



## Completion Report

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Project Number: 32285  
Loan Numbers: 1972 and 1973  
June 2009

# Socialist Republic of Viet Nam: Agriculture Sector Development Program

Asian Development Bank

## CURRENCY EQUIVALENTS

Currency Unit      –      dong (D)

		<b>At Appraisal</b> (30 June 2002)	<b>At Project Completion</b> (31 March 2008)
D1.00	=	\$0.0000655	\$0.0000628
\$1.00	=	D15,263.00	D15,935.00

## ABBREVIATIONS

ADB	–	Asian Development Bank
AGI	–	Agricultural Genetics Institute
AMIS	–	agricultural market information system
ASDP	–	Agriculture Sector Development Program
ASINCV	–	Agricultural Science Institute of North Central Vietnam
ASISOV	–	Agricultural Science Institute of South Central Vietnam
ASP	–	Agriculture Sector Program
CEW	–	commune extension worker
CLRRI	–	Cửu Long Rice Research Institute
EA	–	executing agency
FCRI	–	Food Crop Research Institute
FSIV	–	Forestry Science Institute of Vietnam
HCMWRU	–	Water Resources University–Ho Chi Minh City
IAS	–	Institute of Agricultural Science of South Viet Nam
ICARD	–	Information Center for Agriculture and Rural Development
MARD	–	Ministry of Agriculture and Rural Development
MOF	–	Ministry of Fisheries
MPI	–	Ministry of Planning and Investment
NAEC	–	National Agricultural Extension Center
NAFEC	–	National Agricultural and Fisheries Extension Center
NEFSPC	–	North-East Forestry Science and Production Center
NOMAFSI	–	Northern Mountainous Agriculture and Forestry Science Institute
PAEC	–	provincial agricultural extension center
PAEM	–	participatory agricultural extension methodology
PEAC	–	provincial extension advisory council
PGRC	–	Plant Genetic Resources Center
PIU	–	program (or project) implementation unit
SBV	–	State Bank of Vietnam
SDR	–	special drawing rights
SEFSPC	–	South-East Forestry Science and Production Center
SEHORT	–	South-East Horticultural Research Center
SMEs	–	small and medium-sized enterprises
SOFRI	–	Southern Fruit Research Institute
STOs	–	science and technology organizations
TA	–	technical assistance

VAAS	–	Vietnam Academy of Agricultural Sciences
VASI	–	Vietnam Agricultural Science Institute
VBARD	–	Vietnam Bank for Agriculture and Rural Development
VIAEP	–	Vietnam Institute of Agricultural Engineering and Post-harvest Technology
VIWRR	–	Vietnam Institute for Water Resources Research

## NOTES

- (i) The fiscal year (FY) of the Government and its agencies ends on 31 December.
- (ii) In this report, “\$” refers to US dollars.

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## BASIC DATA

### A. Loan Identification

1.	Country	Socialist Republic of Viet Nam
2.	Loan Numbers	1972 (Program Loan) and 1973 (Project Loan)
3.	Program Title	Agriculture Sector Development Program
4.	Borrower	Socialist Republic of Viet Nam
5.	Executing Agencies	Ministry of Agriculture and Rural Development (Program Loan) Vietnam Bank for Agriculture and Rural Development (Project Loan)
6.	Amounts of Loans	SDR44,876,000 (Program Loan) SDR22,438,000 (Project Loan)
7.	Program Completion Report Number	PCR: VIE 1096

### B. Loan Data

1.	Appraisal	
	– Date Started	17 June 2002
	– Date Completed	30 June 2002
2.	Loan Negotiations	
	– Date Started	18 November 2002
	– Date Completed	20 November 2002
3.	Date of Board Approval	16 December 2002
4.	Date of Loan Agreement	22 April 2003
5.	Date of Loan Effectiveness	
	– In Loan Agreement	21 July 2003
	– Actual	27 October 2003
	– Number of Extensions	1
6.	Closing Date	
	a. Program Loan	
	– In Loan Agreement	31 March 2006
	– Actual	12 December 2007
	– Number of Extensions	1
	b. Project Loan	
	– In Loan Agreement	30 September 2006
	– Actual	22 September 2008
	– Number of Extensions	1
7.	Terms of Loan	
	a. Program Loan	
	– Interest Rate	1% during the grace period, 1.5% during amortization
	– Maturity (number of years)	24
	– Grace Period (number of years)	8

- b. Program Loan
- Interest Rate (Project Loan) 1% during the grace period, 1.5% during amortization
  - Maturity (number of years) 32
  - Grace Period (number of years) 8
8. Terms of Relending (Project Loan)
- Interest Rate The relending rate is equivalent to the weighted average cost of deposit funds of the banking system and mobilized savings funds of 12 months or more, as determined by the State Bank of Vietnam at the end of each quarter.
  - Maturity (number of years) 20
  - Grace Period (number of years) 5
  - Second-Step Borrower Vietnam Bank for Agriculture and Rural Development
9. Disbursements
- a. Dates

	Initial Disbursement	Final Disbursement	Time Interval
Loan 1972	18 December 2003	12 December 2007	48.10 months
Loan 1973	8 October 2004	22 September 2008	47.51 months

  

	Effective Date	Original Closing Date	Time Interval
Loan 1972	27 October 2003	31 March 2006	29.16 months
Loan 1973	27 October 2003	30 September 2006	35.16 months

b. Amount Disbursed (\$67,117,208)

	Original Allocation (SDR)	Last Revised Allocation (SDR)	Amount Cancelled (SDR)	Amount Disbursed (SDR)
<b>Program Loan</b>				
First Tranche	14,958,666.67	14,958,666.67	0.00	14,958,666.67
Second Tranche	14,958,666.67	14,958,666.67	0.00	14,958,666.67
Third Tranche	14,958,666.66	14,958,666.66	0.00	14,958,666.66
Final Cancellation			0.02	
<b>Total</b>	<b>44,876,000.00</b>	<b>44,876,000.00</b>	<b>0.02</b>	<b>44,876,000.00</b>

Amount Disbursed (\$34,033,983)

	Original Allocation (SDR)	Last Revised Allocation (SDR)	Amount Disbursed (SDR)
<b>Project Loan</b>			
Credit Line	22,438,000.00	22,438,000.00	22,438,000.00
<b>Total</b>	<b>22,438,000.00</b>	<b>22,438,000.00</b>	<b>22,438,000.00</b>

10. Local Costs (Financed)
- Amount (\$) 36,826,925.74
  - Percentage of Local Costs 34
  - Percentage of Total Cost 21

### C. Program and Project Data

#### 1. Program and Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
A. Program Loan		
Foreign Exchange Cost	60.00	67.12
B. Project Loan		
Foreign Exchange Cost	18.96	21.50
Local Currency Cost	24.16	36.83
<b>Total</b>	<b>103.12</b>	<b>125.45</b>

#### 2. Financing Plan (\$ million)

Cost of Project Loan	Appraisal Estimate	Actual
Implementation Costs		
Borrower (VBARD)	6.00	13.87
ADB	29.60	33.58
Beneficiaries	7.12	10.43
Interest during construction		
Borrower (VBARD)	0.00	0.00
ADB	0.40	0.45
Beneficiaries	0.00	0.00
<b>Total</b>	<b>43.12</b>	<b>58.33</b>

ADB = Asian Development Bank, VBARD = Vietnam Bank for Agriculture and Rural Development.

#### 3. Cost Breakdown, by Component (\$)

Component	Appraisal Estimate	Actual
Agriculture Sector Development Program	60,000,000	67,117,208
Credit (Project)	30,000,000	34,033,983
<b>Total</b>	<b>90,000,000</b>	<b>101,151,191</b>

#### 4. Program Schedule

Date	Appraisal Estimate	Actual
First-Tranche Release	31 December 2002	18 December 2003
Second-Tranche Release	30 June 2004	19 December 2005
Third-Tranche Release	31 December 2005	12 December 2007

#### Project Schedule

Item	Appraisal Estimate (\$)	Actual (\$)
Cancellation upon Closing (12 December 2007)	0.00	0.02

## 5. Performance Report Ratings

Implementation Period	Rating	
	Development Objectives	Implementation Progress
Program Loan October 2003–December 2007	Satisfactory	Satisfactory
Project Loan October 2003–September 2008	Satisfactory	Satisfactory

**D. Implementation Data**

1. Number of Subloans = 3,775

2. Sectoral Distribution of Subloans

Sector/Subsector	Number of Subloans		Amount	
	Number	% of Total	\$ million	% of Total
Agriculture Inputs	636	17	12.65	11
Processing of Crop Products	276	7	8.16	7
Processing of Fish Products	38	1	1.05	1
Processing of Livestock Products	25	1	.66	1
Mechanical Services	225	6	6.04	5
Small-Scale Manufacturing	590	16	15.54	14
Trading	921	24	26.54	24
Others	1,064	28	40.59	36
<b>Total</b>	<b>3,775</b>	<b>100</b>	<b>111.25</b>	<b>100</b>

Source: Vietnam Bank for Agriculture and Rural Development.

3. Geographic Distribution of Subloans

Region	Number of Subloans		Amount		
	Number	% of Total	D million	\$ million	% of Total
Northern Upland	783	21	437,747,353	26.39	24
Red River Delta	837	22	443,581,526	26.74	24
North Central	321	9	154,114,765	9.29	8
Central Coast	95	3	29,316,290	1.76	2
Central Highlands	1,295	34	515,455,521	31.08	28
Southeast	392	10	235,787,836	14.22	13
Mekong River Delta	52	1	29,239,000	1.76	2
<b>Total</b>	<b>3,775</b>	<b>100</b>	<b>1,845,242,291</b>	<b>111.25</b>	<b>100</b>



## 4. Size of Subloans (actual)

Item	Amount	
	D million	\$ million
Average Size of Subloans	489	29,241
Average Size of Subprojects	705	42,123
Average Borrower Contribution (30.58%)	215	12,888
ADB Contribution (46.42%)	327	19,553
VBARD Contribution (23%)	162	9,688

ADB = Asian Development Bank, VBARD = Vietnam Bank for Agriculture and Rural Development.

Source: Vietnam Bank for Agriculture and Rural Development.

## E. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members <sup>a</sup>
Pre-appraisal	25 Feb–17 Mar 2002	7	147	a, b, c, d, e, f
Fact-Finding	8–15 Apr 2002	4	32	b, c, d, e, f,
Appraisal	17–30 Jun 2002	8	75	a, b, c, d, f, g, h
Consultation	17–21 Dec 2002	1	5	c
Inception	17–27 May 2004	2	20	c, i
Joint Review	20–30 Jun 2005	2	16	c, i
Project Midterm Review	17–23 May 2006	3	21	c, f
Program Review 1	27 Sep–10 Oct 2006	3	31	c, d, i
Program Review 2	13–22 Aug 2007	2	17	c, i
Project Review 1	26 Nov–1 Dec 2007	1	6	c
Project Review 2	26 May–2 Jun 08	1	7	c
Completion Review	13–17 Feb 09	3	15	c, f

<sup>a</sup> a – economist, b – financial analyst, c – mission leader, d – programs officer, e – project implementation officer, f – staff consultant, g – counsel, h – director's adviser, i – project analyst.

## **I. PROGRAM DESCRIPTION**

1. The Agriculture Sector Development Program (ASDP) was designed to assist the Government in addressing the declining growth in agriculture and the rural economy by tackling key constraints on agricultural productivity and competitiveness. The Program would help make agriculture more productive, profitable, and competitive in the domestic and export markets by increasing the capacity of research and extension to deliver relevant technology, improving access to information, and facilitating access to capital for small and medium-sized agro-industry enterprises in the private sector.

2. The expected outcomes were more diversified agriculture, better postharvest systems, and rural households that were less vulnerable and that participated more in sector development. ASDP included specific reform measures that would (i) strengthen support services in science and technology (research and extension), and (ii) promote the development of small and medium-sized enterprises (SMEs) in agro-industry.

3. ASDP had two components: (i) a program or policy reform loan, and (ii) a project or agro-industry SME loan. Policy reforms in research, extension, market information, and financial services to agro-industry SMEs were required to implement the Government's 10-year (2001–2010) socioeconomic development strategy and to permit meaningful investments in science and technology, and in the development of private sector SMEs. The Project, consistent with these program objectives, entailed financial support to the Vietnam Bank for Agriculture and Rural Development (VBARD) to enable it to provide medium- and long-term credit to agro-industry SMEs, which were rapidly growing in number. The program framework is shown in Appendix 1.

4. The Program involved (i) restructuring the management of research and extension services; (ii) improving market intelligence; and (iii) at least partially closing the gaps in financing for agro-industry SMEs, to increase their competitiveness with other enterprises, public as well as private, in the sector. Improvements were to be made in the quality and funding of agriculture research and extension to (i) diversify agriculture and raise yields of higher-income crops with market opportunities, (ii) facilitate integration with postharvest systems and agro-processing, (iii) improve the quality of crops with market potential, and (iv) increase stakeholder participation in extension and technology dissemination. The Asian Development Bank (ADB) provided a loan of \$60 million equivalent, denominated in special drawing rights (SDR), from its Special Funds resources. The loan, to be financed in three tranches, had a term of 24 years, including a grace period of 8 years, and an interest charge of 1% yearly during the grace period and 1.5% yearly thereafter.

5. The medium- and long-term loans to SMEs in agro-industry, to be provided under the Project, would support environmentally sound improvements in productivity and product quality among rural businesses, and generate economic growth and employment. The potential borrowers would cover a broad range of economic activities including (i) agricultural input production and supply; (ii) processing of fruits, vegetables, and other horticultural crops, and of industrial crops; (iii) processing of fish and livestock products; (iv) mechanization and other services; (v) small-scale manufacture of baskets and bags, mats, furniture, woven products, and other goods; and (vi) storage and marketing. For this purpose, ADB provided a loan of \$30 million equivalent, denominated in special drawing rights, from its Special Funds resources. The loan had a term of 32 years, including a grace period of 8 years, and carried an interest charge of 1% yearly during the grace period and 1.5% yearly thereafter.

6. **Context.** Until the late 1990s, Viet Nam's agriculture strategy had succeeded in attaining sufficiency in domestic food production for the country, expanding exports, increasing rural employment, and reducing rural poverty. From 2000, however, future sector growth and poverty reduction was placed at risk by (i) decreasing returns to labor, (ii) diminishing demand for rice and other exports because of low quality, and (iii) falling returns to irrigation infrastructure (where rice was the dominant output). The core sector problems were low productivity and profitability, undiversified production, and low quality and competitiveness of the agriculture research system.

7. These problems were caused by weaknesses in (i) crop diversification; (ii) integration with postharvest systems and response to market quality requirements; (iii) management of natural resources; (iv) private sector investment in agriculture processing, trade, and input supply; and (v) stakeholder participation in efforts to improve extension and production. Productivity and crop diversification were low mainly because (i) research and extension services were weak and underdeveloped; (ii) seed production systems were rudimentary; (iii) there were restrictions on land-use rights; (iv) access to financial services was limited; and (v) irrigation systems were deteriorating and inefficient, and therefore required upgrading. The dominance of inefficient state-owned enterprises also stood in the way of private sector investment in agriculture.

8. Specific sector issues were: (i) the fragmentary nature of agriculture research, with around 37 research institutes, mostly underfunded, clustered around the Red River and Mekong deltas and hardly any representation in the other agro-ecological zones, poor coordination of efforts and weak links to extension, poor physical infrastructure, and limited stakeholder involvement; (ii) the relative newness of the national extension system (it was created only in 1993), its narrow presence (in only 50% of the communes), top-down approach, limited technical base, and very high farmer-agent ratio; (iii) commercial production of often-poor-quality seed by research institutes to supplement their budgets, and generally unnecessary subsidies to provincial governments and the extension service for the production of hybrid rice and maize seeds, thus crowding out private activity; (iv) the lack of market information and support (regarding grades and standards, and other matters); and (v) inadequate access to credit for private investment, especially medium- and longer-term loans for SMEs through VBARD, whose poor-performing loans to state-owned enterprises had lowered its capital adequacy ratio below the 8% international standard.

9. The opportunity for ASDP arose when the Ministry of Agriculture and Rural Development (MARD) developed an agriculture and rural development sector plan and strategy for 2001–2010. The plan centered on (i) intensifying agricultural production, (ii) diversifying into higher-value crops and new markets, (iii) promoting off-farm employment, and (iv) reducing poverty, especially in remote and upland areas. This strategy was to be implemented through (i) advances in science and technology; (ii) market-supporting infrastructure and institutions; (iii) private sector investment, particularly among SMEs; (iv) rural infrastructure; and (v) stakeholder participation in planning and implementation. Given the Poverty Reduction Partnership Agreement (PRPA) between the Government and ADB, the Government's Comprehensive Poverty Reduction and Growth Strategy (CPRGS),<sup>1</sup> and the planned programs of development partners in the sector, the ASDP design dwelled on bridging the gaps in science and technology, transferring technology via extension, increasing production quality and value added through SME agroprocessing, and improving market information.

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<sup>1</sup> Government of Vietnam. 2002. *The Comprehensive Poverty Reduction and Growth Strategy*. Hanoi.

10. Accordingly, the ASDP interventions involved, first of all, promoting the development of a highly dependable agriculture research system that could develop and adapt the latest technology. Such a system required (i) clear roles and responsibilities for the research institutes to avoid duplication; (ii) more funding; (iii) more training, both degree and nondegree; (iv) greater autonomy in research center management and decision making; (v) less focus on commercial activities and more on the development of new technologies; (vi) a streamlined system with fewer institutes and more regional focus within Viet Nam; (vii) better feedback from extension agents and farmer representatives to researchers about the value of ongoing research and the demand for research in new areas; and (viii) increased use of competitive grants for funding research.

