marketing and some farmers	
					with declining production.	
			Namobuddha	Replicated	Cultivation using the SCR-CAP approach	
			Municipality		continues. The harvest has been collected at	
					collection centers and transported to the	
					market.	
			Roshi Rural	Replicated	It was observed that some farmer groups are	
			Municipality	Tophoatou	not practicing efficient marketing, but a few	
					individual farmers continue cultivation and	
					engage in sales.	
			Temal Rural	Not	Vegetable cultivation and commercial	
			Municipality	Continued	marketing based on the SCR-CAP approach	
	1		1.1umcipanty	Commucu	marketing based on the SCR-CAT approach	

# 3 Efficiency

The project cost slightly exceeded the plan (the ratio against the plan: 111%) and the project period was as planned (the ratio against the plan: 100%). Regarding the excess project cost, the project activities were suspended due to the Nepal earthquake that occurred just after the start of the project, which resulted in expenses of information gathering during the activity suspension (such as expenses for hiring local staff and renting a temporary project office) and expenses for investigating the earthquake damage and confirming the resumption of activities (such as expenses for dispatching mission members). However, as these additional expenses were incurred due to the external factor, they are excluded from the calculation of project cost in the efficiency evaluation in accordance with JICA evaluation policy.

were no longer practiced.

	Project Cost (Japanese side only, yen)	Project Period (months)	
Plan (ex-ante)	550 million yen	February 2015 - Feb 2020 (60 months)	
Actual	610 million yen	March 2015 - March 2020 (60 months)	
Ratio (%) 111% (but excess is due to the external factor)		100%	

Outputs were produced as planned.

In the light above, the efficiency of the project is 4.

### 4 Sustainability

### <Policy Aspect>

The ADS, an agricultural development strategy at the federal level, is still in effect at the time of ex-post evaluation, with its core focuses on "improving agricultural productivity" and "agricultural commercialization." It states that improving agricultural productivity requires the introduction of technologies and know-how to ensure efficient and sustainable agricultural production in response to market demand. Furthermore, it sets specific targets (Outputs) such as the establishment of a competitive agricultural value chain that increases added value and profits, with the aim of shifting to profitable agricultural commercialization. In addition to the agricultural development strategy at the federal level, agricultural commercialization is also a priority issue in the provincial agricultural development strategies

formulated in all seven provinces. These are consistent with the SRC-CAP approach, which aims to promote high-value commodities and increase agricultural productivity in response to market demand. However, the introduction and promotion of the SCR-CAP approach are not explicitly stated in federal and provincial agricultural policies.

<Institutional/Organizational Aspect>

Since the transition to federalism, major agricultural extension activities have been delegated to local governments. The local governments continue to provide technical support for agricultural extension, including the SRC-CAP approach. Regarding staffing, frequent personnel changes and staff shortages, which have been an issue since the implementation of the project, persist at the time of ex-post evaluation. It was also confirmed that in some districts, the SRC-CAP approach has not been transferred to newly appointed staff. The Agriculture Knowledge Centers (AKC) located in the districts play the role in providing advice on farming and cultivation techniques to farmers for agricultural extension. However, due to issues such as personnel changes and staffing shortages, the AKC has not fully established an organizational structure for the dissemination of the SRC-CAP approach. On the other hand, in recent years, local governments have been hiring their own extension workers, and agricultural cooperatives and some agricultural material sales companies have been providing guidance on cultivation techniques, promoting community extension services through public-private partnerships. It is expected that such resources can be used to ensure the sustainability of the institutional and organizational aspects in the future.

DOA regularly conducts ToT for provincial and local government extension workers using the Operational Guidelines developed under the project. The guidelines are beneficial for extension workers who serve as the front line with farmers in the field, and farmers receive support for extension services and farm management planning through the extension workers. Although there is some uncertainty regarding the transfer of skills when personnel changes occur, DOA reports that extension workers and farmer groups in target districts of the project have the capacity to sustain farming operations using the SRC-CAP approach.

<Financial Aspect>

From the project completion through FY2023/24, the DOA has made annual budget allocations for ToT and has provided training on the SRC-CAP approach to extension workers. According to DOA, training budgets have been distributed to local, provincial, and federal government levels to conduct training for technical personnel. In Melung Rural Municipality where information was obtained, it is reported that a budget has been allocated for activities related to the dissemination and implementation of the SRC-CAP approach.

<Environmental and Social Aspect>

No issue on environmental and social aspect has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the policy, institutional/organizational and technical aspects. Therefore, the sustainability of the project effects is ③.

5 Summary of the Evaluation

The project achieved beyond the plan that the SRC-CAP approach was used to improve agricultural incomes of farmers. The Overall Goal was achieved as planned, with the SRC-CAP approach being replicated in the majority of municipalities, although the SRC-CAP approach was not continued in some municipalities.

Considering all the above points, this project is evaluated to be highly satisfactory.

### III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

In some cases, when AKC extension workers are replaced due to personnel changes, it has become challenging to sustain implementation of the SRC-CAP approach. It is recommended that DOA promptly provide training on the SRC-CAP approach for new extension workers in the target districts of the project. Furthermore, it is requested to monitor the extension workers in addition to continue the implementation of ToT to ensure the continuous dissemination of the SRC-CAP approach.

Lessons Learned for JICA:

- The project focused mainly on providing technical assistance for high-value agricultural products in the cultivation phase of the agricultural value chain. However, in the commercialization of agriculture, it is also crucial to secure transportation means to deliver crops to the market. In the project, synergies were generated in terms of expanding vegetable deliveries to the market through the collaboration with the UNDP agricultural development project that supported the transportation of vegetables to the market. For future similar projects, it is essential to plan projects at the project planning stage to complement assistance beyond the scope of individual projects, such as securing and improving transportation to markets, by collaboration with agricultural loans or other development partners.
- In recent years, from the perspective of ensuring sustainability, local governments have been hiring their own extension agents, and agricultural cooperatives and some agricultural material distributors have been providing them with guidance on agricultural techniques, thus promoting community extension services through public-private partnerships. Since capacity building of extension workers along with the inputs of necessary materials are essential for the dissemination of high-value commodities, it is expected that resources such as community based extension centers or posts play an important role in technology dissemination even after the project completion. Therefore, the use of such resources should be incorporated into the project activities from the project formation stage, ensuring the sustainability of the institutional and organizational aspects of the project.
- In the project, farmers were required to bear half of the cost of the materials and equipment for irrigation facilities purchased by the project to ensure the continuous and proper use even after the completion of the project. Additionally, and farmer group members themselves decided how to use the project financial support based on their own activity plans. In future similar projects, it is expected that such cost-sharing approaches and initiatives to foster farmer group member ownership can improve the effectiveness and sustainability of the project.



Plastic Tunnel Roshi Rural Municipality, Kavre District



Irrigation reservoir/pipe Roshi Rural Municipality, Kavre District