



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

---

Project Number: 40238  
September 2013

## Proposed Loan Socialist Republic of Viet Nam: Productive Rural Infrastructure Sector Project in the Central Highlands

## CURRENCY EQUIVALENTS

(as of 16 August 2013)

Currency unit	–	dong (D)
D1.00	=	\$0.00004754
\$1.00	=	D21,036.00

## ABBREVIATIONS

ADB	–	Asian Development Bank
CHP	–	Central Highlands province
CPMU	–	central project management unit
EIRR	–	economic internal rate of return
ha	–	hectare
IDMC	–	irrigation and drainage management company
MARD	–	Ministry of Agriculture and Rural Development
NRD	–	National Target Program for New Rural Development
NWRS	–	National Water Resources Strategy
O&M	–	operation and maintenance
PPC	–	provincial people's committee
PPMU	–	provincial project management unit
PRI	–	productive rural infrastructure
RSP	–	representative subproject
SEDP	–	socioeconomic development plan
TA	–	technical assistance
WUO	–	water user organization

## NOTE

In this report, "\$" refers to US dollars.

<b>Vice-President</b>	S. Groff, Operations 2
<b>Director General</b>	J. Nugent, Southeast Asia Department (SERD)
<b>Director</b>	J. H. Mir, Environment, Natural Resources, and Agriculture Division, SERD
<b>Team leader</b>	D. Salter, Senior Natural Resources and Agriculture Specialist, SERD
<b>Team members</b>	S. Aman-Wooster, Senior Social Development Specialist, SERD O. Badiola, Associate Project Analyst, SERD B. Giap, Natural Resources and Agriculture Economist, SERD P. L. Ho, Senior Project Officer, SERD N. Ikemoto, Senior Environment Specialist, SERD U. Hoque, Senior Social Development Specialist, SERD S. Kawazu, Senior Counsel, Office of the General Counsel N. T. T. Luong, Associate Procurement Analyst, SERD H. T. K. Nguyen, Senior Financial Control Officer, SERD G. T. Nguyen, Social Development Officer, SERD A. Pettersson, Senior Procurement Specialist, Operations Services and Financial Management Department P. Q. Pham, Environment Officer, SERD N. D. Thang., Associate Safeguards Officer, SERD
<b>Peer reviewer</b>	T. Matsuo, Director, Environment, Natural Resources, and Agriculture Division, South Asia Department

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. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impact and Outcome	3
C. Outputs	3
D. Investment and Financing Plans	4
E. Implementation Arrangements	5
III. DUE DILIGENCE	6
A. Technical	6
B. Economic and Financial	6
C. Governance	7
D. Poverty and Social	7
E. Safeguards	8
F. Risks and Mitigating Measures	9
IV. ASSURANCES AND CONDITIONS	10
V. RECOMMENDATION	10
APPENDIXES	
1. Design and Monitoring Framework	11
2. List of Linked Documents	14