11. Second, the agriculture extension service was to be encouraged to (i) widen extension coverage to fill service gaps in the communes, primarily in remote and mountainous areas; (ii) provide more training to staff, in a broader range of subjects including group-based participatory methods, farm management, postharvest processing, storage, marketing, and credit; (iii) increase the proportion of female extension agents and agents from ethnic minorities, and targeting of the rural poor; (iv) improve funding for the extension service to increase operating budgets and, as far as possible, remuneration; (v) give the private sector a greater role in training extension workers, setting priorities for public extension activities, and supporting farmers in the appropriate use of inputs; and (vi) create extension advisory boards to evaluate and improve extension services, and obtain feedback from mass organizations, nongovernment organizations, and private sector input suppliers.

12. Third, ASDP was to establish a retail and wholesale market information system within the Information Center for Agriculture and Rural Development (ICARD) to (i) gather price information from a large number of domestic and international markets for all of the main commodities; (ii) analyze recent market trends displayed on bulletin boards and chalkboards in the villages and local markets; and (iii) disseminate the information through newspapers, magazines, radio, extension agents, and the internet.

13. Lastly, the program was to support the development of agro-industry SMEs by giving them better access to medium- and long-term credit via VBARD. The long-term funds provided under the loan were also intended to strengthen VBARD's position by reducing its duration and interest-variation risks and improving its fund management, especially as government-directed lending to state-owned enterprises (SOEs) was also to be reduced.

14. During program implementation, the program design remained fundamentally strong and consistent with government objectives for the sector. By 2006, it was increasingly clear from both MARD's 5-year plan (2006–2010) and external analyses<sup>2</sup> that productivity growth in the agriculture sector demanded improved research, extension, and technology transfer, and not simply factor expansion. The then mismatch between MARD's structure and spending and the requirements of a modernized technology base were apparent and were partly to be addressed through ADB's Agriculture Science and Technology Project,<sup>3</sup> prepared in 2006. Agro-industry finance was also still high on the sector agenda. The work of the International Fund for Agricultural Development (IFAD) in 2007<sup>4</sup> confirmed that formal capital markets were still too underdeveloped to channel a sizable volume of resources into new rural projects, and that

<sup>2</sup> World Bank. 2006. *Accelerating Vietnam's Rural Development Growth, Equity and Diversification*. Washington, DC.

<sup>3</sup> ADB. 2006. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Vietnam for the Agriculture Science and Technology Project*. Manila (Loan 2283-VIE, for \$30 million, approved on 11 December).

<sup>4</sup> IFAD. 2007. *Developing Business with the Rural Poor* (draft appraisal report).

“improving the mobilization of capital, both private and public, remained one of the main components of the unfinished reform agenda” for the sector.

15. In 2007–2008, macroeconomic and sector circumstances in Viet Nam changed considerably as high commodity prices (especially those for oil and rice) were transmitted domestically, and the implications of the slowdown in the industrialized economies became apparent. Confronted with massive inflows of capital in 2007, the Government chose to give priority to economic growth, purchasing large amounts of foreign currency to prevent the dong from appreciating, without a concomitant sale of bills. A major credit expansion resulted, precipitating property and stock bubbles, and annual inflation of around 20%. Domestic inflation without significant currency depreciation led to a loss of export competitiveness and an increase in imports of intermediate goods and luxury consumer items, widening the trade deficit by offsetting export value increases from (for example) coffee and other primary commodities, international demand for which is now falling.

16. In early 2008, the Government introduced an economic stabilization package that consisted mainly of mopping up credit by requiring banks to purchase bills, tightening public expenditures, and postponing inefficient projects. The package appears to be working but at the cost of lower overall economic growth. Gross domestic product growth in 2008 was around 7%, versus the previously expected 9%, and agriculture grew by less than 3%.<sup>5</sup> Productivity and profitability improvements in agriculture are even more imperative.

## II. EVALUATION OF DESIGN AND IMPLEMENTATION

### A. Design and Formulation of Agriculture Sector Development Program

17. The ASDP as a whole was designed as a sector development loan, the main idea being that both an investment project and policy reforms were needed to achieve the objectives of the project loan in full and on time. The sector development lending modality is intended to foster an integrated approach to sector needs and also enhance ADB's leverage in promoting institutional and policy reform.<sup>6</sup> Strong government commitment to the reform process is required and a previous history of implementing program loans or projects with significant conditions attached is desirable.

18. Government commitment was evident throughout program design and formulation, as manifested in MARD's 2001–2010 plan, which specifically recognized the need to upgrade the national technology base. The commitment to reform had also been evident in the earlier Agriculture Sector Program (ASP).<sup>7</sup> Against this sector background, ASDP addressed clear institutional and policy development needs in a relevant way with regard to strengthening

<sup>5</sup> World Bank. 2008. *Taking Stock: An Update on Vietnam's Recent Economic Developments*. Washington, DC (June).

<sup>6</sup> ADB. 2003. *Operations Manual*. OM Section D5/BP: Sector Development Programs. Manila.

<sup>7</sup> ADB. 1994. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Vietnam for the Agriculture Sector Program. Manila. Loan 1340(SF)-VIE, for \$80 million, approved on 8 December, and two associated technical assistance (TA) projects: ADB. 2003. Technical Assistance to the Socialist Republic of Vietnam for the Rice Market Monitoring and Policy Options Study. Manila, TA 2224, for \$832,000, approved on 8 December; and ADB. 2003. Technical Assistance to the Socialist Republic of Vietnam for the Land Information System and Agricultural Taxation Study. Manila, TA 2225, for \$646,000, approved on 8 December. See the Program Completion Report: 2000. Agriculture Sector Program. Manila: ADB. This program comprised: (i) market orientation and efficiency reforms, (ii) rural financial intermediation, and (iii) land tenure improvements.

agriculture research and extension systems and promoting agro-industrial development. It was founded on a relatively substantial and detailed sector and subsector analysis including consideration of the impact of the proposed reforms and the respective roles of the public and private sectors.

19. The design of the program loan (1972-VIE) encompassed the entire agriculture research system, as it was felt that only through comprehensive reform and fully integrated institutional mandates could the duplication of effort, lack of specialization, and failure to realize economies of scale be overcome. Similarly evident was the need to simultaneously strengthen the agriculture extension system and link it more closely to agriculture research so that improved, and more relevant, technologies could be applied.

20. Promoting agro-industrial development via SMEs, especially as generators of employment, was also recognized to be largely a question of releasing the financing constraint on technical upgrades and enterprise productivity enhancement. This required identifying and reforming a major financial institution with agriculture and rural outreach, and VBARD was the obvious candidate, having been involved in the earlier ADB Rural Credit Project and having the largest rural branch and transaction office network.<sup>8</sup>

21. The Government's strategies for poverty reduction, financial sector development, and growth in rural areas, including its Socio-Economic Development Plan (2001–2010), all emphasize the importance of better access to financial services. The project loan (1973-VIE) therefore met the operational priorities of the Government, which recognizes the role of the private sector in improving the supply of credit to agro-industry SMEs to diversify the rural economy, improve incomes and employment, and reduce rural poverty.

22. As sector lending modalities, the program and project loans were not as fully integrated as they could have been. While both may well have been necessary for long-term and wide-scale sector productivity enhancement—the strengthened research and extension systems would deliver more relevant and targeted products in the medium to long term and some agro-industry investments could eventually be based on them—their only functional link in design terms was the disbursement of the agro-industry SME loans through VBARD, whose capital base would be fortified under the program loan. In that sense, the program loan was a necessary condition for the success of the project loan.<sup>9</sup>

23. Also, there seems to have been a lack of continuity between ASDP and the earlier ASP. Unfinished business in the ASP in terms of market liberalization and land-use rights, the progress of which had stalled after the 1997 Asian crisis, were not taken forward under ASDP. The report and recommendation of the President suggested that the ASDP, given what various other agencies were doing in other areas, would direct its attention to gaps in science and technology, technology transfer, and value addition, but it did not discuss how lack of progress in market liberalization and land reform, among others, might or might not constrain program impact.

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<sup>8</sup> ADB. 1996. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Vietnam for the Rural Credit Project*. Manila. Loan 1457-VIE, for \$50 million, approved on 12 September.

<sup>9</sup> One operational consequence of this situation was that ADB review missions and MARD would request greater coordination between the loans' EAs, although in reality there was very little to be harmonized.

24. The last point to make on design and formulation is perhaps the omission of any significant investment in human resources development to exploit the new hardware resource base within the strengthened agriculture research system.

## **B. Program Outputs**

### **1. The Program Loan**

25. Component A was designed to strengthen agriculture research and technology by reinforcing both the agricultural research system and agriculture extension delivery.

#### **a. Agriculture Research**

26. The main outputs of the program loan in agriculture research were the following: (i) the consolidation of the agriculture and fisheries research institutes from 32 to 25 (15 are within or are soon to join the newly formed Vietnam Academy of Agricultural Sciences [VAAS], 5 have remained independent, and 5 more were acquired by MARD from the fisheries ministry merger of 2007), each with a clear and separate mandate and functions; (ii) the granting of functional autonomy to the majority of the institutes (those under VAAS await the VAAS director's decision on their autonomy); (iii) the establishment of four regional research institutes, addressing the diverse agro-ecological needs of technology transfer within Viet Nam; (iv) the incorporation of competitive grant awards, performance-based staff evaluation, and participatory research in research institute activities, and the near-complete abandonment of the previous commercial activities of the institutes; (v) the upgrading of civil works and the improvement and expansion of the equipment of the institutes; and (vi) the increase in the budget allocation for agriculture research. Full details of these outputs of component A in agriculture research can be found in Appendix 2.

#### **b. Agriculture Extension**

27. The main outputs of the program loan in agriculture extension were the following: (i) the establishment of provincial extension advisory councils (PEACs), (ii) the formation of subject-matter specialist teams, (iii) the application of participatory extension methods, (iii) the recruitment of commune extension workers (CEWs), (iv) the expansion of staff training at all levels, and (iv) the establishment of a national agriculture extension center, now called National Agricultural and Fisheries Extension Center (NAFEC). Collectively, these outputs strengthened the links between research and extension, encouraged multiple and more pluralistic extension services, and ensured better prioritization of extension strategies in the provinces. Full details of the outputs of component A in agriculture research can be found in Appendix 3.

28. In component B, which was designed to promote agro-industry development, an agriculture market information system covering 100 districts in 20 provinces was established within ICARD to collect and publish regular and frequent input and output data. Information about the price of agricultural products (e.g., rice varieties, maize, sweet potato, vegetables, rubber, coffee, tea, fruits, and meat, beef, poultry and cattle) and the price of materials as production inputs (e.g., fertilizers, pesticides, seedlings and breeding animals, petrol) was collected at 328 markets. Summarized information is disseminated through (i) published materials, (ii) television, (iii) radio broadcasting, and (iv) the internet. Details of the agriculture market information system are in Appendix 4.

29. The Government was also to provide funds to increase VBARD's legal capital and to resolve nonperforming loans. Accordingly, the Government increased VBARD's legal capital to D5.4 trillion by the end of 2003 and to D6.2 trillion by the end of 2004. Of the D5.34 trillion in resolved nonperforming loans as of the end of 2005, D2.40 trillion was financed by the Government, D1.34 trillion was covered by VBARD's loan-loss provisions, and D1.60 trillion was recovered from subborrowers. The remaining amount of D38.3 billion, less than 1% of the total amount of the nonperforming loans, was resolved before December 2007.

30. Some of the major quantitative targets, together with the actual results delivered under the program loan, are summarized in the table below.

### Outputs Planned and Achieved under the Program Loan

Item	Planned	Achieved
<b>Agriculture Research System</b>		
Reorganize research institutes	Consolidate institutes from 32 to 25	25 institutes formed (12 institutes within VAAS, 8 other agriculture institutes <sup>a</sup> and 5 fisheries institutes)
Establish regional institutes	2 regional institutes to be established	4 established
Increase budget for research	Budget to be increased by 12% yearly	Budget increased by 12% yearly
Phase out and eventually stop the commercial activities of research institutes	Commercial activities to be phased out and then stopped	Commercial activities stopped (although affiliated companies continue to engage in some commercial activities)
Implement competitive bidding for research	Bidding system to be implemented	Bidding system implemented and functional
Make science and technology organizations autonomous	All institutes to be made autonomous	Most institutes granted autonomy; a few remain to implement Decree 115
<b>Agriculture Extension System</b>		
Establish PEACs	40 PEACs to be established	40 PEACs established
Establish National Agriculture Extension Center (now National Agricultural and Fisheries Extension Center [NAFEC])	National Agriculture Extension Center to be established and made operational	NAFEC established and operational; also provides fisheries extension services
Implement PAEM	PAEM to be implemented in 40 communes in 10 provinces (40 districts)	PAEM implemented in 40 communes in 10 provinces (40 districts)
Strengthen links between research and extension	Links to be strengthened in 40 provinces	Links strengthened in 40 provinces
Form subject-matter specialist teams	Specialist teams to be formed in 10 provinces	Specialist teams formed in 10 provinces
Hire grassroots extension workers	6,000 extension workers to be hired	6,660 extension workers hired
Train grassroots extension workers	1,000 extension workers to be trained	2,000 extension workers trained
Increase budget for extension	Budget to be increased by 12% yearly	Budget increased by 12% yearly



Item	Planned	Achieved
<b>Agro-industry Development</b>		
Set up agriculture extension and market information system	System to be set up in 20 provinces (100 districts)	System set up in 20 provinces (100 districts)
Phase out subsidies for hybrid maize	Subsidies to be terminated	Subsidies terminated
Send letter from MARD to provinces ending the subsidies for commercial hybrid rice seed	Letter ending subsidies to be sent to 4 provinces	Letter sent to 4 provinces
Send letter from MARD to provinces regarding poverty reduction assistance through subsidies for hybrid rice seed	Letter to be sent to 18 provinces	Letter sent to 18 provinces
Increase legal fund for VBARD	Legal fund to be increased to D3,360 billion	Legal fund increased to D6,200 billion
Provide funds to VBARD for resolving nonperforming loans	Government to provide financial support to VBARD to allow the latter to forgive eligible nonperforming loans identified as of 31 December 2000, in accordance with the Prime Minister's Decision No. 149 of 5 October 2001 on the resolution of nonperforming loans to state-owned commercial banks	D2.4 trillion provided

MARD = Ministry of Agriculture and Rural Development, NAFEC = National Agricultural and Fisheries Extension Center, PAEM = participatory agricultural extension methodology, PEAC = provincial extension advisory council, VAAS = Vietnam Academy of Agricultural Sciences, VBARD = Vietnam Bank for Agriculture and Rural Development.

<sup>a</sup> Three of these—Cửu Long Rice Research Institute, Institute of Agricultural Science of South Viet Nam, and Southern Horticultural Research Institute—are due to join the Vietnam Academy of Agricultural Sciences in 2009.

Sources: ADB Loan Review Missions

## 2. The Project Loan

31. The project loan was designed to provide funds for increasing agriculture productivity and profitability, specifically by improving the competitiveness of SMEs that would have increased access to medium- and long-term finance provided via VBARD.<sup>10</sup> The potential borrowers would cover broad categories of economic activity including (i) the production and supply of agricultural inputs; (ii) the processing of fruits, vegetables, other horticultural crops, and industrial crops; (iii) the processing of fish and livestock products; (iv) mechanization and other services; (v) the small-scale manufacture of baskets and bags, mats, furniture, woven products, and other goods; and (vi) storage and marketing. The loan was to be channelled through 23 branches of VBARD.<sup>11</sup>

32. As of 31 September 2008, about 4,000 loans, including those from the revolving fund,

<sup>10</sup> A summary of VBARD's background and financial situation can be found in Appendix 5.

<sup>11</sup> These were Bắc Ninh, Bình Thuận, Đắk Nông, Đắk Lắk, Điện Biên, Gia Lai, Hà Nam, Hà Tây, Hà Tĩnh, Hưng Yên, Lai Châu, Lào Cai, Nam Định, Ninh Bình, Phú Yên, Quảng Bình, Quảng Nam, Tây Ninh, Thừa Thiên-Huế, Trà Vinh, Tuyên Quang, Vũng Tàu, and Yên Bái.

had been provided. The average subloan size was about \$29,000 (D489 million). The total value of subloans disbursed was around \$111.25 million (D1,845 billion). Subborrowers' own capital contribution to investments was about 31%, ADB's about 46%, and VBARD's about 23%. Some 60% of loans by value, and over 50% by volume, went to trading and "other" activities including transportation and storage; some 11% by value, and 17% by volume, went to the supply of inputs such as fertilizers, livestock, and fish food; and less than 10% by both value and volume went to the processing of crops, fish, and livestock. The highest number of loans went to the Central Highlands (34%), especially Đắk Lắk province, but average amounts were lower here than in other regions. The Northern Uplands and Red River Delta accounted for about half of all lending.

33. Overall, the total capital lent was about 30% larger than had been expected at design, average loan size was almost three times larger than expected, and the total number of subloans was about half what had been anticipated.

### **C. Program Costs and Disbursements**

34. ADB provided SDR67.3 million (\$101.1 million) for ASDP.

35. The program loan, amounting to \$67.1 million, was released in three tranches. The dollar amount increased with the depreciation of the dollar vis-à-vis the special drawing rights. Disbursements under the project loan totalled \$34.03 million, \$13.9 million of which was financed by VBARD and \$10.4 million by subborrowers. The first disbursement took place in December 2003. The final disbursement was for expenditures incurred before the loan closing date of 22 September 2008. The amount of \$0.02 was cancelled when the loan account was closed.

### **D. Program Schedule**

36. The Program was to be implemented from April 2003 to March 2006. But the first tranche was released only on 18 December 2003 because of delay in the effectiveness of the loan on 27 October 2003 and the fulfilment of loan conditions requiring the reorganization of the agricultural research institutes related to the policy mechanism. The final tranche was released on 12 December 2007. The program was implemented over 4 years, with completion being extended once for 1 year.

37. The project loan took effect on 27 October 2003 but because of the initial delay of about 4 months in loan signing, and VBARD's need for more time to finalize the implementation guidelines before the first withdrawal, the overall loan closing date was extended from September 2006 to September 2008.