## PROJECT AT A GLANCE

<b>1. Project Name:</b> Productive Rural Infrastructure Sector Project in the Central Highlands				<b>2. Project Number:</b> 40238-023																				
<b>3. Country:</b> Viet Nam, Socialist Republic of		<b>4. Department/Division:</b> Southeast Asia Department/Environment, Natural Resources & Agriculture Division																						
<b>5. Sector Classification:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sectors</th> <th style="text-align: center;">Primary</th> <th style="text-align: left;">Subsectors</th> </tr> <tr> <td>Agriculture and natural resources</td> <td style="text-align: center;">√</td> <td>Agriculture and rural sector development</td> </tr> <tr> <td></td> <td></td> <td>Irrigation, drainage, and flood protection</td> </tr> <tr> <td>Transport, and information and communication technology</td> <td></td> <td>Road transport</td> </tr> </table>		Sectors	Primary	Subsectors	Agriculture and natural resources	√	Agriculture and rural sector development			Irrigation, drainage, and flood protection	Transport, and information and communication technology		Road transport									
Sectors	Primary	Subsectors																						
Agriculture and natural resources	√	Agriculture and rural sector development																						
		Irrigation, drainage, and flood protection																						
Transport, and information and communication technology		Road transport																						
<b>6. Thematic Classification:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Themes</th> <th style="text-align: center;">Primary</th> <th style="text-align: left;">Subthemes</th> </tr> <tr> <td>Economic growth</td> <td style="text-align: center;">√</td> <td>Widening access to markets and economic opportunities</td> </tr> <tr> <td>Environmental sustainability</td> <td></td> <td>Natural resources conservation</td> </tr> <tr> <td>Capacity development</td> <td></td> <td>Organizational development</td> </tr> </table>		Themes	Primary	Subthemes	Economic growth	√	Widening access to markets and economic opportunities	Environmental sustainability		Natural resources conservation	Capacity development		Organizational development									
Themes	Primary	Subthemes																						
Economic growth	√	Widening access to markets and economic opportunities																						
Environmental sustainability		Natural resources conservation																						
Capacity development		Organizational development																						
<b>6a. Climate Change Impact</b>			<b>6b. Gender Mainstreaming</b>																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Adaptation</td> <td style="width: 50%; text-align: center;">Medium</td> </tr> <tr> <td>Mitigation</td> <td style="text-align: center;">Low</td> </tr> </table>			Adaptation	Medium	Mitigation	Low	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Gender equity theme (GEN)</td> <td style="width: 20%;"></td> </tr> <tr> <td>Effective gender mainstreaming (EGM)</td> <td style="text-align: center;">√</td> </tr> <tr> <td>Some gender elements (SGE)</td> <td></td> </tr> <tr> <td>No gender elements (NGE)</td> <td></td> </tr> </table>			Gender equity theme (GEN)		Effective gender mainstreaming (EGM)	√	Some gender elements (SGE)		No gender elements (NGE)								
Adaptation	Medium																							
Mitigation	Low																							
Gender equity theme (GEN)																								
Effective gender mainstreaming (EGM)	√																							
Some gender elements (SGE)																								
No gender elements (NGE)																								
<b>7. Targeting Classification:</b>			<b>8. Location Impact:</b>																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="text-align: center;">General Intervention</th> <th colspan="3" style="text-align: center;">Targeted Intervention</th> </tr> <tr> <th style="text-align: center;">Geographic dimensions of inclusive growth</th> <th style="text-align: center;">Millennium development goals</th> <th style="text-align: center;">Income poverty at household level</th> </tr> <tr> <td></td> <td style="text-align: center;">√</td> <td></td> <td></td> </tr> </table>			General Intervention	Targeted Intervention			Geographic dimensions of inclusive growth	Millennium development goals	Income poverty at household level		√			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">National</td> <td style="width: 30%; text-align: center;">Low</td> </tr> <tr> <td>Regional</td> <td style="text-align: center;">Low</td> </tr> <tr> <td>Rural</td> <td style="text-align: center;">High</td> </tr> <tr> <td>Urban</td> <td style="text-align: center;">Low</td> </tr> </table>			National	Low	Regional	Low	Rural	High	Urban	Low
General Intervention	Targeted Intervention																							
	Geographic dimensions of inclusive growth	Millennium development goals	Income poverty at household level																					
	√																							
National	Low																							
Regional	Low																							
Rural	High																							
Urban	Low																							
<b>9. Project Risk Categorization:</b> Low																								
<b>10. Safeguards Categorization:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Environment</td> <td style="width: 40%; text-align: center;">B</td> </tr> <tr> <td>Involuntary resettlement</td> <td style="text-align: center;">B</td> </tr> <tr> <td>Indigenous peoples</td> <td style="text-align: center;">B</td> </tr> </table>		Environment	B	Involuntary resettlement	B	Indigenous peoples	B															
Environment	B																							
Involuntary resettlement	B																							
Indigenous peoples	B																							
<b>11. ADB Financing:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sovereign/Nonsovereign</th> <th style="text-align: left;">Modality</th> <th style="text-align: left;">Source</th> <th style="text-align: right;">Amount (\$ Million)</th> </tr> <tr> <td>Sovereign</td> <td>Sector loan</td> <td>Asian Development Fund</td> <td style="text-align: right;">80.0</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total</td> <td style="text-align: right;">80.0</td> </tr> </table>		Sovereign/Nonsovereign	Modality	Source	Amount (\$ Million)	Sovereign	Sector loan	Asian Development Fund	80.0	Total			80.0									
Sovereign/Nonsovereign	Modality	Source	Amount (\$ Million)																					
Sovereign	Sector loan	Asian Development Fund	80.0																					
Total			80.0																					
<b>12. Cofinancing:</b>																								
No Cofinancing available.																								
<b>13. Counterpart Financing:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Source</th> <th style="text-align: right;">Amount (\$ Million)</th> </tr> <tr> <td>Government</td> <td style="text-align: right;">7.58</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> </tr> <tr> <td></td> <td style="text-align: right;">7.58</td> </tr> </table>		Source	Amount (\$ Million)	Government	7.58	Total			7.58													
Source	Amount (\$ Million)																							
Government	7.58																							
Total																								
	7.58																							
<b>14. Aid Effectiveness:</b>																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Parallel project implementation unit</td> <td style="width: 50%; text-align: center;">No</td> </tr> <tr> <td>Program-based approach</td> <td style="text-align: center;">No</td> </tr> </table>		Parallel project implementation unit	No	Program-based approach	No																	
Parallel project implementation unit	No																							
Program-based approach	No																							

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Socialist Republic of Viet Nam for the Productive Rural Infrastructure Sector Project in the Central Highlands.<sup>1</sup>

2. The proposed project aims to regenerate and upgrade underdeveloped or outdated productive rural infrastructure (PRI), targeting areas with good potential for agricultural production with existing irrigation schemes.<sup>2</sup> The PRI investments will include irrigation and associated access infrastructure. The project will be carried out in Viet Nam's Central Highland provinces (CHPs) of Dak Lak, Dak Nong, Gia Lai, Kon Tum, and Lam Dong over 5 years.<sup>3</sup> It directly supports the Government of Viet Nam's National Target Program for New Rural Development, 2010–2020 (NRD) with activities based on the socioeconomic development plans (SEDPs) of the participating provinces. It supports the National Water Resources Strategy (NWRS), 2006–2020, for which the Asian Development Bank (ADB) is playing a major role in revising and updating water resources policy and strengthening water sector institutions.<sup>4</sup>

## II. THE PROJECT

### A. Rationale

3. **High rates of rural poverty.** The majority (about 71%) of the CHP population lives in rural areas where the primary income source is farming. While poverty has been reduced nationwide from 18.1% in 2002 to 10.7% in 2010, in the CHPs in 2010, the average poverty rate was 22.2%. Contributing factors are difficult terrain, and hence inaccessibility, and the lack of commercial opportunities, social services, and arable land in some of the areas, compounded by deteriorated PRI. Poverty rates in some isolated areas of the CHP are 70%–80% among ethnic minority people, who represent between 21% and 53% of the provincial populations.<sup>5</sup> Women, especially those of ethnic minorities, tend to account for higher poverty rates than men.

4. **To upgrade underdeveloped or outdated PRI that constrains agricultural and rural productivity.** Less than 11% of arable land in the CHP has irrigation infrastructure and much of it is performing poorly because of age, under-engineered for current use, limited funding available for new investment, and a historically limited capacity for asset maintenance. Viet Nam's record of poverty reduction has been driven by agricultural reforms facilitated by good access to infrastructure.<sup>6</sup> Viet Nam has gained an important position in the global agricultural market, particularly coffee, pepper, and rice. More effective PRI will greatly increase production of these products. The project will improve PRI to enable optimal agricultural output, diversity, and production efficiency. This is also expected to allow quicker and safer access to markets,

---

<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> The term PRI refers to infrastructure that helps improve agricultural production through irrigation (reservoirs, canals, water management and control structures) and access (rural roads and bridges).

<sup>3</sup> The CHPs have a combined area of 5.46 million hectares (ha)—of which 1.64 million ha are arable, including 0.18 ha with irrigation—and a population of 5.28 million, of whom 3.75 million live in rural areas.