### **E. Implementation Arrangements**

38. MARD, the Executing Agency (EA) for the program loan, was responsible for overall supervision and coordination with the Ministry of Finance (MOF), the Ministry of Planning and Investment (MPI), the State Bank of Vietnam (SBV), VBARD, and the participating provinces during the implementation of the Program. SBV was responsible for disbursements, MOF for the management of loan utilization, and MARD for day-to-day implementation including the supervision of ASDP implementation and fund use, and the evaluation of program impact on stakeholders.

39. MARD established a program steering committee chaired by a vice minister and comprising representatives from MARD, MOF, MPI, SBV, and VBARD. MARD also created a program implementation unit (PIU), while participating provinces formed provincial extension advisory councils (PEACs) for extension activities and project implementation boards for market information activities.

40. VBARD was the EA for the project loan. A project implementation unit (PIU) was established in April 2004 to serve as the focal point for project implementation, management, and coordination. The PIU's performance was generally satisfactory but, because of their many other commitments, VBARD staff had limited time to supervise the provincial and district branches in accordance with the Loan Agreement.

41. ADB made the loan available to the Government as Borrower and to VBARD under a Subsidiary Loan Agreement, which provided for (i) a loan maturity of 32 years and a grace period of 8 years, with a service charge of 1% yearly during the grace period and 1.5% yearly thereafter, based on the amount of the loan withdrawn from the loan account and outstanding from time to time; (ii) repayment of principal in equal semiannual installments; and (iii) a variable relending interest rate set in line with the cost of the term deposit.<sup>12</sup> The Government re-lent the loan proceeds in local currency to VBARD. The relending interest rates and other terms and conditions for the lending, relending, and onlending were determined in such a way as to cover VBARD's expenses.

## **F. Conditions and Covenants**

### **1. The Program Loan**

42. The first-tranche conditions were fully complied with, but about a year later than expected, even with technical assistance (TA) support to MARD. All necessary approvals of plans (e.g., for institutional reorganization) were obtained, and all letters of instruction to agencies and other entities were issued by MARD, the Ministry of Science and Technology, and the Prime Minister's office. All second-tranche conditions were also complied with, although the status of the planned phaseout of commercial seed sales was somewhat unclear for a time. MARD issued appropriate instructions regarding the production of basic seed for further multiplication, but allowance was made for a transition period from 2004 to 2008, during which seed supply companies were to be contracted or independent companies established to multiply and sell certified seeds. Moreover, the exact relationship between the research institutes and their commercial affiliates was ambiguous. The conditions for the third and last tranche were complied with in full by mid-2007.

43. Appendix 6 contains a summary of the status of compliance with the covenants associated with the program loan (plus some explanatory detail).

### **2. The Project Loan**

44. Compliance with project loan covenants was held back by (i) the delayed preparation of the loan implementation guidelines by VBARD; (ii) the opening of deposit bank accounts for loan collection and lending from the revolving fund since VBARD operated manual accounting

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<sup>12</sup> The interest rates and other terms and conditions for lending, relending, and onlending were set forth in the Loan Agreement.

systems and procedures for the dispatch of funds to branches;<sup>13</sup> and (iii) the submission of quarterly progress reports, imprest account audit reports, and financial reports.

45. Perhaps more serious was the situation with respect to the monitoring of lending activities, and especially their possible adverse environmental impact, in the provinces and districts, where VBARD staff capacity was stretched very thinly. VBARD's ability to monitor environmental compliance remained weak and, although the scale of possible problems was not documented, field visits to individual SMEs (e.g., during the midterm review in 2006) did suggest that problems existed but were not being identified by VBARD such that loans might be suspended. Overall, the loan covenants in this area were not fully complied with.

46. The status of compliance with the project loan covenants is summarized in Appendix 7.

## **G. Related Technical Assistance**

47. Two stand-alone advisory TA projects were approved to support MARD's preparations for program loan compliance and VBARD's SME operations in implementing the project loan.

48. **Agriculture Sector Development Support (TA 4105-VIE).**<sup>14</sup> The TA was provided to assist MARD in fulfilling the first- and second-tranche conditions of the ASDP. The TA (i) helped VBARD to carry out studies on SME development in Viet Nam, (ii) assisted in the preparation of a new operational strategy for VBARD's SME lending operations, and (iii) gave advisory support for improving VBARD's credit appraisal system for agro-industry SMEs and project performance management system for SME operations.

49. **Strengthening Agricultural Science and Technology Management (TA 4619-VIE).**<sup>15</sup> The TA was provided to assist MARD in fulfilling the third-tranche conditions of the program loan. The TA outputs consisted mainly of reports and included (i) appropriate procedural documents for an agriculture science and technology management system, (ii) improved operational coordination between agriculture research and extension, (iii) improved knowledge and capacity for agriculture science and technology management, and (iv) an appropriate monitoring and evaluation system for major agriculture science and technology activities.

## **H. Consultant Recruitment and Procurement**

50. There were no implementation consultants for either the program or the project loan.

51. Goods and services were procured according to ADB's *Guidelines for Procurement*. Equipment contracts of up to \$100,000 involved direct purchase, while contracts beyond that amount and up to \$500,000 followed international shopping procedures. No equipment worth more than \$500,000 was purchased with loan funds. Procurement implementation was as originally planned.

<sup>13</sup> VBARD now expects to integrate the revolving fund into its broader accounting systems later in 2009.

<sup>14</sup> ADB. 2003. *Technical Assistance to the Socialist Republic of Vietnam for the Agriculture Sector Development Support*. Manila. TA 4105-VIE, for \$600,000, approved on 2 May.

<sup>15</sup> ADB. 2005. *Technical Assistance to the Socialist Republic of Vietnam for the Strengthening Agricultural Science and Technology Management*. Manila. TA 4619-VIE, for \$700,000, approved on 19 July.

## **I. Performance of Consultants, Contractors and Suppliers**

52. The most persistent problem with national contractors was due to the effects of domestic inflation, especially in 2006 and 2007. The cost of civil works had to be readjusted during implementation as the prices of construction materials and labor costs rose (by an average of 15%–20% yearly), and there were protracted discussions between the research institutes (through their PIUs) and contractors, and repeated submissions to MARD for consideration and approval. This process delayed the overall construction progress at those institutes that had started procurement late.

53. The procurement of equipment for institutes and schools was satisfactory. However, there were specific issues. Equipment was procured for the agricultural genetics institutes before the laboratories that would house the equipment were built, and there were problems with computer hardware and equipment guarantees in the provinces. Reported problems with the market information system were resolved by 2008.

## **J. Performance of the Borrower and Executing Agencies**

54. The performance of the Borrower was satisfactory. The Government showed strong and continuing commitment to achieving the objectives of the Program and essentially complied with all loan covenants.

55. SBV, as a member of the steering committee, had an active role in and provided justification for the program extension for the Government's approval, and coordinated closely with ADB during the program period. MOF and MPI were similarly active in proposing to the Government and National Assembly a 12% yearly increase in funding for agriculture research and extension. MARD facilitated close coordination with these agencies implementing the Program and provided timely support to ADB missions. MARD also continued to revise financial estimates to allow for domestic inflation, gaining access to incremental dollar loan disbursements as a result of the depreciation of the dollar vis-à-vis the special drawing rights.

56. Although PIU managers and staff understood the procurement procedures and regulations of ADB and the Government, provincial and institute staff were less experienced and there were consequent delays in the preparation of documents and the awarding of contracts.

57. Program management suffered in regard to overall monitoring and evaluation. While individual PIUs and MARD were very well aware of the progress of loan disbursements and construction progress, general assessment of overall ASDP performance was not institutionalized. Midterm, assessment, and completion reports commissioned by MARD and VBARD on the loans were poor, there was weak evidence of impact, and issues identified for possible management attention were not addressed.

58. VBARD generally implemented the project loan well. However, staff were routinely overloaded with work, and officers generally had just enough time to operate the Project and to collect and collate reports from the branches. They did not have enough time to inspect and supervise the implementation of the Project in the branches. Despite the earlier comments about the revolving fund (para. 44), project operations were generally well integrated into the day-to-day operation of VBARD.

59. Overall, the Borrower's and the executing agencies' performance was satisfactory.

## **K. Performance of the Asian Development Bank**

60. The Program was administered from ADB headquarters. Enough missions were sent to Viet Nam to monitor implementation, evaluate outputs, and hold discussions with implementing agencies and associated TA consultants. Missions were also (i) timely, as all were planned in response to the tranche needs and timetables; and (ii) adequate in technical composition, providing sufficient depth of knowledge to allow agencies to identify problems and plan solutions. Various field visits were made to research institutes and provinces throughout Viet Nam.

61. After the Inception Mission in May 2004, ADB organized a supervision mission once or twice a year for the project loan (mostly comprising a financial analyst and a financial or agricultural economist) and the members worked closely with VBARD in resolving problems concerning the credit lines.

62. Given this level of involvement, plus the depth of preparation in design and appraisal, ADB's performance was satisfactory.

## **III. EVALUATION OF PERFORMANCE**

### **A. Relevance**

63. The ASDP was relevant.

64. Problems and opportunities were assessed adequately at the time of approval. The sector description and analysis of problems and opportunities contained in the report and recommendation of the President was extensive, although no problem tree was constructed, the sector analysis appendix was subsector-oriented rather than causal and consequential in presentation, and no explicit "lessons learned" were described. MARD's agriculture sector plan and the new VBARD policy toward SME lending partly explained the timeliness of the opportunity for ASDP but the limited continuity with earlier ADB interventions is notable.

65. The Program's impact, outcome, and outputs conformed to a high degree with the Government's development strategy and the degree of stakeholder ownership. MARD's sector plan had only very recently been approved by the Communist Party congress in 2001, and the Poverty Reduction Partnership Agreement (PRPA) between the Government and ADB included strategies to strengthen research and extension and to promote private sector activity in agro-processing and value addition.

66. This conformity with government development objectives was maintained throughout the Project. MARD's agriculture sector planning and current thinking on both research and extension in 2008 carried forward ideas and experiences from the ASDP experience, and it is arguably even more relevant to sustain private value addition and job creation and to maintain underlying sector productivity and competitiveness in conditions of intensifying economic crisis. No changes in scope of outputs or planned outcome were needed to maintain relevance.

67. The associated TA projects were appropriate, and supported MARD in complying effectively with the tranche conditions amid comprehensive and quite-complex institutional change. Cognizance of the concurrent activities of development partners was adequate.

68. There was a reasonable balance between public sector support in the program loan and private sector promotion under the project loan, but, more generally, the design and formulation of the ASDP as a sector lending modality can be criticized for the lack of integration between the program and project loans. Apart from VBARD's role in both, the link between the loans was very limited.

69. The financial and economic analyses of the Program were poor. While the method of economic pricing and wider analysis was appropriate, a few agro-industrial activities were unrealistically described rather than the SME operations of the businesses whose capital stock would be augmented by the VBARD loan. There was no distribution analysis, risk analysis, or any demonstration that the program loan interventions were least-cost solutions.

70. Finally, regarding the program design, it is perhaps doubtful whether the institutional reforms and hardware investment alone were sufficient to achieve the output of a "strengthened research system" without any concomitant investment in human resources development. The absence of software support may have reflected MARD's own priorities, but it was apparent during implementation that (for example) new equipment bought with ASDP funds stayed unused because of lack of training.

## **B. Effectiveness in Achieving Outcome**

71. The ASDP was effective in achieving the targeted outputs. The expected outputs of the program loan were almost entirely achieved, with the fulfillment of such conditions as the phaseout of the sale of certified seeds by the research institutes and the ongoing organization reform of the institutes. The project loan's targets, in lending levels and job creation, were exceeded.

72. The outcome of ASDP was defined to be "increased agricultural productivity and profitability" and "increased competitiveness." This outcome had been achieved to some extent at the time of program completion, and is quite likely to intensify over time. Only a partial assessment of the achievement of the intended outcome was made at ASDP closing for two main reasons: (i) although outputs delivered under the program loan have undoubtedly strengthened agriculture research and extension, the financial and economic benefits may not be apparent for a number of years, given the time it takes for research results to be widely disseminated and applied; and (ii) the agriculture research and extension systems are still in transition and it is not yet clear to what extent the benefits of both institutional reforms and physical investments (hardware) may be complemented or compromised by ongoing developments in human resources (software, and specifically the extent to which the research system can retain scientific staff, given public sector salaries and cost norms).

73. With respect to the first point, it is likely that the scale and coverage of the benefits from agriculture research will increase over time, thereby making the Program more effective. Regarding the second point, it remains unclear to what extent the program-induced reform and hardware investments, some of which are not yet fully in place (such as buildings and laboratories), have actually loosened the constraints on human capacity and intellectual capital. Improved national agriculture productivity and competitiveness depends on the availability of staff in sufficient numbers and quality within the research institutes to use the improved facilities and systems.

74. It may also be noted that, to the extent that program implementation was delayed by difficulties in complying with loan conditions or, because of inflation, in tendering construction contracts, program effectiveness, as measured at the time of program completion, correspondingly suffered.

75. The contribution of the project loan to increased productivity, profitability, and competitiveness is clearer. The loans from VBARD were entirely used to upgrade SME facilities, and clear examples of the increased productivity, profitability, and competitiveness of the enterprises can be found in Appendix 8.

### **C. Efficiency in Achieving Outcome and Outputs**

76. The ASDP is assessed as efficient in achieving the expected outputs.

77. At program design, the financial internal rate of return (FIRR) and the economic internal rate of return (EIRR) were estimated for a number of agro-industry activities under the project loan. There was no estimate of the economic impact of the program loan. As these estimates were not particularly realistic, as all loans went to SMEs with an existing scale of operations whose costs and business structures were not reflected in the FIRR/EIRR analysis, and as only part of ASDP was covered in any case, the following discussion considers the efficiency criteria primarily in terms of whether the program outputs as a whole could have been achieved at lower cost.

78. It is unlikely that the delivered outputs of the program loan could have been produced at much lower costs. The related TA projects were clearly necessary to support reforms within MARD, and the bidding and contract awarding processes for hardware appear to have been managed reasonably well. Delays occurred because of domestic inflation and the consequential knock-on renegotiations with contractors and suppliers, rather than inefficiencies inherent in these processes. The functioning of PIUs seems broadly satisfactory across the range of institutes.

79. As regards the project loan, VBARD's performance more than adequately met industry "best practice" standards of comparative efficiency. Operations under the loans were carried out at interest rates that were not only attractive to borrowers but also enough to cover VBARD costs, although VBARD was urged during the midterm review to vary the rates on existing loans and to ensure more frequent repayments of principal. More generally, the increase in VBARD's equity in real terms has improved the quality of its loan portfolio. Its nonperforming loans have been reduced, provisions for losses have substantially increased, and the scale of its operations has grown. Overall, VBARD has become a relatively efficient institution.

80. A final dimension of the efficiency assessment criterion is whether or not an altogether different type of intervention could have solved the same development problem at a lower cost. It is inconceivable that agriculture research and extension could have been strengthened without both significant institutional and policy reforms plus hardware investments, or that SME competitiveness could have been increased without technological upgrades made possible by incremental funding. In this sense, the designed and implemented measures were probably the most efficient for dealing with the development problem as defined.

### **D. Preliminary Assessment of Sustainability**

81. The preliminary assessment of ASDP sustainability is "likely."



82. The reforms and reorganizations made under the program loan are permanent in the sense that no return to the situation that existed before ASDP is contemplated. There is no significant operating entity or cost recovery issues within the ASDP framework, and the research institutes are likely to become better able over time to compete for private funds through contracting activities, thereby improving the flow of funds into the public sector. Similarly, with the termination of the seed subsidies, commercial activities should make public financing more—rather than less—sustainable. There is no reason to suppose that the current contribution of MARD or the Ministry of Science and Technology to research funding will change in any way, or that the overall sector and macroeconomic policy environment will become any less favorable.

83. Sustainability is perhaps less clear in the financing of extension activities. The provinces are supposed to carry on the funding of extension activities introduced by ASDP (e.g., the PAEC and the recruitment of CEWs). The situation, however, varies across provinces: while some provinces have already received allocations equal to or larger than the ASDP funds, the allocations for other provinces have been lower or do not appear to be forthcoming at all (as of February 2009).

84. Regarding the project loan, VBARD's efficiency of operations and financial stability generally seem to support the notion that the benefits of ASDP will continue. The maturity periods of project funds are long term and defaults under the loan operations are low at present. What is perhaps of more importance is the actual profitability of SMEs receiving loans in deteriorating economic conditions. The survey of SMEs contained in the financial and economic analyses (Appendix 8) clearly demonstrates that profitability underwent a significant decline between 2007 and 2008, and the numerous deferments of equipment purchases by these enterprises are increasingly causing VBARD to struggle to find new lending opportunities. The Government's economic stabilization package introduced in 2008, and the targeted interest rate subsidy to SMEs, may succeed in supporting economic activity, but the situation at present, including which SMEs may actually qualify and to what extent, is uncertain.

## **E. Impact**

85. ASDP has had several types of identifiable impact so far.

### **1. Institutional Impact**

86. The strengthening of the agriculture research and extension systems was the outcome of the program loan and its impact has already been described in some detail. Better alignment of missions and mandates, better internal use of resources, better use of skills, and better reward systems are all aspects of this process.

87. One way of determining the scale of the impact of ASDP, at least in terms of extension, may be in regard to the content of NAFEC's plan for extension system development in 2010–2015 and beyond (currently submitted to MARD). This plan, among other things, incorporates many of the features of an extension system introduced under ASDP, notably the continuation of PEACs, the maintenance of extension work in the communes, and the expansion of pluralistic and multiple approaches. This suggests that at least parts of the ASDP experience have already become institutionalized.

88. The project loan also strengthened VBARD and specifically supported its SME-oriented lending, which has been a policy objective since 2002.

## **2. Socioeconomic Impact**

89. The most obvious socioeconomic impact of the Program is on job creation (Appendix 8). A large number of jobs have been created, many are permanent and full time, and most are in rural areas and offer possibilities to relatively poor people.

90. Another identifiable impact of the Program is in terms of the “socialization” process that has occurred through the increased involvement of nongovernment organizations, private companies, mass organizations, and individual farmers (and farmers’ clubs) in the agriculture extension (and to a lesser extent, research) activities in the public sector. The inclusive and participatory nature of these activities helps strengthen civil society overall, and has offered specific opportunities to women and ethnic minorities (e.g., through the recruitment of CEWs).