<sup>4</sup> ADB assistance has been provided since the mid-1990s through several sector loans and technical assistance (TA) projects, most recently: ADB. 2012. *Technical Assistance to the Socialist Republic of Viet Nam for Preparing the River Basin Water Resources Management and Development Project*. Manila; ADB. 2008. *Technical Assistance to the Socialist Republic of Viet Nam for the Water Sector Review*. Manila; and ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Socialist Republic of Viet Nam for the Central Region Water Resources Project*. Manila.

<sup>5</sup> In Viet Nam, the officially preferred term for indigenous people is ethnic minority people.

<sup>6</sup> Year round irrigation can increase CHP rice yields from 4 tons per hectare (t/ha) to more than 8 t/ha annually.

employment opportunities, and social services. Simultaneously, it will lower the costs of rural production and marketing, and reduce food wastage during transport and handling. PRI in good condition will increase incomes from on- and off-farm employment, lessen the work burden of women, and boost food availability. The project is pro-poor, will increase food security as well as land and water resource productivity, all of which strengthen climate change resilience.<sup>7</sup>

5. **The project advances three key NRD priorities:** (i) to extend the coverage of PRI development to the CHPs; (ii) to improve PRI sustainability by concentrating investments in selected productive areas and using appropriate designs to enable sustainable management and boost climate change resilience; and (iii) to strengthen the capacity of stakeholders to sustainably develop, manage, operate, and use PRI.<sup>8</sup>

6. **Immediate needs of the CHPs.** In consultation with the Ministry of Agriculture and Rural Development (MARD) and the CHPs, 28 candidate subprojects from the provinces' SEDPs have been screened for possible inclusion in the project and were found to meet agreed-upon eligibility criteria for preliminary technical, financial, economic, environmental, and social considerations. Feasibility studies were carried out in three representative subprojects (RSPs), with positive results led by substantial increases in farm incomes, including for poor farmers, from both higher production and employment.<sup>9</sup> The other subprojects have been prioritized and will be subject to feasibility studies during implementation. Available funding suggests that 15 to 18 subprojects will be implemented using ADB loan proceeds.

7. **The project has innovative technical and implementation features that highlight ADB's value addition to the sector.** Four technical features that contribute to the ongoing policy dialogue on water resource management in general and irrigation sustainability in particular are: (i) strengthening of dams and reservoirs that are the backbone of irrigation systems in the CHPs but are now aging and likely to become increasingly unstable, especially given the predicted stresses associated with climate change—it is anticipated that this initiative will lead to an expansion of future investments in reservoir stability; (ii) in conjunction with the dam and reservoir improvements, establishment of community-based danger warning systems; (iii) integration of soil and water conservation measures into PRI design through bioengineering techniques<sup>10</sup>—this will improve the environs in the subproject areas and the stability of PRI; and (iv) research and demonstration of approaches to better irrigation and water management in the CHPs, which will be essential for coping with more extreme weather. A new implementation feature is the provision of startup consultants to support project implementation activities while the loan implementation consultants are recruited, thus avoiding early implementation delays.

8. **Meeting national and provincial priorities.** The central government's SEDP for 2011–2016,<sup>11</sup> the NRD, and the NWRS prioritize upgrading PRI to serve the dual objective of social and economic development. This includes improving irrigation for rural water supply, double paddy cropping, and the expansion of irrigated areas for cash crops. It also includes developing

<sup>7</sup> ADB provided project preparatory technical assistance. ADB. 2011. *Technical Assistance to the Socialist Republic of Viet Nam for Productive Rural Infrastructure Development in the Central Highlands*. Manila.

<sup>8</sup> A sector modality is proposed, as it directly supports the NRD to meet the priority development needs of the sector. There is demonstrated institutional capacity to implement the sector development plan, and it follows the experience in three previous and ongoing PRI development projects financed by ADB. The policies applicable to agriculture and rural development are appropriate and will be improved through the proposed project.

<sup>9</sup> Subprojects are Ea Kao in Dak Lak, Tan Son in Gia Lai, and Kon Trang Kla in Kon Tum.

<sup>10</sup> The project will cooperate with ADB 2012. *Technical Assistance to the Socialist Republic of Viet Nam for Promoting Climate Resilient Rural Infrastructure in the Northern Mountain Provinces*. Manila.

<sup>11</sup> Government of Viet Nam, Ministry of Planning and Investment. 2011. *The Five-Year Socio-Economic Development Plan, 2011–2016*. Ha Noi.

rural transport infrastructure for the timely movement of agricultural inputs and surpluses as well as the improvement of social conditions. In Viet Nam it is demonstrated that the poor gain the most by better access. There are two ongoing ADB-supported PRI projects—Integrated Rural Development Sector Project in the Central Provinces and Sustainable Rural Infrastructure Development Project in Northern Mountain Provinces. Lessons were incorporated from these as well as six successfully completed, MARD-implemented, and ADB-supported PRI projects, particularly the Rural Infrastructure Sector Project. It builds upon the successful ADB-supported interventions in water and irrigation development and management, notably the Second Red River Basin Sector Project, which helped formulate Viet Nam’s law on water resources and train the irrigation and drainage management companies (IDMCs),<sup>12</sup> and the Central Region Water Resources Project (footnote 4), which helped develop successful institutional models for IDMCs and water user organizations (WUOs). The project complements investments in poverty reduction being made in the CHP by the development partners.<sup>13</sup>

9. The project design is based on (i) a recognized demand to rehabilitate and upgrade priority PRI to improve socioeconomic conditions in the CHPs; (ii) government and ADB strategies of providing PRI as a means to reduce poverty as described in the government’s SEDP and NRD, as well as ADB’s country partnership strategy;<sup>14</sup> and (iii) the successful design, implementation experience, and lessons from related past and ongoing ADB-funded projects, in particular the need to (a) prescreen subprojects for prima facie viability with minimal safeguard issues; (b) limit the geographic coverage to obtain a good balance between capital investments and overhead costs, as well as contain implementation weaknesses at a manageable level; (c) confine activities to those that can be readily carried out within local capacities; (d) carefully prepare the procurement plan to optimize contract size, number, and methodology; and (e) take advance actions to ensure that competent counterpart project staff are assigned and trained, and prepare procurement packages to reduce implementation delays.

## **B. Impact and Outcome**

10. The impact of the project will be increased rural incomes and sustained livelihoods in the CHPs. The outcome will be improved rural and agricultural productivity with improved access to, and use of, water, materials, knowledge, production inputs and markets.

## **C. Outputs**

11. The project will have three main outputs: (i) improved PRI with activities carried out by implementing subprojects, including (a) civil works to improve irrigation infrastructure in at least 15 schemes;<sup>15</sup> (b) construction of rural roads to support the mobility and transport needs of the population in and around the irrigation schemes; and (c) creation of jobs during civil works that benefit local people, including women and ethnic minorities;<sup>16</sup> (ii) enhanced capacity to develop, manage, and use PRI, with activities in all subprojects including (a) training on project implementation management; (b) preparation of condition inventories and operation and maintenance (O&M) plans; (c) training of staff at MARD, equivalent agencies in the CHPs, and IDMCs; (d) in-service training to upgrade the formal qualifications of PRI managers; (e) training of PRI users to best use the upgraded PRI; (f) campaigns to raise awareness of HIV/AIDS, and of road and water reservoir safety; and (g) special PRI studies, pilots, and demonstrations; and

<sup>12</sup> ADB. 2012. *Completion Report: Second Red River Basin Sector Project in Viet Nam*. Manila (Loan 1855-VIE).

<sup>13</sup> Development Coordination (accessible from the list of linked documents in Appendix 2).

<sup>14</sup> ADB. 2012. *Country Partnership Strategy: Viet Nam, 2012–2015*. Manila.

<sup>15</sup> It is estimated that 12 small and medium-sized reservoirs will be repaired or strengthened.

<sup>16</sup> To be reported by the project from information provided by the construction contractors as a contract requirement.

(iii) efficient project management by meeting timelines for successfully (a) setting up a central project management unit (CPMU) and five provincial project management units (PPMUs); (b) recruiting and fielding consultants for project startup, implementation, benefit monitoring, and safeguard monitoring; and (c) completing feasibility studies and civil works.

#### D. Investment and Financing Plans

12. The project is estimated to cost \$87.58 million (Table 1).

**Table 1: Project Investment Plan**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Improvement of productive rural infrastructure	73.45
2. Capacity development	2.01
3. Project management	6.76
<b>Subtotal (A)</b>	<b>82.22</b>
<b>B. Contingencies<sup>c</sup></b>	<b>3.04</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>2.32</b>
<b>Total (A+B+C)</b>	<b>87.58</b>

<sup>a</sup> Includes taxes and duties of \$8.238 million, financed by the Asian Development Bank (ADB), the government, and project provinces.

<sup>b</sup> In end-2012 prices.

<sup>c</sup> Physical contingencies computed at 5% for all goods and services except for the subproject allocation. Price contingencies computed at 2.6% for the 5 years of implementation on foreign exchange costs and 7% on local currency costs. This assumes a fixed exchange rate of \$1 = D21,000 throughout the life of the investment.

<sup>d</sup> Includes interest charges during implementation for the ADB Asian Development Fund loan.

Source: ADB estimates.

13. The government has requested a loan in various currencies equivalent to SDR53,041,000 (\$80 million equivalent) from ADB's Special Funds resources to help finance the project.<sup>17</sup> The loan will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per annum throughout the entire loan term, equal amortization, and such other terms and conditions set forth in the draft loan agreement.

14. The financing plan is in Table 2.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (loan)	80.00	91.34
Government of Viet Nam		
Project provinces	7.38	8.43
Central government budget	0.20	0.23
<b>Total</b>	<b>87.58</b>	<b>100.00</b>

Source: Asian Development Bank estimates.

<sup>17</sup> ADB will finance taxes and duties for the expenditure items it covers, interest during implementation, recurrent costs (i.e., project management costs, but this will not include any salaries or remuneration other than travel costs and daily subsistence allowance for the government officials who work for the project), transportation costs, including taxes and duties for the expenditure items it covers, and bank charges related to the imprest account. The following principles were followed in determining the amount of taxes and duties to be financed by ADB: (i) the amount does not represent an excessive share of the project; (ii) the taxes and duties apply only to ADB-financed expenditures; (iii) the amount is within the thresholds identified while preparing the ADB Country Partnership Strategy: Viet Nam, 2012–2015; and (iv) financing of taxes and duties is material and relevant to project success.

## E. Implementation Arrangements

15. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.<sup>18</sup> The overall implementation arrangements will be consistent with those that have been used in several prior and current ADB-supported projects.

**Table 3: Implementation Arrangements**

Aspects		Arrangements	
Implementation period	December 2013–December 2018 (5 years)		
Estimated completion date	31 December 2018		
Management			
(i) Executing agency	Ministry of Agriculture and Rural Development		
(ii) Key implementing agencies	Provincial people’s committees of Dak Lak, Dak Nong, Gia Lai, Kon Tum, and Lam Dong provinces		
(iii) Implementation units	Central project management unit to be located in Ha Noi and provincial project management units to be located in each provincial capital		
Procurement	National competitive bidding	47–57 contracts	\$62.681 million
	Shopping	7 contracts	\$0.420 million
Consulting services	Quality- and cost-based selection (90:10)	1 contract with 360 person-months	\$3.287 million
	Quality-based selection / Cost–quality selection / Fixed-budget selection / Least-cost selection	Multiple	\$6.599 million
	Individual selection	24 person-months	\$0.278 million
	Government procedures	Multiple	\$1.800 million (from the government’s resources)
Advance contracting	Selection procedures for loan implementation consultants will be undertaken up to the short-listing stage prior to loan effectiveness.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed on between the government and ADB.		

Source: Asian Development Bank estimates.