## **3. Environmental Impact**

91. The program loan supported better technology development, application, and extension and so should result in more positive impact in the long run, although none is identifiable at present.

92. The project loan has resulted in the use of more-modern technology, at least some of which (e.g., in quick-freezing equipment, in cardboard carton manufacture) reduces overall resource use or directly supports recycling (e.g., through the use of waste paper). While there was concern about VBARD’s ability to monitor environmental compliance, no evidence of systemic environmental consequences of an adverse nature from the activities of individual SMEs was documented.

## **4. Unintended Impact**

93. The ASDP appears to have had no unintended impact. Investments made under the program loan benefit the country as a whole, and there is no evidence of particular groups being disadvantaged through resource fungibility and uptake of other projects or programs.

# **IV. OVERALL ASSESSMENT AND RECOMMENDATIONS**

## **A. Overall Assessment**

94. Overall, the Program is rated “successful.” Loan covenants were generally complied with and the performance of the Borrower, EAs, and ADB was satisfactory.

95. Despite some implementation delays, the program and project loans each delivered their intended outputs and the planned outcome is likely to be achieved, despite some deficiencies and inconsistency in the original design of ASDP. The research and extension systems have certainly been strengthened under the program loan, and the understanding of this experience has clearly contributed to the ongoing reform measures in both systems.

96. The project loan had particularly noteworthy impact on job creation, and provided significant general support to an agency in lending to rural SMEs.

## **B. Lessons**

97. The ASDP experience suggests that overoptimism about EA readiness and ability to implement programs and projects—a major determining factor in project performance<sup>16</sup>—persists. The significant delay at start-up for both loans exemplified this point.

98. Some of the question marks relating to the extent of achievement of the ASDP outcome also relate to the original design of the whole program. A lesson that may be drawn is that more rigor is still needed in investment design.

99. On the other hand, the success of ASDP also demonstrates that, where government ownership and commitment is sufficient, a significant institutional and policy reform program and substantial infrastructure investment program can be successfully implemented within an acceptable time frame.

100. The project loan likewise showed that it was critical to find an appropriate partner to disburse loans profitably in relatively large numbers to SMEs across Viet Nam in rural areas. In this role, despite difficulties in overall management capacity and specific monitoring aspects, VBARD performed well.

## **C. Recommendations**

### **1. Program- and Investment-Related Recommendations**

101. Regarding agriculture research, the system is still in transition (e.g., regarding the role of VAAS as an intermediary between individual institutes and MARD, and the eventual composition of VAAS itself) and should be monitored to ensure that any changes are consistent with a modern approach and efficient delivery.

102. In agriculture extension, ongoing reorganizations should also continue to be monitored, so that the lessons of ASDP are fully institutionalized and the provinces receive adequate funds to carry on those activities that have been shown to be successful. In this regard, there should be a fuller and more detailed evaluation of the success of the extension activities. Particular emphasis may be given to redesigning PAECs to make them more functional in active membership composition, and to understanding problems in the wider application of PAEM.

103. VBARD's internal monitoring and reporting of subloan compliance must be strengthened. A strategy for VBARD lending to SMEs in the medium to longer term would be desirable, especially in the current economic climate. This might include lending models such as short-term financing.

### **2. General Recommendations**

104. ADB's sector development lending needs a clearer and more explicit justification than that given for ASDP. While most conditions for sector development lending, such as government commitment and previous ADB experience in the sector, were met, greater integration between program and project loans is needed for a long-term approach to the sector.

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<sup>16</sup> For details, see, for example, ADB. 2008. *Evaluation Study on Project Performance and the Project Cycle*. Manila.

105. Financial and economic sector development lending is needed must be subjected to more rigorous analysis. The ASDP economic analysis did not take a clear least-cost approach, included very few risk or distributional considerations, and (for the project loan) was based on unrealistic activity models rather than enterprise circumstances. Overall, the ASDP analysis could have been considerably strengthened and made more realistic if (i) it had included the benefits from extension strengthening (e.g., by using a benefit stream of extension trainee incomes to approximate the social value of grassroots extension investments to Viet Nam, as was done in the Agriculture Science and Technology Project); and (ii) if the subproject loans to SMEs had been considered part of enterprise capital or operating expenses rather than stand-alone subprojects (e.g., as might more typically be the case for household or microcredit lending).

106. Loan covenant formulation should receive more rigorous attention than it did under ASDP in at least two respects: (i) the inability of VBARD's accounting system to incorporate a loan-specific revolving fund could have been anticipated; and (ii) VBARD's difficulties in meeting subborrowers' environmental compliance could have been supported with better-provisioned TA, a need that seems to have been brought out in the initial environmental examination but was not captured in the project loan design.

## PROGRAM FRAMEWORK

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
<b>Goals/Sector Impact</b> Increased agricultural growth  Reduced poverty	Contribute, through technology advances, to the Government's annual sector growth rate of 4.5%  Contribute to the Government's original poverty reduction targets from 45% to 27% by 2007, through technology transfers relevant to poor farm households  Contribute to Government's rural employment increase target of 20% by 2010	National agriculture statistics  Program monitoring system at the Ministry of Agriculture and Rural Development (MARD)  Regular sectoral review	Government commitment to policy and institutional reforms  Active participation of the private sector  Effective implementation of the needed reforms	Agriculture sector growth of around 3% per annum in 2009  Poverty incidence estimated at 15.9%
<b>Purposes/Objectives</b> Increased agricultural productivity and profitability  Increased competitiveness	Restructure research organization and increase capacity to focus on value addition and quality improvements in line with market and farmer needs in the 7 agro-climatic regions of Viet Nam  Expand extension service coverage to all communes, and shift to participatory methods  Contribute to the Government's targeted export increases of 20% through increases in value addition and high-quality agro-products  Improve product responsiveness and price competitiveness by expanding the market information system  Give private sector agro-industry small and medium-sized enterprises (SMEs)	Program monitoring system at MARD with emphasis on technology relevance, transfer mechanism systems, and sample surveys of farm productivity  Program completion report  Progress reports by Asian Development Bank (ADB) review missions  Agro-industry trade statistics including type and composition  Price surveys  VBARD portfolio monitoring	Effective implementation of policy and institutional reforms under complementary programs and projects  Improved access to essential agricultural inputs  Adequate provision of rural infrastructure  Legal and institutional framework favorable to private sector's participation in place	National agriculture research system reorganized and strengthened, including focus on regional needs  National extension coverage at commune level, involving more pluralistic and participatory approaches  Functioning agriculture market information system  SME technology upgrade with the help of loan funds

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
	access to \$36 million in capital through the Vietnam Bank for Agriculture and Rural Development (VBARD)			
<b>Outputs /Components</b>  <b>A. Strengthen Science and Technology</b>  <b>1. Strengthen Agriculture Research</b>  <p>Clearly define mandates for regional and national centers. Single-discipline centers to be consolidated into national ones with compatible mandates. Clarify and, if necessary, redesign the functions and responsibilities of each of the institutes to ensure that there is no duplication of effort</p> <p>Consolidate, restructure, and merge institutes that have closely related functions to establish fewer national, regional, and specialized research institutes focusing on important agriculture problems in food crops, perennial and cash crops, livestock, postharvest and engineering, soil and water resources, forestry, and agriculture policy</p> <p>Establish standards and performance-based evaluation for agriculture research institute staff to provide financial and other rewards to good performers</p>	<p>Clarify and redesign the functions and responsibilities of 32 MARD research institutes by 2003 to avoid duplication of efforts</p> <p>Consolidate, restructure, and merge research institutes by 2005 to reduce their number and to improve their synergy and coordination; reassign surplus staff to other government agencies or provide them with a severance package</p> <p>Fully implement staff standards and performance-based evaluation by 2005; give financial and other rewards to good performers</p>	<p>Program monitoring system at MARD including external research reviews arranged by MARD; progress reports; ADB review missions; consultants' reports; user and adoption surveys by MARD</p>	<p>Government commitment to carry out policy and institutional reforms in agriculture research</p> <p>Willingness of staff of the research institutes to accept the proposed reorganization and restructuring</p> <p>Recommendations contained in the Master Plan for Agricultural Research used as a basis for reorganization</p> <p>Government's satisfactory treatment of the affected staff</p> <p>Transparency in implementing the performance-based evaluation</p>	<p>All institutional mandates rewritten, most institutes merged under umbrella of VAAS (except for three), and 4 regional institutes established</p> <p>Performance-based staff evaluation applied in all institutes</p>

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
Prioritize agricultural research toward more adaptive on-farm research, which should be undertaken in a participatory manner involving extension staff and farmers	Give high priority to participatory on-farm research in the research institutes by 2004		Research scientists provided adequate transport facilities and per diem	Participatory and adaptive research projects prioritized
Phase out the commercial activities of the research institutes, particularly the mass production and sale of certified seeds by allowing only the sale of breeder's seeds and foundation seeds (pre-basic and basic seeds) to private and public seed companies	Complete the phaseout of the commercial activities of the research institutes by 2004, except for the sale of breeder's seeds and foundation seeds; require research institutes to focus fully on their core research responsibilities		The Government's ability to provide adequate funding to research institutes to compensate for the expected revenue losses from the phaseout of commercial activities	Institutes' commercial activities
Establish a system of competitive grants for research institutes in the Ministry of Science and Technology (MOST) and MARD	Operate a system of competitive grants at MOST and MARD to increase the efficiency and quality of research; award at least 10 competitive grants yearly to research institutes by 2004		Simple and practical criteria for issuing competitive grants; transparency in awarding the grants to research institutes	Competitive grants system established and functioning
Provide autonomy to agricultural research institutes to enable them to carry out research effectively, obtain funding from other sources such as international organizations and private sector companies, provide financial incentives to research staff, and develop personnel and administrative policy in accordance with their autonomy status. MARD to develop systems of governance and review to ensure that autonomy does not lead to isolation and	Operate the agriculture research institutes as partially autonomous organizations by 2005		Willingness of the research institutes to accept the proposed autonomy; no conflicts between the autonomous research institutes and the other departments within MARD	Autonomous status for all research institutes (under VAAS)

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
<p>that the center remains responsive to national goals</p> <p>Prepare and approve a human resources development plan to strengthen agriculture research over the next 5–10 years</p> <p>Provide adequate recurrent and operating budget to agriculture research institutes by steadily increasing their allocations within 3 years</p>	<p>Approve and implement a 5- to 10-year human resources development plan by 2004; give research scientists graduate and short-term training to improve their skills and knowledge base</p> <p>Increase the budget for agriculture research by at least 12% yearly</p>		<p>Government's strong support for improving the quality of human resources in research institutes</p> <p>Government's strong support for providing adequate budget for agriculture research</p>	<p>HRD plan developed and approved</p> <p>Research and extension budgets increased by just over 12% yearly</p>
<p><b>2. Strengthen Agriculture Extension</b></p> <p>Establish a provincial extension advisory council in each province to provide a forum for stakeholder participation in preparing extension programs and other related activities</p> <p>Include representatives of farmers' associations, women's unions, cooperatives, local research institutes, extension staff, nongovernment organizations (NGOs), and private sector input suppliers in the council</p> <p>Create pluralistic extension service providers by contracting out some extension services to NGOs, universities, farmers' organizations, private companies, input</p>	<p>Establish provincial extension advisory councils in at least 20 provinces by 2004, and at least 40 provinces by 2005</p> <p>Create pluralistic extension service providers and make them operational in at least 5 provinces by 2004, and 10 provinces by 2005</p> <p>Develop clear extension strategies and priorities together with outputs, activities, monitoring indicators, and costs, and have them approved by 2004</p>	<p>Program monitoring system at MARD; progress reports; ADB review missions; consultants' reports</p>	<p>Provincial governments' agreement to involve all stakeholders in preparing extension programs and related activities</p> <p>Government's strong commitment to carry out policy and institutional reforms in agriculture extension</p> <p>Willingness of MARD and provincial governments to involve NGOs, universities, and private sector in providing extension services</p>	<p>40 PEACs established and functioning</p> <p>Government, NGOs, private sector, and researchers represented in PEACs</p> <p>Significant pluralistic elements in agriculture extension in most provinces</p>



<b>Design Summary</b>	<b>Performance Targets</b>	<b>Monitoring Mechanisms</b>	<b>Assumptions and Risks</b>	<b>Achievements</b>
suppliers, and agribusiness, where possible				
Develop extension strategies and priorities, outputs, activities, monitoring indicators, and costs	Establish mechanism to strengthen links between research and extension by 2005; researchers, extension staff, and farmers to undertake participatory on-farm research and demonstrations		MARD's clear vision for reorganizing and strengthening agricultural extension	Provincial extension strategies developed by PEACs
Prepare a mechanism to strengthen links between research and extension	Redirect training of extension staff toward a new set of skills including participatory extension methodology, marketing, postharvest activities, and rural finance by 2005		Extension staff provided adequate transport facilities and per diem to undertake on-farm research and farm demonstrations	Research institutes involved in extension as trainers and technical advisers
Redirect training of extension staff toward a new set of skills including participatory extension methodology, marketing, postharvest activities, and rural finance	Establish and institutionalize participatory extension approach in at least 10 provinces, 40 districts, and 40 communes by 2005		Improved MARD capacity to prepare the required training manuals	Regional TOT courses, training manuals recompiled and updated
Institutionalize the participatory approach in extension services in which farmers will increasingly participate in planning, implementing, monitoring, and evaluating extension activities	Hire about 1,000 new extension staff by 2005, and 4,000 more after 2005  Form more farmer groups and deliver training programs to farmers		Willingness of the provincial governments to support reforms initiated by the central Government in agriculture extension, and to replace the top-down approach with a bottom-up approach	Commune development planning, participatory agriculture extension demonstration, farmer field schools, and farmer interest groups established
Expand extension services in the districts and communes, particularly in poor provinces, by hiring 5,000 new extension staff to fill vacancies in the communes	Train about 1,000 staff in participatory extension methodology, marketing, postharvest activities, and rural finance by 2005, and 4,000 more after 2005		Adequate budget provided by MARD to the poor provinces for hiring new extension staff	6,600 commune extension workers recruited

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
Increase funding for training of extension staff and key farmers	See to it that women or ethnic minorities make up at least 10% of the newly recruited extension staff by 2005		MARD 's ability to organize a large-scale training program involving universities, NGOs, and the private sector	Over 18,000 staff trained in about 750 courses
Improve the targeting of poor, female, and ethnic groups in extension activities by increasing the number of female and ethnic-minority staff by at least 10% over a period of 30 months	Make NAEC (established through the reorganization of DAFE) operational by 2005		Government's strong support for gender balance and involvement of ethnic minorities in the poverty reduction program	Of recruited staff, 24% are female and 35% are from ethnic minorities
Reorganize the Department of Agriculture and Forestry Extension (DAFE) into the National Extension Center (NEC) and transfer its regulatory function to the legislation or policy department of MARD to limit NEC responsibility for agriculture extension	Establish a team of subject-matter specialists in the provinces to assist in training extension staff and in providing advisory services to farmers by 2006		Government's firm commitment to carry out institutional reforms in DAFE	NAEC established; now NAFEC, following merger of MARD and Ministry of Fisheries
Establish a team of subject-matter specialists, comprising experts in agronomy, horticulture, soil fertility, crop protection, livestock production, forestry, farm management, and sociology, in the provinces to assist the extension staff in providing advisory services to farmers' groups, and in training extension staff in specific skills	Increase the budget for agriculture extension by at least 12% yearly		Availability of suitably qualified graduates to fill the vacancies in the subject-matter specialist teams in the provinces	SMS teams established in 10 pilot provinces
Provide adequate recurrent and operating budget for agriculture extension by steadily increasing the budget allocation within 3 years		MARD's budget reports	Government commitment to continue increasing funds for agriculture extension	Extension budget increased by more than 12% yearly on average

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions and Risks	Achievements
<b>B. Promote Agro-industry Development</b>				
Establish and strengthen an agriculture market information system that is linked to the provinces and districts, with market information and market demand and risk analysis	Have MARD approve the plan for establishing and strengthening an agriculture market information system by 2002	Program monitoring system at MARD; progress reports; ADB review missions	Models developed by MARD that can be replicated in other parts of the country	AMIS established in 20 provinces (100 districts)
MARD to (i) terminate subsidies on hybrid maize seeds; (ii) issue letters to 4 provinces ending the subsidies on the commercial production of hybrid rice seeds (a first-tranche condition); (iii) issue letters to 18 provinces stating that poverty reduction support for poor farmers through subsidized hybrid rice seeds will be (a) limited to poor farmers identified by the communes, (b) phased out for each given farmer over a 3-crop period, and (c) limited in size and funds used for extension; and (iv) phased out for commercial production by farmers as a third-tranche condition	Establish agriculture market information system network in at least 10 provinces and 50 districts by 2004, and in 10 more provinces and 50 more districts by 2005  Terminate subsidies on commercial production of hybrid rice and hybrid maize seed by 2003  Terminate subsidies on commercial production of hybrid rice seed to farmers by 2006	Consultants' reports; user surveys by MARD; user surveys by VBARD	Adequate funds made available to MARD to establish the agriculture market information system in all 61 provinces  Phaseout and removal of subsidies, accompanied by increased focus on training and extension activities to promote use of hybrid seeds	Maize and rice seed subsidies terminated
Provide additional capital of D1.92 trillion to VBARD and reimburse VBARD for eligible nonperforming loans	Provide additional capital of D1.92 trillion to VBARD and reimburse VBARD for eligible nonperforming loans by 2005		Strong commitment of the Government to strengthen the financial performance of VBARD; VBARD's strong commitment to support the implementation of the policy reforms	D5 trillion extra capital provided
VBARD to meet the minimum core capital adequacy ratio (CAR) of 4% of its risk	VBARD to achieve the minimum core CAR of 4% of its risk assets by 2005, and		SME access to land and credit equal to that of state-owned enterprises (SOEs)	7.21% CAR in 2007

<b>Design Summary</b>	<b>Performance Targets</b>	<b>Monitoring Mechanisms</b>	<b>Assumptions and Risks</b>	<b>Achievements</b>
assets in compliance with its restructuring plan	overall CAR of 8% by 2010			
VBARD to comply with the provisions of SBV Decision 488, particularly those related to loan classification, adequate provisioning for expected loan losses, and solvency (capital adequacy) requirement	VBARD to comply with loan classification, provisioning for expected loan losses, and solvency requirements in 2003–2007		Large demand for credit by SMEs in the agro-industry sector  Active participation of privately owned SMEs in the credit program of Agriculture Sector Development Program	VBARD compliance with SBV Decision 488
Provide financial support to VBARD to enable it to forgive eligible nonperforming loans	Reimburse VBARD by 2004 for losses incurred on loans to SOEs and priority sectors		Transparent negotiation of interest rates, serving the interests of both VBARD and its borrowers	D2.4 trillion financial support financed by the Government
VBARD to extend loans with interest rates negotiated by VBARD and its borrowers	Fix lending interest rates charged by VBARD in 2003–2010 on the basis of market rates			All subloans agreed on commercial basis
<b>Inputs</b>	<b>Cost Estimates</b>	<b>Monitoring Mechanisms</b>	<b>Assumptions and Risks</b>	<b>Achievements</b>
Program loan	\$60 million in three tranches	Program monitoring system at MARD; progress reports; ADB review missions; consultants' reports	Government's timely compliance with first-, second-, and third-tranche conditions	Actual program cost was \$125.45m; program loan extended by 18 months and project loan by 24 months
Project loan	\$36.0 million credit line: ADB loan: \$30.0 million Government's contribution: \$6.0 million		Timely recruitment of consultants for support for policy loan	

ADB = Asian Development Bank, AMIS = Agriculture Market Information System, CAR = capital adequacy ratio, DAFE = Department of Agriculture and Forestry Extension, HRD = human resource development, MARD = Ministry of Agriculture and Rural Development, MOST = Ministry of Science and Technology, NAEC = National Agriculture Extension Center, NAFEC = National Agriculture and Fisheries Extension Center, NGO = nongovernment organization, PEAC = Provincial Extension Advisory Council, SBV = State Bank of Viet Nam; SMS = subject matter specialists, SOE = state-owned enterprise, TOT = training of trainers, VAAS = Vietnam Academy of Agriculture Sciences, VBARD = Vietnam Bank for Agriculture and Rural Development.