16. MARD will be the executing agency through its Agriculture Projects Management Board, which will establish a CPMU responsible for central project coordination and led by a full-time project director with management experience in similar projects and preferably familiarity with the preparation of the project.<sup>19</sup> One imprest account will be set up for CPMU operations.

17. The implementing agencies will be the provincial people's committees (PPCs) of the five participating provinces. The vice chairperson of each PPC will have overall responsibility for implementation coordination in his or her province. Each PPC will act through its department of agricultural and rural development, which will establish a PPMU responsible for province-specific, day-to-day project management. A sub-account will be established for each PPMU.

18. In the communes, the project will coordinate closely with the local administrations, using the commune people's committees as points of liaison. The PPMUs will work closely with

<sup>18</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

<sup>19</sup> MARD shall provide qualified counterpart project staff who will be dedicated full-time to the project.

commune personnel who will ensure coordination of day-to-day activities between the project and commune authorities. These activities will include organizing public consultations and design and implementation monitoring by commune supervision boards.<sup>20</sup> The boards are already supported by regular budget allocation from the districts.

19. Subprojects will be implemented in three phases: (i) the three RSPs prepared under project preparatory technical assistance (TA) will start right upon loan effectiveness; (ii) the two top priorities for the provinces of Dak Lak, Gia Lai, and Kon Tum, and the three top priorities for the provinces of Lam Dong and Dak Nong will start as soon as the feasibility studies are completed (after about 1 year); and (iii) the remaining subprojects will be implemented after all contracts are tendered and their funding is verified. All subprojects will be subject to pre-implementation feasibility studies according to the following criteria: (i) the subproject is technically feasible with an economic internal rate of return (EIRR) above 12%;<sup>21</sup> (ii) procurement packages are in conformity with the procurement plan, cost estimates are clearly identified and recorded, and all sources of funding have been confirmed; (iii) the feasibility report contains a detailed financing plan for O&M; (iv) public hearings on subproject proposals are conducted in the communes concerned, and measures for future public consultation and supervision by the commune supervision boards are clearly spelled out; (v) the subproject has no major negative environmental or social impacts, and mitigation measures have been defined for minor impacts;<sup>22</sup> (vi) the subproject has no significant resettlement impacts and, for category B subprojects, a resettlement plan has been prepared in accordance with agreed Government of Viet Nam and ADB policies; and (vii) the subproject has no significant ethnic minority impacts and, where necessary, ethnic minority development plans will be prepared.

### **III. DUE DILIGENCE**

#### **A. Technical**

20. The subprojects involve the rehabilitation, upgrading, repair, and strengthening of PRI. The technology for undertaking such works is within the capacity of the provincial government agencies assigned to implement them. The civil works design will be based on appropriate standards to ensure sustainability. This will entail the use of high-standard designs (such as concrete roads) and the latest available technologies for improving water storage and control structures. It will also involve stabilizing the environs around the PRI through soil and water conservation measures. The capacity building component focuses on O&M and includes training for the end users of the upgraded infrastructure, with an asset management initiative for irrigation schemes including reservoir engineering, repair and maintenance. Provincial governments will ensure the availability of O&M funds as part of the feasibility screening and, where relevant, will register the road improvements with the provincial departments of transport to ensure inclusion in maintenance programs.

#### **B. Economic and Financial**

21. Benefits from PRI improvements include more agricultural productivity along with reductions in travel costs and times, while indirect benefits include the diversification of income sources, greater diversification of market-oriented agriculture output, and more value-added production. Indirect benefits also include broader access to health and education services, and lower costs of inputs and household commodities, all leading to better socioeconomic conditions

<sup>20</sup> The commune supervision boards will include at least one women's representative.

<sup>21</sup> An EIRR of 10% is acceptable if a significant level of unquantifiable benefits is documented.

<sup>22</sup> Subprojects with any safeguard classification of A will be excluded.

in beneficiary communities. Analysis of the RSPs indicates that PRI improvements will allow crop diversification and adoption of high-value crops, and estimates are that annual incremental production attributable to the RSP investments will be in the range of 4,390 tons - 9,800 tons for rice and 927 tons - 2,200 tons for coffee.<sup>23</sup> As a result, incremental net crop financial value per household will be in the range of \$573–\$1,042 per annum. Based on quantifiable benefits, the EIRRs of the three RSPs are 18.9%, 20.0%, and 20.2%.<sup>24</sup> The EIRRs are deemed attractive and robust, as none of the risk factors appears to place the subprojects' economic viability in immediate jeopardy. The EIRRs can be used as proxies to demonstrate the economic viability of the overall project since the RSP analysis will guide the evaluation of other subprojects. It is estimated that an average D8.8 billion per year per province (in 2013 constant prices) is needed to meet the O&M cost of subproject PRI. The fiscal analysis indicates that this is affordable.<sup>25</sup> The project loan agreement has incorporated covenants to the effect that each PPC will allocate a budget for O&M from 2018–2034, as per the whole-life asset analysis,<sup>26</sup> and ensure that the IDMCs receive adequate allocations for the O&M under their responsibility.<sup>27</sup>

### C. Governance

22. All procurement and recruitment of consultants to be financed by the loan funds will be carried out in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and Guidelines on the Use of Consultants (2013, as amended from time to time). MARD has committed to ensuring that all accounts administered by the CPMU and PPMUs are consolidated and audited annually by auditors acceptable to ADB. The project will strengthen the capacities of CPMU and PPMU staff in disbursement and financial management procedures to allow efficient operation of imprest and sub-accounts, and the reporting of financial performance to the government and ADB. Implementation of the project will be consistent with the government's requirements for provincial implementation under national coordination. Where possible, the involvement of district and lower-level administrations and communities will be sought to effect their participation in design and construction monitoring. The project will establish a webpage on the Agriculture Projects Management Board website to disclose implementation progress and bid notifications and their results, and provide a grievance mechanism against corrupt practices.

23. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and MARD. The specific policy requirements and supplementary measures are described in the project administration manual.

### D. Poverty and Social

24. The project will have a direct positive impact on rural incomes and poverty levels by stimulating more agricultural production (both food and commercial crops), which in turn will increase demand for labor and hence create jobs, reduce travel times, and lower transport costs for both goods and project beneficiaries, and increase access to services such as health and education.<sup>28</sup> While the selection of subprojects arises from the provincial SEDP process,

<sup>23</sup> Using year 10 of the subproject's completion as the representative year.

<sup>24</sup> This is well above the economic cost of capital of 12%.

<sup>25</sup> The fiscal affordability analysis indicates that (i) based on the past 5 years' figures, all PPCs will be able to allocate significant budget for infrastructure investment and O&M; (ii) the required average annual budget of D8.8 billion per province is in the range of 2.0%–3.4% of the projected allocations. Review of past and ongoing projects suggests that if the O&M budget required of PPCs is below 5%, the annual allocations are affordable.

<sup>26</sup> This is consistent with Decree 115/2008/NDCP as described in Table 4 under "Sustainability".

<sup>27</sup> Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

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

components within the subprojects will be determined both by the IDMCs and the communities, and coordinated through the commune people's committees and WUOs. The IDMCs will see to it that critical infrastructure issues are solved, e.g., by repairing water reservoirs. The WUOs will see to it that canals reach key areas and that road access priorities reflect the communities' mobility and transport needs. During construction, the commune supervision board will deal with local concerns and interests.

25. The project's gender classification is "effective gender mainstreaming," category 2. To ensure that benefits accrue to women, a gender action plan has been prepared.<sup>29</sup> Women, including women's groups and the Vietnam Women's Union, will be consulted on infrastructure design. There will be separate meetings for women, held at appropriate times and using language and cultural sensitivity that allow women to participate. The commune supervision board will have female representation. Contractors will be encouraged to employ women in civil works, and must pay men and women equally for work of equal type. The project will improve women's decision making on PRI management and O&M. PRI training under the project will take into account the needs of female farmers and target at least 40% female participation.

26. Funds have been included in the project to secure the structural integrity of the subproject reservoirs and to ensure that community-based safety and warning systems are established and operational. To improve safety along roads to be upgraded by the project, funds have been provided to undertake road safety information campaigns. In addition, HIV/AIDS awareness campaigns will be carried out in the subproject areas. These safety and awareness campaigns and systems will factor in the needs of vulnerable groups, women and children.

## **E. Safeguards**

27. **Environment (category B).** Adverse environmental impacts are not likely. The initial environmental examinations for three sample subprojects found no indication of significant adverse environmental impacts. The PPTA subproject screening excluded those subprojects with potentially serious negative environmental impacts. MARD has gained environmental safeguard management capacity through implementing similar projects. Additional training for the CPMU safeguard staff and the PPMUs is included in the project costs. An environmental assessment and review framework<sup>30</sup> has been agreed to and disclosed by the government and ADB to guide environmental assessments and measures to deal with potential environmental impacts. Proper use of pesticides and fertilizer will be promoted as part of the irrigation efficiency and management training to minimize soil and water pollution. The paving of roads will reduce dust, which has negative impacts on human and livestock health, crops, and safety. Measures to improve climate change resilience include the stabilization of local environs by improving reservoirs and integrating soil and water conservation measures into subproject design. Also, greater irrigation efficiency will reduce the stress on water resources.

28. **Involuntary resettlement (category B).** No significant resettlement impacts are expected because the majority of PRI improvements will occur along existing rights of way and will mainly require compensation for roadside trees, crops, and/or small structures with possibly a small amount of land acquisition. No actual resettlement is foreseen—the absence of major resettlement issues was one of the criteria when screening subprojects for eligibility. An indication of the effectiveness of the screening is that the three RSPs were assessed to be category C for resettlement and did not require resettlement plans. The government and ADB

<sup>29</sup> Gender Action Plan (accessible from the list of linked documents in Appendix 2).

<sup>30</sup> Environment Assessment and Review Framework (accessible from the list of linked documents in Appendix 2).

have agreed on and disclosed on the ADB website a project resettlement framework and associated procedures, which outlines the responsibilities for preparing resettlement plans for potential category B subprojects.<sup>31</sup> The plans shall be submitted and approved by ADB before the subprojects are implemented. Compensation, allowances, operation and administration costs, surveys, monitoring, and reporting will be financed from provincial counterpart funds. Adequate provisions will be made for preparing and implementing resettlement plans, and for engaging resettlement specialists.

29. **Indigenous people (category B).** In the priority subprojects proposed by the CHPs, ethnic minorities were found to account for 21%–98% of the subproject area population; the predominant share being 47%. The minorities will be among the main beneficiaries of the project. Moreover, no negative changes are envisaged in their farming and livelihood systems or their cultural practice and ancestral domains. Any possible negative impacts such as temporary loss of crops or crop land for construction purposes will be avoided as best as possible, or will be compensated according to the resettlement plans. Impacts in these areas are expected to be overwhelmingly positive since the subprojects will be aimed at overall economic and social improvement of the population. An ethnic minority development framework to manage any issues that might arise has been agreed to and disclosed by the government and ADB.<sup>32</sup> It guides the preparation of ethnic minority development plans for potential category B subprojects. The plans shall be approved by ADB before a subproject is implemented. As with involuntary resettlement, the three RSPs were assessed to be category C for indigenous people and did not require such plans.

30. Safeguard design, review, and monitoring consultants are included in the project design for all phases of implementation and, in adherence to government regulations and procedures, will provide sufficient capacity and expertise to ensure compliance with ADB's Safeguard Policy Statement (2009). Resources from loan proceeds are available to cover the costs of implementing ethnic minority development plans.