## **STRENGTHENING OF THE AGRICULTURE RESEARCH SYSTEM**

### **A. Introduction**

1. Under component A (strengthening science and technology), the agriculture research system in Viet Nam as a whole experienced a reorganization and reorientation of functions as a result of a range of policy reforms. Nineteen agriculture research institutes, centers, and universities also benefited from physical investments using loan proceeds (the budget for the upgrading of facilities at institutes, centers, universities, etc. was some \$48.64 million [D760 billion], or about 82% of the value of the Agriculture Sector Development Program [ASDP] loan).

2. This appendix summarizes the “software” of agriculture research system strengthening and the “hardware” of the physical investments in the upgrading of research facilities. An overall summary of the agriculture research strengthening under the loan concludes the appendix.

### **B. Agriculture Research System Strengthening: The Software**

3. The strengthening of the agriculture research system, in software terms, involved, among other things, (i) clarifying institutional mandates and responsibilities, and reorganizing institutions into fewer manageable structures; (ii) granting functional autonomy to such institutes; (iii) phasing out the commercial activities of the institutes; (iv) introducing uniform performance-based standards for staff evaluation; (v) preparing an overall human resources development plan for the agriculture research system; (vi) establishing a system of competitive grants for the awarding of projects; (vii) prioritizing participatory approaches to the development of agriculture research work; and (viii) increasing the overall budget for national agriculture research.

4. The following agriculture research organizations were affected: (i) Vietnam Agricultural Science Institute (VASI), restructured in 2006 as the Vietnam Academy of Agricultural Sciences (VAAS), and its high-tech demonstration area in Son La province; (ii) Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI) and its research and technology transfer center in the North Mountains; (iii) Agricultural Science Institute of North Central Vietnam (ASINCV); (iv) Agricultural Science Institute of South Central Vietnam (ASISOV); (v) National Institute of Animal Husbandry (NIAH) and the high-tech dairy-crossed cattle-raising pilot project in Ba Vi; (vi) Vietnam Institute of Agricultural Engineering and Post-harvest Technology (VIAEP); (vii) Forestry Science Institute of Vietnam (FSIV) and its North-East Forestry Science and Production Center (NEFSPC) and South-East Forestry Science and Production Center (SEFSPC); (viii) Vietnam Institute for Water Resources (VIWR); (ix) Agricultural Genetics Institute (AGI); (x) Institute of Agricultural Science of South Viet Nam (IAS) and its centers in Hung Loc and Ben Cat; (xi) Cửu Long Rice Research Institute (CLRRI) and its Secondary School for Mechanics in Agricultural Technology and Rural Development in O Mon; (xii) Southern Fruit Research Institute (SOFRI) and its South-East Horticultural Research Center (SEHORT); (xiii) Western Highlands Agro-Forestry Science Institute (WASI); (xiv) Agricultural Economics Institute, recently restructured as the Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD); (xv) Water Resources University (WRU) in Hanoi, and its branch in Ho Chi Minh City; and (xvi) Forestry University.

## 1. Clarification of Mandates and Responsibilities of Agriculture Research Institutes

5. According to commitments under the loan, 32 agriculture research institutes were to be reduced to about 25. At the end of 2008, there were 12 institutes under VAAS as shown in Table A2.1. The establishment of VAAS is seen as an effective step in identifying clearly the functions and tasks of the member institutes under its umbrella.

**Table A2.1: Member Institutes of the Vietnam Academy of Agricultural Sciences, as of 31 December 2008)**

Maize Research Institute
North Mountainous Agriculture and Forestry Sciences Institute
Agricultural Genetics Institute
Food Crops Research Institute
Technology Transfer and Extension Center (under the Food Crops Research Institute)
Fruit and Vegetable Research Institute
Plant Protection Research Institute
Soils and Fertilizers Research Institute
Plant Genetic Resources Center
Agricultural Science Institute of North Central Vietnam
Western Highlands Agro-Forestry Science Institute
Agriculture Environment Center
Agricultural Science Institute of South Central Vietnam

Source: VAAS Director, 2009

6. The Western Highlands Agro-Forestry Science Institute (WASI) and the newly established Agriculture Environment Center (AEC) were added in 2008.

7. Eight other agriculture institutes remain independent. These are the Forestry Science Institute of Vietnam (FSIV), the Vietnam Institute of Water Resources (VIWR), which has merged with the Southern Institute of Water Resources, the Institute of Policy and Strategy of Agriculture and Rural Development (IPSARD), the Vietnam Institute of Agricultural Engineering and Post-harvest Technology (VIAEP), the National Institute of Animal Sciences (NIAS), the National Institute of Veterinary Research (NIVR), the Institute of Agricultural Science of South Viet Nam (IAS), the Southern Fruit Research Institute (SOFRI), and the Cửu Long Rice Research Institute (CLRRI). The last three are set to join VAAS in 2009. In addition, there are also 5 fisheries research institutes, resulting from the 2007 merger of the Ministry of Agriculture and Rural Development (MARD) and the Ministry of Fisheries. These are the Fishery Economic and Planning Institute (FEPI), the Sea-product Research Institute (SEPRI), the Aquaculture Research Institute No. 1 (ARI), the Aquaculture Research Institute No. 2 (ARI-2), and the Aquaculture Research Institute No. 3 (ARI-3).

8. The functions and tasks of MARD science and technology organizations (STOs) have been more clearly reassigned during the process of system restructuring under ASDP.<sup>1</sup> This has reduced duplication of effort, and has also helped improve collaboration among institutions and develop integrated (multidisciplinary) projects (especially among the member institutes under VAAS, since December 2005). Overall, the science and technology system has become more efficient as a result of the simplified management organization structure, and especially the reduced effort needed to coordinate the activities of institutions undertaking similar tasks.

<sup>1</sup> Following Decision No. 930/2005/QĐ-TTg by the Prime Minister, dated 9 September 2005, approving the reorganization plan for the science and technology system under MARD.

9. The establishment of four regional agriculture science institutes under VAAS—the Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI), the Agricultural Science Institute for North Central Vietnam (ASINCV), the Agricultural Science Institute for South Central Vietnam (ASINSOV), and the Western Highlands Agro-forestry Science Institute (WASI)—has also helped to strengthen the links between research and technology transfer and extension (by helping to bridge gaps between the provinces and professional institutes), and also to reduce the previous imbalance in the distribution of science resources between the Northern Mountainous and Central provinces.

10. Most MARD institutions underwent little change in their functions. The main exceptions were (i) the technology transfer responsibilities given to VAAS after its restructuring in late 2005, and (ii) the responsibility assigned to three VAAS member regional institutes for developing long- and medium-term research strategies for their respective regions. Additionally, FSIV was made responsible for graduate and postgraduate training in forestry research and for business development, CLRRI for graduate and postgraduate training in rice research, and VIAEP for basic research, public utility research, and some commercial activities involving machinery import and export. More-integrated research tasks, including crop production, livestock production, forestry, post-harvest technology, extension, and market promotion have also been assigned to three regional institutes. These other responsibilities were recently allocated: (i) SOFRI (including SEHORT) now undertake research in vegetables, flowers, and ornamental trees; and (ii) VIAEP has taken up agricultural machinery and equipment testing, agricultural commodity quality and safety control and evaluation, and postharvest technology work on fishery and salt production.

11. Since the functions and responsibilities of institutions were clarified and redesigned by MARD, there have been no mandate overlaps between institutions. However, there are still some overlaps in research tasks between institutes under VAAS, including: (i) fruit and vegetable research (Fruits and Vegetables Research Institute [FAVRI] and the Food Crop Research Institute [FCRI]); (ii) legume research (Maize Research Institute [MRI], FCRI, and AGI); (iii) flower research (FCRI, FAVRI, and AGI); and (iv) rice breeding (FCRI, AGI, and CLRRI).

12. Perhaps the most obvious current feature of the restructuring is the position occupied by VAAS. Although it embraces a range of essentially crop-based disciplines, it is not yet a truly “agricultural” academy, and the future status of the three southern cropping institutes that were due to join VAAS but have not yet done so (as of March 2009) remains unclear. Some institutes under VAAS have expressed the view that VAAS now operates as an extra layer of administration between them and MARD (with which they used to have direct dealings), and that there is tension between the roles of VAAS and MARD. For example, VAAS is responsible for coordinating and managing the annual work plans of the institutes, and for approving and submitting bids for work to MARD and the Ministry of Science and Technology, yet the responsibility for appointing institute directors remains with MARD, and funds for science projects come directly from MARD. Similarly, VAAS has no power to move staff between institutes although it is responsible for their overall planning.

13. In general, VAAS is seen as being relatively weak in not having finance-related power commensurate with its administrative power, and many institutes would prefer to have VAAS strengthened further and become a “one-stop shop” with which they could deal on all technical and funding matters. The institutes claim this move would be consistent with Decision 782 (1996), which reorganized the agriculture research system, even though it clearly threatens the power of individual institute directors. Overall, the status of VAAS vis-à-vis both MARD and individual institutes still has to be fully settled.

## 2. Provision of Autonomy to Agricultural Research Institutes

14. Decree No. 115/2005/ND-CP (5 September 2005) from the Prime Minister provided for the autonomy of public science and technology organizations.<sup>2</sup>

15. Because of the complexity of the science and technology system of MARD, and given the ongoing restructuring of the research system and categorization of agricultural institutes, MARD started implementing Decree 115 later than other ministries. The first pilot transformation of research institutes involved the MRI (MARD Decision No.1907/QĐ-BNN-TCCB dated 3 July 2007) and the Thuy Phuong Poultry Research Center under NIAH (MARD Decision No.705/QĐ-BNN-TCCB, dated March 16, 2007).

16. By the second half of 2007, all national research institutes and centers under MARD had received decisions from VAAS making them autonomous. Table A2.2 lists the science and technology institutes along with numbers and dates of the MARD decisions.

17. The extent of the institutes' autonomy is to be reviewed in 2009 and a further decision may be expected from MARD.

**Table A2.2: Autonomous Science and Technology Organizations,  
as of 31 December 2008)**

Organization	MARD's Decision Number
<b>Vietnam Academy of Agricultural Sciences</b>	3781/QĐ-BNN-TCCB on 29/11/07
Maize Research Institute	1907/QĐ-BNN-TCCB on 03/07/07
North Mountainous Agriculture and Forestry Sciences Institute	3927/QĐ-BNN-TCCB on 11/12/07
Agricultural Genetics Institute	4020/QĐ-BNN-TCCB on 19/12/07
Food Crops Research Institute (FCRI)	3953/QĐ-BNN-TCCB on 13/12/07
Technology Transfer and Extension Center (under Food Crops Research Institute)	4018/QĐ-BNN-TCCB on 19/12/07
Fruit and Vegetable Research Institute	3982/QĐ-BNN-TCCB on 14/12/07
Plant Protection Research Institute	3981/QĐ-BNN-TCCB on 14/12/07
Soils and Fertilizers Research Institute	3927/QĐ-BNN-TCCB on 11/12/07
Plant Genetic Resources Center (PGRC)	4021/QĐ-BNN-TCCB on 19/12/07
Agricultural Science Institute of North Central Vietnam	4022/QĐ-BNN-TCCB on 19/12/07
Western Highlands Agro-Forestry Science Institute	3928/QĐ-BNN-TCCB on 11/12/07
Agriculture Environment Center	(newly established)
Agricultural Science Institute of South Central Vietnam	3922/QĐ-BNN-TCCB on 11/12/07
<b>National Institute of Animal Sciences</b>	2563/QĐ-BNN-TCCB on 04/09/07
Thuy Phuong Poultry Research Center	705/QĐ-BNN-TCCB on 16/03/07
Animal Food Research and Experiment Station	3084/QĐ-BNN-TCCB on 16/10/07
Van Phuc Poultry Research Center	3093/QĐ-BNN-TCCB on 17/10/07
Son Tay Goat and Rabbit Research Center	3067/QĐ-BNN-TCCB on 15/10/07
Livestock Research and Development Center in Mountainous areas	3071/QĐ-BNN-TCCB on 15/10/07
Dai Xuyen Duck Research Center	3068/QĐ-BNN-TCCB on 15/10/07
Ba Vi Cattle and Pasture research Center	3069/QĐ-BNN-TCCB on 15/10/07
Thuy Phuong Pig Research Center	3083/QĐ-BNN-TCCB on 16/10/07
Livestock Research and Development Center	2983/QĐ-BNN-TCCB on 09/10/07
Livestock Research and Development Center of Central Vietnam	2890/QĐ-BNN-TCCB on 02/10/07

<sup>2</sup> This came into effect 15 days after its publication in *Cong Bao*. (Government Gazette)



Organization	MARD's Decision Number
<b>Vietnam Institute of Agricultural Engineering and Post Harvest Technology</b>	3300/QĐ-BNN-TCCB on 26/10/07
Center of Agricultural Product quality testing and Standardization	3785/QĐ-BNN-TCCB on 29/11/07
Investment Consultancy and Technology Transfer Center	3788/QĐ-BNN-TCCB on 29/11/07
Machine and Equipment Appraisal Center	3784/QĐ-BNN-TCCB on 29/11/07
VIAEP Sub-Institute in Ho Chi Minh City	3787/QĐ-BNN-TCCB on 29/11/07
Agricultural Engineering Development Center	3780/QĐ-BNN-TCCB on 29/11/07
Center for Aero-hydrological Machine and Irrigation mechanization	3783/QĐ-BNN-TCCB on 29/11/07
Agricultural Engineering Technology Transfer of Central Vietnam	3786/QĐ-BNN-TCCB on 29/11/07
<b>Institute of Policy and Strategy for Agricultural and Rural Development</b>	1748/QĐ-BNN-TCCB on 15/06/07
IPSARD Representative in the South	1846/QĐ-BNN-TCCB on 27/06/07
Rural Development Center	1848/QĐ-BNN-TCCB on 27/06/07
Agriculture and Rural Development Information Center	1849/QĐ-BNN-TCCB on 27/06/07
Consulting Center for Agricultural Policy	1850/QĐ-BNN-TCCB on 27/06/07
<b>Institute of Agricultural Science in the South</b>	3432/QĐ-BNN-TCCB on 02/11/07
Dong Thap Muoi Agricultural Research and Experimental Center	4170/QĐ-BNN-TCCB on 28/12/07
Hung Loc Agricultural Research and Experimental Center	4174/QĐ-BNN-TCCB on 28/12/07
Ruminant Breeding Research and Training Center	4198/QĐ-BNN-TCCB on 28/12/07
Binh Thang Livestock Research and Training Center	4197/QĐ-BNN-TCCB on 28/12/07
Agricultural Technology Transfer Center	4171/QĐ-BNN-TCCB on 28/12/07
Da Lat Potato-Vegetable-Flower Research Center	4175/QĐ-BNN-TCCB on 28/12/07
Sugar cane Research and Development Center	4172/QĐ-BNN-TCCB on 28/12/07
<b>Cửu Long Rice Research Institute (CLRRI)</b>	2675/QĐ-BNN-TCCB on 13/09/07
<b>Southern Fruit Research Institute (SOFRI)</b>	2565/QĐ-BNN-TCCB on 04/09/07
South-East Horticultural Research Center (SEHORT)	2564/QĐ-BNN-TCCB on 04/09/07
<b>Forestry Science Institute of Vietnam (FSIV)</b>	2681/QĐ-BNN-TCCB on 14/09/07
Lam Dong Sylviculture Research and Experiment Center	3728/QĐ-BNN-TCCB on 26/11/07
Research Center of Non-timber	3581/QĐ-BNN-TCCB on 13/11/07
Research Center of Forest Ecology and Environment	3579/QĐ-BNN-TCCB on 13/11/07
Cau Hai Sylviculture Research and Experiment Center	3577/QĐ-BNN-TCCB on 13/11/07
Tropical Forestry Center	3572/QĐ-BNN-TCCB on 13/11/07
Research and Sylviculture Center in North-Eastern Area	3574/QĐ-BNN-TCCB on 13/11/07
Research and Sylviculture Center in South-Eastern Area	3573/QĐ-BNN-TCCB on 13/11/07
Research and Sylviculture Center in North-Western Area	3580/QĐ-BNN-TCCB on 13/11/07
Minh Hai Center for Research and Application of Mangrove Forest farming Practices	3575/QĐ-BNN-TCCB on 13/11/07
Forest Science Sub-Institute in the South	3583/QĐ-BNN-TCCB on 13/11/07
Research and Sylviculture Center in North Central area	3578/QĐ-BNN-TCCB on 13/11/07
Research Center of Forest Tree Seed	3582/QĐ-BNN-TCCB on 13/11/07
Research and Technology Center of Forest Industry.	3576/QĐ-BNN-TCCB on 13/11/07
Center of Sylvicultural Technology Transfer	3623/QĐ-BNN-TCCB on 16/11/07
Forestry Biotechnology Center	3726/QĐ-BNN-TCCB on 26/11/07
<b>Institute of Veterinary Research</b>	3782/QĐ-BNN-TCCB on 29/11/07
Sub-Institute of Veterinary Research in the Center	1847/QĐ-BNN-TCCB on 27/06/07

Source: ASDP Completion Report (draft; Scanagri, 2008)

### 3. Phaseout of Commercial Activities of Research Institutes

18. ASINCV, IAS, VIAEP, NEFSPC, SEFSPC, Forest University, Plant Genetic Resources Center (PGRC), Water Resources University–Hanoi, Water Resources University–Ho Chi Minh City, and the Secondary School for Mechanics in Agricultural Technology and Rural Development do not have any commercial activities (e.g., sale of cultivated seed). Other

institutions have also stopped commercial activities and have transferred these to science and technology affiliates that operate under commercial or enterprise laws. Such agencies may produce seeds for further multiplication, as land for bulk production at the research institutes is very limited.