## F. Risks and Mitigating Measures

31. The benefits and impacts of the project are expected to far outweigh the costs. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>33</sup>

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
<b>Sustainability:</b> Inappropriate designs, poor-quality construction, inadequate O&M funding, or deficient O&M practices may lead to premature asset deterioration and thus reduce benefits.	LICs will provide guidance on PRI engineering design, especially for dams and reservoirs, as well as oversight during construction. A significant effort will be placed on ensuring sustainable O&M, including capacity building and adoption of institutional structures developed in earlier successful ADB projects. Participating provinces have committed to provide adequate O&M funding for the IDMCs. The government has recently made a commitment to improve the sustainability of irrigation schemes under Decree 115/2008/NDCP. Government funding is now guaranteed for the IDMCs responsible for carrying out O&M down to the secondary canal level. <sup>a</sup> Road improvements will use robust technologies and will be registered with the responsible authorities.
<b>Climate:</b> Catastrophic	Careful attention will be paid to the planning, timing, and sequencing of

<sup>31</sup> Resettlement Framework (accessible from the list of linked documents in Appendix 2).

<sup>32</sup> Indigenous Peoples Planning Framework: Ethnic Minority Development Framework (accessible from the list of linked documents in Appendix 2).

<sup>33</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

<b>Risks</b>	<b>Mitigating Measures</b>
climatic events interrupt implementation or damage the infrastructure.	implementation activities, to match seasonal conditions. The use of robust designs and good construction quality control will reduce the vulnerability of the PRI to climatic events. In addition, soil and water conservation measures will be included in subproject design to stabilize the local environment.
<b>Technical capacity:</b> Implementation capacities of the provinces to meet all ADB and project requirements are limited.	The experience and qualifications of candidates for key positions will be reviewed by MARD with ADB's support. LICs will provide support, capacity building, training, and technical review, while monitoring consultants will ensure project quality in terms of technical and safeguard requirements. As an incentive for good performance and delivery, implementation will be phased, rewarding better-performing provinces in the third phase with additional resources.
<b>Governance:</b> Limited public financial management and procurement capacity may impair implementation efficiency and allow corrupt practices to develop.	Advance actions will be carried out up to loan effectiveness. Thereafter, startup consultants will be mobilized to provide training in ADB procurement procedures and requirements, and to ensure establishment of a sound financial management system. The financial management system will be the same as the one the Agriculture Projects Management Board now uses in ongoing ADB projects. To deter corrupt practices, implementation procedures encourage maximum transparency, including consultation with and monitoring by the beneficiaries.

ADB = Asian Development Bank, IDMC = irrigation and drainage management company, LIC = loan implementation consultant, O&M = operation and maintenance, PRI = productive rural infrastructure.

<sup>a</sup> The IDMCs previously received irrigation service fees from both government and water user groups to carry out O&M. The Decree 115/2008/ND-CP was promulgated by the Ministry of Finance in 2008, waives these fees for the water user groups.

Source: Asian Development Bank estimates.

#### **IV. ASSURANCES AND CONDITIONS**

32. The government and MARD have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and loan documents.

33. The government and MARD have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement.

#### **V. RECOMMENDATION**

34. 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 in various currencies equivalent to SDR53,041,000 to the Socialist Republic of Viet Nam for the Productive Rural Infrastructure Sector Project in the Central Highlands, from ADB's Special Funds resources, with an interest charge at the rate of 2.0% per annum for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Takehiko Nakao  
President

2 September 2013

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<b>Impact</b> Increased rural incomes and sustained livelihoods in the CHPs.	<p>By 2024 (from subproject baselines measured in 2012):<sup>a</sup></p> <p>Rural individual average annual income of D17.65 million will increase by 4% in constant dong prices.</p> <p>Annual incremental demand for agricultural labor will increase by an average of 85 days per household.</p>	Commune statistics; Committee for Ethnic Minority Affairs; General Statistics Office	<p><b>Assumptions</b>  Government will continue to invest in the socioeconomic development of the CHPs</p> <p>Benefit stream continues over economic life of the improved PRI.</p> <p><b>Risk</b>  Improper use and management of PRI or catastrophic climatic events lead to premature deterioration after project completion.</p>
<b>Outcome</b> Improved rural and agricultural productivity in the CHPs	<p>By 2018 (from baselines in 2013):</p> <p>Annual average increase in agricultural productivity (ton/ha): rice 4 to 8; coffee 2.7 to 3.5, pepper 2.7 to 3.8</p> <p>Around 225,000 more people will have access to improved PRI</p>	PBMS DARD statistics	<p><b>Risk</b>  Operation and maintenance requirements are not fully met.</p>
<b>Outputs</b> 1. Productive rural infrastructure improved	<p>By 2018 (from baselines in 2012):</p> <p>Irrigation improved in at least 15 schemes across 18,500 ha, including 10,000 ha of paddy, 2,200 ha of coffee and pepper, and 6,300 ha of cash crops.</p> <p>Better access by upgrading 130 km of low-volume rural roads.</p> <p>Work days of employment in civil works: (a) 30% are dedicated for women under equal pay and conditions as men; and (b) in areas where ethnic minorities constitute the majority of the population, 40% are prioritized to ethnic minority women and men.</p>	PBMS Provincial statistics	<p><b>Assumption</b>  Capacity of engineers and contractors to implement water reservoir repairs exists within Viet Nam.</p> <p><b>Risk</b>  Climatic events delay or damage PRI construction.</p>
2. Enhanced capacity to develop, manage, and use productive rural infrastructure.	<p>At least 50 training courses completed on project management (at least 35% female participation).</p> <p>For all subprojects implemented, condition inventories and operation and management plans established with training for</p>	PBMS	<p><b>Assumption</b>  Sufficient capacities to absorb training and meet implementation demands are available in the CHPs.</p>

<b>Design Summary</b>	<b>Performance Targets and Indicators with Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
3. Efficient project management	<p>implementation of the plans (35% female participation in management).</p> <p>75 staff of MARD, CHP counterparts, and IDMCs trained in the development and management of PRI (minimum 30% women).</p> <p>80 staff of MARD, CHP counterparts, and IDMCs provided opportunities for in-service training to upgrade formal qualifications (minimum 30% women).</p> <p>210 training courses for 6,500 PRI users, with special focus on water user groups, and beneficiaries to optimally use the upgraded PRI (minimum 40% female participation).</p> <p>HIV/AIDS, road and dam safety awareness campaigns carried out in all subproject areas.</p> <p>At least four special studies, pilots, and demonstrations of improved PRI and irrigation scheme management.</p> <p>CPMU and five PPMUs set up and fully functional by June 2014.</p> <p>Feasibility studies completed and approved in three phases: June 2014, October 2014, May 2016.</p> <p>Construction works completed in three phases: January 2016, July 2016, and April 2018.</p>	PBMS, CPMU quarterly reports.	<p><b>Risk</b></p> <p>Provinces are unable to appoint qualified staff.</p>