#### **4. Staff Standards and Performance-Based Evaluation**

19. All MARD institutions now use staff standards guidance from the Ministry of Science and Technology and MARD to evaluate their staff (based on a pilot scheme in VIAEP, developed under TA-4105, and approved by MARD in October 2005). Institutions regularly implement semiannual staff performance-based evaluation. All of them provide different levels of incentives to “good” and “excellent” performers, consisting not only of financial rewards (e.g., semiannual and annual bonuses, merit increases before agreed terms), but also of nonmonetary rewards (such as certificates of merit, title promotions, and priority in training).

20. However, the current system has come under criticism: (i) performance is assessed by level and type of staff, with no technical differentiation; (ii) detailed terms of reference often do not exist; and (iii) assessment criteria are promotion-focused and not performance-based.

21. The majority of the institutes had no surplus staff to be reassigned to other government agencies or provided with a severance package in the course of reorganization. Only 10 staff of the former VASI voluntarily left employment and thereby benefited from the severance package for redundancies.<sup>3</sup>

#### **5. Human Resources Development and Training**

22. Staff training contributes to an improved (updated and extended) national agriculture science knowledge base as well as to the qualifications and skill of individual researchers. In this context, MARD held a series of consultations to formulate a human resources development (HRD) plan to strengthen agricultural research, and approved the plan on 24 October 2005.<sup>4</sup> Individual institutes have also prepared their own HRD plans (e.g., VAAS has a plan for its nearly 3,000 staff for 2006–2010).

23. Within the national agriculture research institute system, only national institutes are provided with graduate and postgraduate training, while non-national institutions send their own research scientists to other institutes. Short-term training is conducted by all research institutes. Funding for the graduate and postgraduate training comes from different sources, including (i) government budgets allocated for a national program of training, (ii) the ministry budget, and (iii) international cooperation projects and programs. Funding for short-term training usually comes from the ministry budget, and also from international projects.

24. To give an idea of the depth and scale of human resources development within the agriculture research system, VAAS, for example, has 88 PhDs (32 qualified overseas) and 113 staff with MSc degrees (88 from abroad), while VIAEP has 23 PhDs (10 from abroad) and 58 staff with MSc degrees (13 from abroad). Between 2003 and 2007, 754 received graduate (for the majority) or postgraduate training, and 1,783 went through short-term training.<sup>5</sup>

<sup>3</sup> Under the Government's Resolution No.16/2000/NQ-CP of 18 October 2000 on the streamlining of administrative agencies and nonbusiness units and Resolution No. 09/2003/NQ-CP of 28 July 2003 amending and supplementing the Government's Resolution No. 16/2000/NQ-CP. The same policy applied to some redundant staff of VIAEP following the new Government Decree No. 132/ND-CP.

<sup>4</sup> Decision 2889/QĐ/BNN-KHCN 24. This was also a tranche condition.

<sup>5</sup> No data were available from HCMWRU or SEFSPC.

**Table A2.3: Number of Research Scientists Undertaking Postgraduate and Short-Term Training, 2003–2007**

<b>Institution</b>	<b>Postgraduate Training</b>	<b>Short-Term Training</b>
AGI	11	22
ASINCV	14	04
ASISOV	16	40
CLRRI	74	162
Forest University	84	500
FSIV	21	250
HWRU	113	208
IAS	17	88
NEFSPC	05	15
NIAH	41	56
NOMAFSI	15	25
PGRC	11	02
SEHORT	07	25
SOFRI	15	50
VAAS	113	161
VIAEP	58	NR
VIWR	125	155
WASI	14	20
<b>Total</b>	<b>754</b>	<b>1,783</b>

AGI = Agricultural Genetics Institute, ASINCV = Agricultural Science Institute of North Central Vietnam, ASISOV = Agricultural Science Institute of South Central Vietnam, CLRRI = Cửu Long Rice Research Institute, FSIV = Forestry Science Institute of Vietnam, HWRU = Water Resources University–Hanoi, IAS = Institute of Agricultural Science of South Viet Nam, NEFSPC = North-East Forestry Science and Production Center, NIAH = National Institute of Animal Husbandry, NOMAFSI = Northern Mountainous Agriculture and Forestry Science Institute, PGRC = Plant Genetics Resource Centre, SEHORT = South-East Horticultural Research, SOFRI = Southern Fruit Research Institute, VAAS = Vietnam Academy of Agricultural Sciences, VIAEP = Vietnam Institute of Agricultural Engineering and Post-harvest Technology, VIWR = Vietnam Institute of Water Resources, WASI = Western Highlands Agro-Forestry Science Institute.

Source: Institutes' survey, 2008

## **6. Establishment of a System of Competitive Grants in the Ministry of Science and Technology and the Ministry of Agriculture and Rural Development**

25. A system of competitive research grant allocations was started in 2004. Among 18 institutions that responded to a survey questionnaire for MARD's own assessment of the program loan, the total number of competitive research subjects implemented by MARD institutions was 110 at national level and 331 at ministerial level, with a total value of D386,986 million (\$24.3m).<sup>6</sup> Table A2.4 shows that VAAS covered the largest number of subjects, with 34 national and 75 ministerial grants, followed by VIAEP with 22 national and 26 ministerial grants and the largest fund received (D64,917 million) (\$4.1m). Four institutions got no national and ministerial competitive research subjects (IAS, WASI, NEFSPC, PGRC), and one (ASISOV) got only a ministerial competitive research subject.

<sup>6</sup> To the end of 2007. From the survey, three agriculture research institutions failed to respond.

**Table A2.4: Number of Research Subjects  
Implemented through Competitive Grants, 2004–2007**

Institution	Number of Subjects		Total Fund (D million)
	National	Ministerial	
AGI	09	10	50,900
ASINCV	01	03	2,900
ASISOV	0	01	2,000
CLRRI	0	2	3,800
Forest University	05	78	25,854
FSIV	02	08	26,000
HWRU	14	53	43,955
IAS	0	0	0
NIAH	09	22	37,950
NEFSPC	0	0	0
NOMAFSI	06	20	40,000
PGRC	0	0	0
SEHORT	02	10	2,897
SOFRI	1	1	2,400
VAAS	34	75	48,630
VIAEP	22	26	64,917
VIWR	05	22	34,783
WASI	0	0	0
<b>Total</b>	<b>110</b>	<b>331</b>	<b>386,986</b>

AGI = Agricultural Genetics Institute, ASINCV = Agricultural Science Institute of North Central Vietnam, ASISOV = Agricultural Science Institute of South Central Vietnam, CLRRI = Cửu Long Rice Research Institute, FSIV = Forestry Science Institute of Vietnam, HWRU = Hanoi Water Resources University, IAS = Institute of Agricultural Science of South Viet Nam, NIAH = National Institute of Animal Husbandry, NEFSPC = North-East Forestry Science and Production Center, NOMAFSI = Northern Mountainous Agriculture and Forestry Science Institute, PGRC = Plant Genetics Resource Centre, SEHORT = South-East Horticultural Research, SOFRI = Southern Fruit Research Institute, VAAS = Vietnam Academy of Agricultural Sciences, VIAEP = Vietnam Institute of Agricultural Engineering and Post-harvest Technology, VIWR = Vietnam Institute of Water Resources, WASI = Western Highlands Agro-Forestry Science Institute.

Source: institutes' survey, 2008

26. Overall, this new funding system has made institutions more competitive and responsive in improving the quality of research and technology transfer, especially in on-farm research, thereby meeting national and ministerial targets (and farmers' needs) better.

27. The major problems confronting the competitive grant funding system are (i) how best to make a broad range of research institutions (public, private, nongovernment organizations) aware of the procedures for gaining access to the information they need to prepare their bids, and (ii) how the MARD Department of Science and Technology should best organize different appraisal committees composed of senior and leading scientists in various fields of research. Institutes are variously able to bid for work (SOFRI was especially successful in 2008, with 30% of its work coming from these sources), and the unpredictability of bid outcomes can make managing work planning quite difficult for smaller institutions.

## 7. Prioritization of Participatory On-Farm Adaptive Research by Institutions

28. Participatory characteristics have become compulsory criteria for the appraisal of research projects not only at national and ministerial level but also at the individual institutional level. This contrasts with the previous situation, where purely science considerations predominated. Institutions promote on-farm research in different ways, including (i) encouraging the participation of researchers in technology transfer and extension (e.g., through the establishment of technology transfer units); (ii) promoting research projects to be implemented by regional institutes, research centers, and universities and colleges according to local or regional production demand; and (iii) involving farmers and extension workers in problem identification and work planning. Recent examples of such participatory work projects are NOMAFSI's work in the adaptation of mountainous rice and ASINCV's work in short-duration rice.

## 8. Budget Allocations for Agriculture Research Institutes

29. The budget for the agriculture research system as a whole increased at an average rate of just over 12% yearly during the implementation period, meeting the loan commitment made by the Government to the Asian Development Bank.

30. Table A2.5 (below, containing data from a survey in early 2008) shows that the extent of budget increases varied between institutions and from year to year. The increase between 2004 and 2005 was relatively slight (only about 1.5% overall) because the period was within the 2001–2005 5-year plan, meaning that no new research projects could be added until the new plan period had begun. Obviously this rate of increase was more than made up for by allocations in later years. Between 2006 and 2007, the budget allocation for VAAS increased by 3%, SOFRI's by nearly 33%, FSIV's by nearly 35%, and VIAEP's by 12%.

**Table A2.5: Budget Allocation for Agriculture Research, by Institution, 2004–2008**

Institution	Budget Allocation, by Year (D million)			
	2004	2005	2006	2007
AGI	9,885	11,687	7,728	19,854
ASINCV	700	800	2,000	2,300
ASISOV	4,597	4,630	4,550	6,100
CLRRI	3,760	3,515	6,700	11,730
Forest University	1,200	1,500	4,000	7,000
FSIV	8,100	7,600	17,800	24,000
HWRU				
HCMWRU				
IAS	12,984	20,372	9,893	10,055
NEFSPC	527	49	567	594
NIAH	NR	NR	27,306	39,600
NOMAFSI	18,071	17,874	11,528	19,121
PGRC	1,981	1,948	2,815	3,305
SEHORT	1,543	1,705	2,070	1,902
SEFSPC				
SOFRI	1,760	1,310	2,570	3,410
VAAS			58,932	81,414
VIAEP	15,000	15,850	16,900	19,000
VIWR	24,737	17,514	23,100	24,600
WASI	2,250	2,400	3,975	3,600

AGI = Agricultural Genetics Institute, ASINCV = Agricultural Science Institute of North Central Vietnam, ASISOV = Agricultural Science Institute of South Central Vietnam, CLRRI = Cũu Long Rice Research Institute, FSIV = Forestry Science Institute of Vietnam, HWRU = Hanoi Water Resources University, HCMWRU = Water Resources University–Ho Chi Minh City, IAS = Institute of Agricultural Science of South

Viet Nam, NEFSPC = North-East Forestry Science and Production Center, NIAH = National Institute of Animal Husbandry, NOMAFSI = Northern Mountainous Agriculture and Forestry Science Institute, PGRC = Plant Genetics Resource Centre, SEHORT = South-East Horticultural Research, SEFSPC = South-East Forestry Science and Production Center, SOFRI = Southern Fruit Research Institute, VAAS = Vietnam Academy of Agricultural Sciences, VIAEP = Vietnam Institute of Agricultural Engineering and Post-harvest Technology, VIWR = Vietnam Institute of Water Resources, WASI = Western Highlands Agro-Forestry Science Institute.

Source: institutes' survey, 2008

31. The overall agriculture research budget increased by 15.07% in 2006 and by 13.37% in 2007, and—following the merger of MARD with the Ministry of Fisheries—the research budget increased by 9.85% in 2009 over the previous year's budget.

### C. Agriculture Research System Strengthening: The Hardware

32. Under the program loan, 19 investment subprojects involving the upgrading of the physical facilities of the agriculture research system were approved<sup>7</sup> and implemented.

33. The investment project funds originally allocated totalled \$48.64 million (D760 billion). Eleven institutions had started implementing investments by late 2005, and the others started after that. Funds were used for investment preparation (civil works design, land compensation, etc.) and for the procurement of equipment. Total annual expenditure on civil works and equipment between 2005 and 2008 is shown in Table A2.6.

**Table A2.6: Summary of Expenditure on Upgrading Research Facilities, by Year and Cost Category**  
(D million)

Year	Total	Civil Works	Equipment
2005	67,890	26,426	41,164
2006	87,452	66,525	20,927
2007	184,163	165,284	18,879
2008	256,062	223,829	32,233

Source: institutes' survey, 2008

34. These investments have been grouped under three main types: (i) the construction and upgrading of physical facilities of regional agro-forestry institutes, (ii) the construction and completion of key laboratories, and (iii) agriculture research and transfer of advanced technologies. The investment projects are summarized in Table A2.7.

35. By the end of 2008, 12 institutions had finished implementing their investment projects, but the savings on the original budgets for 8 of these institutions remained to be transferred to their 2009 expenditures. By the end of 2009, other institutions are expected to complete investment implementation (with a total expected investment in 2009 of D109,978 million, (\$6.9m) D98,750 million (\$6.2m) of this amount being for civil works and D11,228 million (\$0.7m) for equipment).<sup>8</sup>

<sup>7</sup> Official Letter No.688/TTg-QHQT from the Prime Minister, dated 3 June 2005.

<sup>8</sup> Construction completed by 30 June 2009 and funds to be disbursed by 31 December 2009.

**Table A2.7: Summary of Agriculture Research Investment Projects**

Investment Project	Fund Allocation	
	D billion	\$ million
<b>Investment Projects for Construction and Upgrading of Physical Facilities of Regional Agro-Forestry Institutes</b>	<b>90.0</b>	<b>5.76</b>
Construction and upgrading of North Mountainous Agro-Forestry Research Institute	30.0	1.92
Construction and upgrading of Agricultural Science Institute of South Central Vietnam	30.0	1.92
Construction and upgrading of Agricultural Science Institute of North Central Vietnam	30.0	1.92
<b>Investment Projects for Construction and Completion of Key Laboratories</b>	<b>100.0</b>	<b>6.40</b>
Additional Fund for Animal Cell Technology Laboratory under NIAH	43.0	2.75
Additional Fund for River and Coastal Engineering Key Laboratory under VIWR	45.0	2.88
Additional Fund for Key Laboratory under AGI	12.0	0.77
<b>Investment Projects for Agriculture Research and Transfer of Advanced Technologies</b>	<b>570.0</b>	<b>36.48</b>
VASI (now VAAS)	68.0	4.35
▪ VASI central office and auxiliary works	21.0	1.34
▪ National Crop Gene Bank and National Genetic Resources preservation system	27.0	1.73
▪ Physical facilities for Research and Technology Transfer Center in the North Mountains	10.0	0.64
▪ Construction of hi-tech demonstration area	10.0	0.64
NIAH:	38.0	2.43
▪ Improvement , upgrading of experimental station at NIAH	11.0	0.70
▪ Hi-tech diary crossed cattle raising pilot at Ba Vi	27.0	1.73
VIAEP:	68.0	4.35
▪ Construction, completion of experiment areas and laboratories of VIAEP and its centers (measurement, testing and control of agricultural machinery, agro-processing and preservation workshop, specimen stock warehouse)	68.0	4.35
FSIV:	48.0	3.07
▪ Additional fund for FSIV projects (laboratory equipment) in Hanoi	8.0	0.51
▪ Upgrading of North-East Research and Sylviculture Center	10.0	0.64
▪ Upgrading of South-East Research and Sylviculture Center	10.0	0.64
▪ Establishment of three key laboratories on forest biotechnology, physiology, ecology and environment, wood processing and conservation.	20.0	1.28
VIWR:	25.0	1.6
▪ Additional fund for construction of Modelling Station on River and Coastal Engineering and Water Resources hi-tech at Hoa Lac	25.0	1.6
AGI:	46.0	2.94
▪ Additional fund for expansion and completion of AGI facilities in Hanoi	31.0	1.98
▪ Upgrading of irrigation system of AGI sub-institute at Van Giang	15.0	0.96
IAS:	66.0	4.22
▪ Additional fund for IAS facilities completion in HCM city	12.0	0.77
▪ Equipment of IAS Labs.	15.0	0.96
▪ Additional fund for upgrading irrigation system of Hung Loc and Ben Cat centers	17.0	1.09
▪ Establishment of Ruminants Research and Training Center at Ben Cat	22.0	1.40
CLRRI:	45.0	2.88
▪ Additional fund for improvement of institute facilities in O Mon	24.0	1.54
▪ Additional fund for completion of upgrading the Secondary School for Mechanics in Agricultural Technology and Rural Development in O Mon	21.0	1.34
SOFRI:	26.0	1.66
▪ Establishment of Technology Transfer Center in Tiền Giang	14.0	0.90
▪ Completion of Fruit Experiment Station in Tiền Giang	4.0	0.25
▪ Upgrading of Eastern South Fruit Research Center in Vũng Tàu)	8.0	0.51
WASI:	20.0	1.28
▪ Investment for completion of WASI physical facilities	20.0	1.28
Forestry University:	39.0	2.50
▪ Additional fund for completion of Forest University physical facilities	39.0	2.50
Water Resources University:	66.0	4.22
▪ Construction of Universal Auditorium in Hanoi	20.0	1.28
▪ Additional fund for HCMWRU, first phase	26.0	1.66
▪ Additional fund for HCMWRU, second phase	20.0	1.28

Investment Project	Fund Allocation	
	D billion	\$ million
AEI (IPSARD):	15.0	0.96
▪ Construction of AEI new office in Hanoi	15.0	0.96
<b>Total</b>	<b>760.0</b>	<b>48.64</b>

AEI = Agriculture Economics Institute; AGI = Agricultural Genetics Institute; CLRRRI = Cửu Long Rice Research Institute; FSIV = Forest Science Institute Of Vietnam; HCMWRU = Water Resources University–Ho Chi Minh City, HCM = Ho Chi Minh, IAS = Institute of Agricultural Science of South Viet Nam, IPSARD = Institute for Policy and Strategy in Agriculture and Rural Development; NIAH = National Institute For Animal Health, SOFRI = Southern Fruit Research Institute, VAAS = Vietnam Academy of Agricultural Sciences, VASI = Vietnam Agricultural Science Institute, VIAEP = Vietnam Institute for Agriculture Engineering and Post Harvest Technology, VIWR = Vietnam Institute of Water Resources, WASI = Western Highlands Agriculture Research Institute

Source: Institutes' survey, 2008

36. Overall investment implementation progress by institution, showing approved amounts and actual expenditures by year and category (civil works or equipment), is summarized in Table A2.8.

37. All the selected institutions and their affiliates are the investment owners of their subprojects. The investment projects and subprojects were managed and implemented by an investment project management unit (IPMU) with a unit head, an accountant, and support staff. Many institutions reported delays in the construction of civil works and the procurement of equipment during implementation. Several institutions started implementing their investment subprojects late: six in 2006 (VAAS, AGI, PGRC, SEHORT, SEFSPC, and NEFSPC), three in 2007 (ASINCV, NOMAFSI, and Water Resources University–Hanoi), and one in 2008 (WASI). Delays were reportedly due to (i) the complex and time-consuming process of appraisal and of approval of construction design, obtaining cost estimates, the listing and technical specification of equipment, etc.; (ii) the relative inexperience of procurement staff of the IPMU; (iii) the ongoing restructuring of the STO system process (in the case of VAAS, AGI, ASINCV, and NOMAFSI); and (iv) the steady increase in the unit cost of construction materials and labor (15–20%). Lengthy negotiations between institutes and contractors ensued, with resubmissions to MARD for consideration and approval, and (typically) the use of contingency funds.

38. Most reported problems in the procurement process itself related to achieving full compliance with national and international competitive bidding processes as required by MARD, given the inexperience of PIU and IPMU staff. Research institutes did not report any problems relating to the procurement procedures of the Asian Development Bank. The majority of the research institutions reported reasonable supplier and contractor performance, with only minor issues in construction quality still needing to be addressed. Again, most contractual difficulties related to civil works cost readjustments; if negotiations stalled or failed, construction would slow down or stop temporarily until agreement was reached.

39. To ensure construction progress and quality, all the institutions recruited construction monitoring consultants to enhance the monitoring and supervision done by its IPMU. Measures carried out to ensure smooth continuity of the investment program varied across institutions, but general recommendations for managing future investments would include (i) further training staff in project planning, management, monitoring, supervision, evaluation, procurement, and financial management; (ii) maintaining the IPMU throughout the project implementation cycle and beyond project completion; (iii) regularly updating official documentation relating to official development assistance (ODA) projects, particularly for civil works procurement; and (iv) assigning a staff member or team to be permanently responsible for the regular maintenance of all facilities constructed.



40. During the implementation of ASDP, MARD made some adjustments in the original allocation and plan, e.g., removing the construction of the high-tech dairy-crossed cattle-raising pilot in Ba Vi (under the NIAH subproject, and with a cost of D27,000 million) (\$1.8 million) and using the funds for other subprojects, and allocating funds for the construction of the new IPSARD office (costing D15,000 million) (\$0.9 million).

#### **D. Agriculture Research System Strengthening: A Summary**

41. Viet Nam's agriculture research system has undergone significant strengthening under the ASDP. The following are the main features of the work done to strengthen the system:

- (i) The policy and institutional reforms—the reorganization of institutions, the clarification of mandates, the introduction of performance-based evaluation and competitive grants, etc.—have collectively helped to modernize the agriculture research system, making it more participatory and responsive to the country's needs, more relevant, and more regionally specific, and have reduced overlaps in purpose and functions between institutions.
- (ii) The policy and institutional reforms, however, remain a work in progress, with the relative power and authority of VAAS in relation to MARD being somewhat unclear, reviews of the institutes' autonomy still in progress or being planned, the status of several institutions vis-à-vis their membership in VAAS being similarly uncertain at present, the ability of individual institutions to both win and implement competitively awarded projects remaining doubtful, and some institutions complaining of now dealing with more, rather than less, bureaucracy than previously.
- (iii) The major investments in physical works to upgrade research facilities has definitely released some previously binding constraints by improving the quantity and quality of scientific research work that can be done, but fundamental structural and systemic problems remain on the "software" side with regard to attracting and retaining scientists (who can command much higher remuneration in the private sector). The physical upgrading program was therefore a necessary, but not sufficient, condition for the strengthening of the research system.<sup>9</sup>
- (iv) There were delays in the construction of works, but most implementation problems related to cost inflation rather than administrative or technical issues. The overall increase in local costs was offset by the increase in the dollar value of the loan denominated in special drawing rights.

42. Despite the substantial investments made under ASDP, problems remain: (i) the aggregate level of agricultural research activity in Viet Nam is still modest (in regional terms); (ii) most researchers are still not well connected internationally; (iii) many projects are very small in scale; (iv) government salary norms are low; (v) institutes are overstaffed with unqualified staff; (vi) procedures for contract involvement and financial processing are overly complex; and (vii) there is still a major need for human resources development. In other words, despite the progress achieved under ASDP, a significant unfinished agenda for the full modernization of Viet Nam's agriculture research system remains.

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<sup>9</sup> The example of the Forestry University is relevant here. The university has had a significant upgrade in a range of equipment, but has no budget for the training of university staff in its use.

**Table A2.8: Investment Implementation Progress with ASDP Funds (as of 31 December 2008)**

Institution	Fund Approved (D million)	Implementation (D million)												Completion Date
		Total Expenses		2005		2006		2007		2008		2009		
		CV+EQ	Year	CV	EQ	CV	EQ	CV	EQ	CV	EQ	CV	EQ	
AGI	58,000	34,441	2008			9,074		10,367		15,000		23,560		31 Dec 2009
ASINCV	30,000	13,958	2008					3,958		10,000		14,613	1,429	31 Dec 2009
ASISOV	30,000	20,427	2008	1,583	877	1,271	117	1,579		15,000		6,573	3,000	31 Dec 2009
CLRRI	24,000	24,000	2008	5,900		5,200	1,550	6,700		4,650				31 Mar 2008
Forest University	39,000	37,843	2008		2,492	8,481	3,375	2,700	11,795	8,250	750	+1,157		31 Dec 2008
FSIV	28,000	26,446	2008		3,195	2,675	3,590	5,797		3,189	8,000	+1,554		31 Dec 2009
HWRU	20,000	20,000	2008					6,500		13,500				30 Jun 2008
HCMWRU	46,000	44,997	2008	8,000			1,800	12,497			22,700		1,003	31 Dec 2008
IAS	66,000	58,350	2008	3,318		12,894		25,771		16,367		+7,650		31 Dec 2008
NEFSPC	17,000 <sup>c</sup>	13,377	2008			2,675	523	2,179		8,000		+3,623		31 Dec 2008
NIAH	54,000	54,000	2008		34,900		8,100	7,000	4,000					31 Dec 2008
NOMAFSI	40,000 <sup>b</sup>	19,000	2008					4,000		15,000		11,000		31 Dec 2009
PGRC	27,000	17,550	2008			50		500		17,000		9,450		31 Dec2009
SEFSPC	10,000	8,509	2008			1,808	298	4,505	736	913	249	+1,491		31 Dec 2008
SEHORT	8,000	6,967	2008				477	4,365		1,591	534	+1,033		31 Jun 2008
SMATARD	21,000	17,635	2008				1,097	4,593	2,348	808		+3,365		31 Dec 2007
SOFRI	18,000	18,000	2008	55		402		5,573		11,971				31 Dec 2008
VAAS	31,000 <sup>a</sup>	21,543	2008			2,343		10,200		9,000				31 Jul 2008
VIAEP	68,000	58,523	2009	145		3,878		25,000		29,500		9,477		30 Jun 2009
VIWR	70,000	70,000	2008	7,425		6,985		21,500		34,090				30 Jun 2009
WASI	20,000	10,000	2008							10,000		4,204	5,796	31 Dec 2009
Total	725,000 <sup>d</sup>	595,566		26,426	41,464	66,525	20,927	165,284	18,879	223,829	32,233	98,750	11,228	
Year Total				67,890		87,452		184,163		256,062		109,978		

AGI = Agricultural Genetics Institute, ASINCV = Agricultural Science Institute of North Central Vietnam, ASISOV = Agricultural Science Institute of South Central Vietnam, CLRRI = Cũu Long Rice Research Institute, FSIV = Forestry Science Institute of Vietnam, HWRU = Hanoi Water Resources University, HCMWRU = Water Resources University–Ho Chi Minh City, IAS = Institute of Agricultural Science of South Viet Nam, NEFSPC = North-East Forestry Science and Production Center, NIAH = National Institute of Animal Husbandry, NOMAFSI = Northern Mountainous Agriculture and Forestry Science Institute, PGRC = Plant Genetics Resource Centre, SEFSPC = South-East Forestry Science and Production Center, SEHORT = South-East Horticultural Research, SMATARD = Secondary School for Mechanics in Agricultural Technology and Rural Development, SOFRI = Southern Fruit Research Institute, VAAS = Vietnam Academy of Agricultural Sciences, VIAEP = Vietnam Institute of Agricultural Engineering and Post-harvest Technology, VIWR = Vietnam Institute of Water Resources, WASI = Western Highlands Agro-Forestry Science Institute.

<sup>a</sup> Including D10,000 million for the construction of hi-tech demonstration area in Hải Dương.

<sup>b</sup> Including D10,000 million of physical facilities for Research & Technology Transfer Center in the North Mountains under NOMAFSI.

<sup>c</sup> D7,000 million additional from NIAH subproject.

<sup>d</sup> Including 7D,000 million transferred from NIAH subproject.

Source: Institutes' Survey, 2008

## **STRENGTHENING OF THE AGRICULTURE EXTENSION SYSTEM**

### **A. Introduction**

1. The funds from the Agriculture Sector Development Program (ASDP) program loan were used to (i) support the establishment of provincial extension advisory councils (PEACs) in the 40 participating provinces (D10 billion) (\$0.63m); (ii) increase the budget of these provinces, especially poor provinces, to allow them to hire 6,000 more commune extension workers (CEWs) (D43 billion) (\$2.7m); and (iii) strengthen the capacity of the extension system (D74 billion (\$4.6m), D14 billion (\$0.9m) of which was used for building the head office of the National Agricultural Extension Center [NAEC], and D60 billion (\$3.8m) for strengthening the capacity of NAEC itself and of the least developed among the 40 participating provinces). The total budget for extension was therefore D127 billion (\$8m), or about 14% of the value of program loan.

2. The extension component under the program loan is described in this appendix largely according to the program framework, from the establishment of PEACs, the achievement of more pluralistic services and better prioritized extension strategies with stronger links to research, staff training and the use of participatory extension techniques, and the recruitment of more CEWs to the pilot-testing of subject-matter specialist (SMS) teams.<sup>1</sup> The establishment of a national extension center and the overall budget situation are then discussed, together with a summary assessment of the implementation experience overall.

### **B. Establishment of Provincial Extension Advisory Councils**

3. PEACs were set up in the 40 participating provinces in two stages. In stage 1, the minister of agriculture and rural development issued approval<sup>2</sup> for the establishment of PEACs in 20 provinces—Bà Rịa–Vũng Tàu, Bắc Giang, Bình Định, Cao Bằng, Đồng Tháp, Hà Tây, Hà Giang, Hà Tĩnh, Hoà Bình, Hưng Yên, Kiên Giang, Lạng Sơn, Long An, Nghệ An, Ninh Thuận, Phú Thọ, Phú Yên, Quảng Nam, Sóc Trăng and Tiền Giang. These PEACs were in place by April 2005. The second stage began in 2006<sup>3</sup> with the minister's approval for the establishment of PEACs in the provinces of Bến Tre, Trà Vinh, Cà Mau, Bắc Cạn, Bắc Ninh, Bến Tre, Bình Phước, Bình Thuận, Cà Mau, Đắk Lắk, Đắk Nông, Điện Biên, Hải Dương, Kon Tum, Lai Châu, Lào Cai, Nam Định, Quảng Ngãi, Quảng Trị, Thanh Hóa, Thừa Thiên–Huế, Trà Vinh and Yên Bái. All of the PEACs in this second group were in place before the end of 2006. The PEAC members came from various organizations including management, extension, research, education, and mass organizations, as well as state-owned and private companies, banks, nongovernment organizations (NGOs), and farmers' organizations. Table A3.1 summarizes the membership composition by province.

4. The primary purpose of the PEAC was to play a consultative role to the provincial people's committee (PPC). As such, the PEACs have variously (i) identified provincial priorities in agricultural production and extension planning, (ii) proposed policies and mechanisms for strengthening extension systems (especially grassroots extension networks), (iii) identified the main crops and animals in each province with competitive advantages in commercial production, (iv) provided advice on marketing strategies for agro-products (and devised trade names for some main products), (v) suggested measures to extend the scale of new participatory extension methodologies, (vi) put forward specific extension programs for poor and ethnic farmers, and (vii) proposed training strategies for extension staff.

<sup>1</sup> Some of the material in this appendix comes from MARD's own survey-based assessment of the Program in early 2008.

<sup>2</sup> Decision No 2625 QD/BNN-KNKL, 6 August 2003.

<sup>3</sup> Decision No 1582 QD/BNN-KHCN, 1 June 2006.

**Table A3.1: Composition of Provincial Extension Advisory Council by Province**

Provinces	Total member of PEAC(person)	Of which, from												
		State management sector (DARD, PDOF, PDOPI, Sub-Dept. of plant protection, animal health...)	PAEC, Center of aquaculture, center of plant breeding, center of animal breeding.	Research institutes/centers	Universities, colleges,	Politric/mass organizations (farmer union, women union, youth organization...)	District level (Division of Economy under DPC, district extension station...)	SOE	Private/join-stock companies	Banks, Treasuries...	NGO	Commune level; farmer organizations (cooperatives, extension clubs...)	Farm owners, progress farmers	Mass media (newspapers, TV)
Lai Châu	17	8	3	0	0	3	0	0	1	1	0	1	0	0
Điện Biên	15	8	1	0	0	2	0	2	0	0	0	2	0	0
Lào Cai	15	3	4	0	1	3	1	1	0	1	0	0	0	1
Hà Giang	15	6	3	0	1	3	0	0	1	1	0	0	0	0
Cao Bằng	14	2	3	0	1	3	0	0	1	1	1	2	0	0
Bắc Cạn	14	6	4	0	0	3	0	0	0	1	0	0	0	0
Yên Bái	15	4	6	0	1	2	1		1	0	0	0	0	0
Lạng Sơn	15	2	4	0	1	4	0	0	2	1	0	0	1	0
Hòa Bình	20	9	4	1	1	1	0	1	0	1	2	0	0	0
Phú Thọ	15	2	2	1	1	4	1	2	0	1	0	0	1	0
Bắc Giang	17	3	5	0	1	2	1	1	1	1	0	1	1	0
Bắc Ninh	17	5	3	0	0	3	2	0	2	0	0	2	0	0
Hà Tây	15	7	3	1	0	1	1	1	0	1	0	0	0	0
Hưng yên	17	7	2	0	1	1	1	0	2	1	1	0	1	0
Hải Dương	17	4	3	1	1	2	3	2	0	0	0	1	0	0
Nam Định	15	6	5	0	0	2	0	0	2	0	0	0	0	0
Thanh Hóa	15	4	2	0	1	3	1	0	1	1	0	2	0	0
Nghệ An	15	2	4	0	1	3	2	1	0	1	0	1	0	0
Hà Tĩnh	17	6	4	0	0	3	1	0	1	1	0	1	0	0
Quảng Trị	15	5	4	0	1	2	1	0	0	0	1	1	0	0
TT - Huế	14	7	2	0	1	2	0	1	0	0	1	0	0	0
Quảng Nam	15	4	3	0	1	3	1	1	0	1	0	1	0	0
Quảng Ngãi	15	7	5	0	0	2	0	0	0	0	0	1	0	0
Bình Định	22	8	4	2	1	4	0	1	0	1	0	0	1	0
Phú Yên	20	5	6	0	0	4	2	1	0	1	0	1	0	0
Ninh Thuận	16	3	5	1	0	2	0	1	0	1	0	3	0	0
Đak Lak	17	7	4	1	1	2	0	0	0	1	0	1	0	0
Dak Nong	15	10	2	0	0	2	0	0	0	1	0	0	0	0
Kontum	16	4	6	0	0	2	0	0	0	2	0	1	1	0
Bình Thuận	16	4	6	0	0	2	0	1	0	1	0	2	0	0
BR – Vũng Tàu	21	6	2	1	1	5	1	1	0	1	0	1	1	1
Long An	16	5	2	2	1	2	0	2	0	1	0	1	0	0

Provinces	Total member of PEAC(person)	Of which, from												
		State management sector (DARD, PDOF, PDOPI, Sub-Dept. of plant protection, animal health...)	PAEC, Center of aquaculture, center of plant breeding, center of animal breeding.	Research institutes/centers	Universities, colleges,	Polit/mass organizations (farmer union, women union, youth organization...)	District level (Division of Economy under DPC, district extension station...)	SOE	Private/join-stock companies	Banks, Treasuries...	NGO	Commune level; farmer organizations (cooperatives, extension clubs...)	Farm owners, progress farmers	Mass media (newspapers, TV)
Tiền Giang	15	4	2	2	1	2	0	1	1	0	0	1	0	0
Sóc Trăng	15	2	2	0	0	1	2	0	1	1	0	5	1	0
Trà Vinh	13	2	2	0	1	2	1	1	0	1	0	2	0	1
Kiên Giang	15	6	3	0	0	3	0	1	0	1	0	0	0	1
Cà Mau	13	3	3	0	0	3	1	1	0	0	0	2	0	0
Đồng Tháp	15	3	2	0	0	4	2	0	0	1	0	2	0	1
Bình Phước	16	4	1	0	1	3	0	1	1	1	0	1	1	2
Bến Tre	16	5	2	0	1	2	4	1	0	1	0	0	0	0
TOTAL	636	198	133	13	23	103	30	26	18	31	6	39	9	7

DARD = Department of Agriculture and Rural Development, DPC = district peoples committee, NGO = nongovernment organization, PAEC = provincial agricultural extension center, PEAC = provincial extension advisory council, PDOF = provincial department of finance, PDOPI = provincial department of plan and investment, SOE = state-owned enterprise, TV = television.