<b>Activities with Milestones</b>	<b>Inputs</b>
<p><b>1. Productive rural infrastructure improved</b></p> <p>1.1 Phase 1 construction works—3 representative subprojects</p> <p>1.1.1 Prepare and approve feasibility studies by PPCs (Jun 2014)</p> <p>1.1.2 Prepare and approve detailed design by DARDs (Sep 2014)</p> <p>1.1.3. Construction supervision consultants recruited and mobilized (Dec 2014)</p> <p>1.1.4. Procurement of civil works (Dec 2014)</p> <p>1.1.5. Construction activities undertaken (Jan 2015)</p> <p>1.2 Phase 2 construction works—12 top priority subprojects (over and above the 3 representative subprojects)</p> <p>1.2.1 Prepare and approve feasibility study by PPCs (Oct 2014)</p> <p>1.2.2 Prepare and approve detailed design by DARDs (Mar 2015)</p> <p>1.2.3. Construction supervision consultants recruited and mobilized (Jun 2015)</p> <p>1.2.4 Procurement of civil works (Jun 2015)</p> <p>1.2.5 Construction activities undertaken (Jul 2015)</p>	<p><b>ADB ADF: \$80 million</b></p> <p><b>Government: \$7.58 million</b></p>

<p><b>Activities with Milestones</b></p> <p>1.3 Phase 3 construction works—remaining subprojects depending on funding availability</p> <p>1.3.1 Prepare and approve feasibility studies by PPCs (May 2016)</p> <p>1.3.2 Prepare and approve detailed design by DARDs (Oct 2016)</p> <p>1.3.3. Construction supervision consultants recruited and mobilized (Mar 2017)</p> <p>1.3.4 Procurement of civil works (Mar 2017)</p> <p>1.3.5 Construction activities undertaken (Apr 2017)</p> <p>1.4 Commissioning and operation and maintenance training undertaken (Jan 2015–Aug 2018)</p> <p><b>2. Enhanced capacity to develop, manage, and use productive rural infrastructure.</b></p> <p>2.1 On-the-job training at CPMU and PPMU in ADB procedures, consultant recruitment, feasibility study evaluation, tender document preparation, construction supervision, and financial accounting and reporting as per ADB requirements by international startup advisor and national startup consultant (Mar 2014–Jun 2015)</p> <p>2.2 Specific in-service staff training for CPMU and PPMU staff by qualified training institutions (Mar 2014–Dec 2016)</p> <p>2.3 Safeguard training for CPMU and PPMU staff (Jan 2015– Jun 2016)</p> <p>2.4 Intermittent study tours. Visits to ongoing rural development projects in Viet Nam. Later study tours to be decided in conjunction with project implementation consultants (Mar 2014– Dec 2015)</p> <p>2.5 Establishment of monitoring and evaluation system and training in its use (Jan 2015–Dec 2015)</p> <p>2.6 Strengthening of technical and community interaction skills within IDMCs in subproject areas (Dec 2016–Jun 2018)</p> <p>2.7 Strengthening of water user associations in subproject areas through community organization and training in technical, financial, and management aspects of field-level irrigation scheme management (Jan 2015–Jun 2018)</p> <p>2.8 Pilot good irrigation management arrangements (Jan 2015-Jun 2018)</p> <p><b>3. Efficient project management</b></p> <p>3.1 Equipment and office space for CPMU and PPMUs procured (Mar 2014–Oct 2014)</p> <p>3.2 Incremental staff recruited for CPMU and PPMUs (Mar 2014)</p> <p>3.3 Incremental operational funds provided by ADB (Oct 2018)</p> <p>3.4 CPMU and PPMU set up and fully functional (Mar 2014)</p> <p>3.5 International startup advisor (intermittent) and national startup consultant (full-time) recruited and mobilized (Dec 2014)</p> <p>3.6 Project implementation consultants recruited and fielded (Oct 2014)</p> <p>3.7 Implementation monitoring consultants recruited and fielded (Oct 2014)</p> <p>3.8 Safeguard monitoring consultants recruited and fielded (Oct 2014)</p> <p>3.9 GAP implementation arrangement is in place and functional (Jan 2015)</p>	
---	--

ADB = Asian Development Bank, CHP = Central Highland province, CPMU = central project management unit, DARD = (provincial) department of agriculture and rural development, GAP = gender action plan, ha = hectare, IDMC = irrigation and drainage management company, MARD = Ministry of Agriculture and Rural Development, O&M = operation and maintenance, PBMS = project benefit management system, PPC = provincial people's committee, PPMU = provincial project management unit, PRI = productive rural infrastructure.

<sup>a</sup> Baseline information is averaged from the top 15 prioritized subproject areas.

Source: Asian Development Bank estimates.

### **LIST OF LINKED DOCUMENTS**

(<http://www.adb.org/Documents/RRPs/?id=40238-023-3>)

1. Loan Agreement
2. Sector Assessment (Summary): Agriculture and Natural Resources
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Economic and Financial Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Gender Action Plan
10. Environmental Assessment and Review Framework
11. Resettlement Framework
12. Indigenous Peoples Planning Framework: Ethnic Minority Development Framework
13. Risk Assessment and Risk Management Plan

### **Supplementary Documents**

14. Economic and Financial Analysis of Ea Kao Subproject, Dak Lak Province
15. Economic and Financial Analysis of Tan Son Subproject, Gia Lai Province
16. Economic and Financial Analysis of Kon Trang Kla and Dak Trit Subproject, Kon Tum Province
17. Bioengineering Report