Source: provincial extension survey, 2008

5. The reported impact from MARD's own survey of PAECs is positive across all provinces and includes the following: (i) the PEAC has become a connecting bridge and coordinator for operational cooperation between extension service providers; (ii) the participation of representatives from leading departments of the provinces (such as Department of Planning, Department of Finance, Department of Agriculture and Rural Development, and VBARD) has meant that proposed extension projects have received wide support from jurisdictional organizations; (iii) PEAC has raised the sense of initiative of localities (provinces, districts, communes) in bottom-up strategy development and planning for extension services; (iv) extension services have become more flexible and comprehensive (covering marketing, credit, etc.) to meet farmers' more diversified needs; (v) PEACs have helped farmers in marketing their products and registering the trade names of special (often local) products (a notable weakness in the past); and (vi) PEACs have boosted the development of farmers' organizations (cooperatives, extension clubs, etc.).<sup>4</sup> Summary findings from MARD's questionnaire-based survey regarding the operations of PEACs are shown in Table A3.2.

<sup>4</sup> For example, in Đắc Lắc province, the manager of the extension club of village no. 8, EaO commune, EaKa district, is a member of the Đắc Lắc PEAC. He organized a producers' cooperative, and persuaded ethnic members of other clubs to organize four more cooperatives. Such cooperatives are voluntarily organized and managed by farmers and in order to share capital to purchase production equipment or provide services to members (e.g., in the acquisition of new varieties of rice, land tilling, and the sharing of practical experiences).

6. However, despite such success, (i) nearly all PEAC members remain part-time members with other commitments and do not attend all meetings, so meetings can be difficult to convene; (ii) the proportion of representatives coming from state management and public services is relatively high (over 50%), whereas research units, business companies, NGOs, and farmers' organizations are relatively less well represented, so the problems dealt with by PEACs do not yet reflect fully the needs of farmers and extension staff at the grassroots; (iii) there are overlaps in activities between the PEAC and the provincial agricultural extension center (PAEC); and (iv) in some provinces the authorities are not yet fully aware of the role of PEACs.

**Table A3.2: Activities of the Provincial Extension Advisory Council**

Province	Has PEAC had positive impact on agricultural production, extension renovation and poverty reduction?									
	Are there different extension services providers in PEAC?		Did PEAC operate as an advisory organization to PPC?		Is there any difficulty in the operation of PEAC?		Proposal for PEAC funding post-ASDP submitted?			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Lai Châu	x		x		x		x		x	
Điện Biên	x		x		x		x		x	
Lào Cai	x		x		x		x		x	
Hà Giang	x		x		x		x			x
Cao Bằng	x		x		x		x		x	
Bắc Cạn	x		x		x		x			x
Yên Bái	x		x		x		x			x
Lạng Sơn	x		x		x		x			x
Hòa Bình	x		x		x		x		x	
Phú Thọ	x		x		x		x		x	
Bắc Giang	x		x		x		x		x	
Bắc Ninh	x		x		x		x		x	
Hà Tây	x		x		x		x		x	
Hưng Yên	x		x		x		x		x	
Hải Dương	x		x		x		x		x	
Nam Định	x		x		x		x			x
Thanh Hóa	x		x		x		x			x
Nghệ An	x		x		x		x		x	
Hà Tĩnh	x		x		x		x		x	
Quảng Trị	x		x		x		x			x
TT-Huế	x		x		x		x			x
Quảng Nam	x		x		x		x		x	
Quảng Ngãi	x		x		x		x		x	
Bình Định	x		x		x			x	x	
Phú Yên	x			x	x		x		x	
Ninh Thuận	x		x		x		x		x	
Đak Lak	x		x		x		x			x
Dak Nong	x		x		x		x		x	
Kontum	x		x		x		x		x	
Bình Thuận	x		x		x		x		x	
BR – Vũng Tàu	x		x		x		x		x	
Long An	x		x		x		x		x	
Tiền Giang	x		x		x		x		x	
Sóc Trăng	x		x		x		x			x

Province	Are there different extension services providers in PEAC?		Did PEAC operate as an advisory organization to PPC?		Has PEAC had positive impact on agricultural production, extension renovation and poverty reduction?		Is there any difficulty in the operation of PEAC?		Proposal for PEAC funding post-ASDP submitted?	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Trà Vinh	x		x		x			x		x
Kiên Giang	x		x		x			x	x	
Cà Mau	x		x		x		x		x	
Đồng Tháp	x		x		x		x		x	
Bình Phước	x		x		x		x		x	
Bến Tre	x		x		x		x		x	
<b>Total</b>	<b>40</b>		<b>39</b>	<b>1</b>	<b>40</b>		<b>37</b>	<b>3</b>	<b>29</b>	<b>11</b>

PEAC = Provincial Extension Advisory Council, PPC = Provincial People's Committee  
Source: provincial extension survey, 2008

### C. Development of Pluralistic Extension Services

7. Cooperation between Provincial Agriculture Extension Centers (PAECs) and other extension services providers (ESPs) in extension activities has increasingly developed in all the 40 provinces implementing ASDP, and consequently more pluralistic extension services have taken shape.

8. ESPs that have cooperated with PAEC include production management organizations, scientific and technological institutions, mass organizations, research institutes, universities, bilateral and international organizations and NGOs, public and private companies, and farmers' organizations. A survey of provinces for which data was available identified 452 separate ESPs as cooperators. The cooperation activities covered technology transfer, training, poverty reduction approaches, the strengthening of grassroots extension, information and communication, demonstration models, and vocational training for farmers.

9. In 27 of the provinces surveyed by MARD, PAEC had granted contracts to research institutes, universities, colleges to provide training services for extension staff. Conversely, many research institutes and centers, aid projects, and NGOs had signed contracts or provided funds to PAEC to participate in their projects. In 29 provinces, research institutes and universities had conducted applied research trials or demonstrations of new rice varieties and new technologies with the participation of extension staff and farmers. As a result, new stakeholders now contribute about 10%–20% of provincial extension costs. In six provinces alone, other service providers had contributed D6 billion (\$0.4 million) for extension activities.

10. The provinces where pluralistic approaches to extension have become most developed appear to be Bắc Ninh, Bến Tre, Đắk Lắk, Hà Giang, Hà Tây, Hải Dương, Lào Cai, Long An, Nghệ An, Ninh Thuận, Phú Thọ and Thừa Thiên–Huế. A network of different extension service providers operating beside public extension system, arguably providing diversity and improved responsiveness to farmers' needs, has now developed.

11. The situation regarding pluralistic extension services vis-à-vis interactions between ESPs and PAEC and the reported impact is summarized in Table A3.3.

Table A3.3: Pluralistic Extension Services

Province	Did PAEC grant contracts to other stakeholders to perform demonstration models?			Did stakeholders grant contracts and contribute cost to PAEC to cooperate in activities of their projects?				Did multiple extension services meet all diversified needs of farmers?		
	Y	N	No. of stake-holders	Y	N	Contract granted to PAEC from stake-holders	Budget from stake-holder (D million)	Y	S	N
Lai Châu		x		x		7		x		
Điện Biên	x			x				x		
Lào Cai		x			x	3		x		
Hà Giang	x		2	x		2	150	x		
Cao Bằng		x		x		3	680	x		
Bắc Cạn	x		1		x			x		
Yên Bái	x			x				x		
Lạng Sơn	x		2		x			x		
Hòa Bình	x			x				x		
Phú Thọ	x			x				x		
Bắc Giang	x			x				x		
Bắc Ninh	x		3	x		3		x		
Hà Tây	x			x		4		x		
Hưng Yên		x		x		3			x	
Hải Dương	x		9	x				x		
Nam Định		x			x			x		
Thanh Hóa		x		x				x		
Nghệ An	x		10	x				x		
Hà Tĩnh		x		x				x		
Quảng Trị	x				x	3		x		
TT-Huế	x		1	x		3	150	x		
Quảng Nam	x			x					x	
Quảng Ngãi	x			x		3		x		
Bình Định	x			x		3	100	x		
Phú Yên	x		1		x			x		
Ninh Thuận	x		3	x		2	70	x		
Đak Lak	x			x					x	
Dak Nong		x		x		1		x		
Kontum		x			x				x	
Bình Thuận	x		1		x				x	
Vũng Tàu	x		3	x		2		x		
Long An	x		10	x		4		x		
Tiền Giang		x			x	4		x		
Sóc Trăng	x		2	x		2		x		
Trà Vinh		x		x		1		x		
Kiên Giang	x		2		x	1	890		x	
Cà Mau		x		x					x	
Đồng Tháp		x		x		2			x	
Bình Phước	x		3	x		2		x		
Bến Tre	x		4		x	2		x		
<b>Total</b>		<b>13</b>	<b>57</b>	<b>29</b>	<b>11</b>	<b>60</b>	<b>2,040</b>	<b>32</b>	<b>8</b>	

PAEC = Provincial Agriculture Extension Centre

Source: provincial extension survey, 2008

## D. Identification of Extension Priorities and Strategies

12. In 38 of the 40 provinces implementing ASDP, PEACs have advised provincial people's committees (PPCs) on identifying extension priorities and developing extension strategies.



These strategies have concentrated on (i) selecting plants and livestock with clear competitive advantage; (ii) identifying suitable farming systems for changing production structures to increase the productivity and quality of commercial products; (iii) developing economic forest management and forestry protection; (iv) reorienting extension development for 2008–2015 with priority given to strengthening and consolidating the grassroots extension system; (v) strengthening the capacity of extension staff at all levels; (vi) modernizing extension methods; and (vii) increasing investment in extension, especially in remote and difficult areas, to provide the poorest with new production skills.

13. Clear priorities for specific extension programs for the poor and ethnic minorities have been developed in 37 out of the 40 participating provinces (according to detailed reports from 22 provinces, there are at least 52 developed extension programs for the poor). Extension programs for the poor typically focus on problems with (i) food security; (ii) the development of indigenous breeds of plants and livestock; (iii) forest development for pulp material; (iv) integration between extension demonstrations and the national poverty reduction Program 135; (v) integration of trade education for farmers with the building of demonstration models; and (vi) the supply of information about incentive policies for the poor (such as support for 100% of breeding cost, exemption from transport fees for demonstration suppliers).

14. In terms of supporting commercial production orientation in agriculture development, PEACs in all 40 participating provinces have advised PPCs and DARD in the selection of specific plants and livestock that are consistent with the strategies and priorities of the province for commercial agro-production. For example, the Phú Thọ PEAC has proposed to the PPC an investment focus on the six key programs of tea, Doan Hung pomelo, forestry trees for pulp material, pipless persimmon, aquaculture, food crops, and beef cattle. The Ninh Thuận PEAC has advised the PPC to select three key programs covering the safe production, processing, and consumption of grapes; improvements in the breeding quality of cattle, goat, and sheep; and the safe processing and consumption of cattle, goat, and sheep products. In Tiền Giang, the PEAC has focused on exports of pesticide-free rice, seven species of fruit crops, and the production of lean pork. In Hà Tây, the emphasis has been on selecting good fruit seeds and arranging for their multiplication, on promoting rice mechanization (as more and more farmers are faced with labor shortages), and introducing new grass varieties (e.g., variety VA06) for large ruminants.

15. Overall, the PAEC helps determine the priorities that then become reflected in annual activity plans (including training) for the provincial extension service. The PAEC's role in identifying extension strategies and priorities, including those for the poor and those intended to help realize commercial possibilities across all provinces, is summarized in Table A3.4.

**Table A3.4: Development of Extension Priorities and Strategies**

Province	Did PEAC advise PPC in developing of extension priorities?		Did PEAC advise on the development of specific extension programs for the poor and ethnic people?			Did PEAC advise PPC in identifying key opportunities?		
	Yes	No	Yes	No	Extension programs for the poor?	Yes	No	How many?
Lai Châu	x		x			x		
Điện Biên	x		x		6	x		
Lào Cai	x		x		1	x		2
Hà Giang	x		x		5	x		7
Cao Bằng	x		x			x		3

Province	Did PEAC advise PPC in developing of extension priorities?		Did PEAC advise on the development of specific extension programs for the poor and ethnic people?			Did PEAC advise PPC in identifying key opportunities?		
	Yes	No	Yes	No	Extension programs for the poor?	Yes	No	How many?
Bắc Cạn		x	x			x		2
Yên Bái	x		x			x		
Lạng Sơn		x	x			x		5
Hòa Bình	x		x			x		6
Phú Thọ	x		x			x		5
Bắc Giang	x		x			x		
Bắc Ninh	x		x			x		4
Hà Tây	x		x		4	x		4
Hưng Yên	x			x		x		2
Hải Dương	x			x		x		2
Nam Định	x			x		x		4
Thanh Hóa	x		x			x		
Nghệ An	x		x		2	x		5
Hà Tĩnh	x		x			x		4
Quảng Trị	x		x		2	x		5
TT-Huế	x		x		1	x		5
Quảng Nam	x		x			x		6
Quảng Ngãi	x		x			x		
Bình Định	x		x			x		6
Phú Yên	x		x			x		4
Ninh Thuận	x		x			x		3
Đak Lak	x		x			x		6
Dak Nong	x		x		3	x		2
Kontum	x		x		3	x		4
Bình Thuận	x		x		2	x		2
BR-Vũng Tàu	x		x		2	x		3
Long An	x		x		1	x		5
Tiền Giang	x		x		1	x		3
Sóc Trăng	x		x		3	x		3
Trà Vinh	x		x		3	x		4
Kiên Giang	x		x		2	x		1
Cà Mau	x		x		1	x		3
Đồng Tháp	x		x		1	x		3
Bình Phước	x		x		2	x		4
Bến Tre	x		x		3	x		7
<b>Total</b>	<b>38</b>	<b>2</b>	<b>37</b>	<b>3</b>	<b>52</b>	<b>40</b>		<b>134</b>

PEAC = Provincial Extension Advisory Council

Source: provincial extension survey, 2008

## E. Strengthening of Links between Research and Extension

16. Links between PAECs and research and training institutions in technology transfer have been strengthened mainly through (i) PAEC contracts with research institutes and educational units for their participation in training programs for extension staff and trade education for farmers; and (ii) consulting work in agricultural science and technology, and in extension development strategies, by representatives of research and training organizations that are also members of PEAC.

17. In all 40 participating provinces, PAEC has invited research institutes and universities, especially regional institutes, to take part in training programs for extension staff and farmers. There is sometimes no direct link between the PAEC and the research institutes in the building of demonstration models, because the institutes get their funding for such activities directly from the provincial department of science and technology [PDST] and from NAEC.

18. Apart from cooperating in the training of staff and farmers, various research institutes and universities have had further links with the provinces through on-the-spot applied-research trials on new breeds of crops and livestock, new farming technologies, plant protection, and the use of new fertilizers. In 37 out of the 40 participating provinces, research and training organizations have conducted and presided over on-the-spot applied-research trials with extension staff and farmers.

19. However, there are still constraints on the further strengthening of the links between research and extension. These constraints include (i) the lack of an annual plan of cooperation between PAEC and the institutes and universities; (ii) the perception that research projects are often impractical and have yet to meet the immediate needs of farmers; (iii) the lack of regular contact between institutes and universities, on the one hand, and provincial extension organizations, on the other, to keep extension staff abreast of research results; and (iv) the limited funding for applied trials.

20. The situation across the provinces in these major respects is summarized in Table A3.5.

**Table A3.5: Strengthening of Links between Research and Extension**

Province	Did PAEC grant contract for training / demonstration to research institutes?		Did research institutes carry out applied research trials with the participation of extension staff and farmers?		Are there still constraints to strengthening research / extension linkages?	
	Yes	No	Yes	No	Yes	No
Lai Châu		x	x		x	
Điện Biên		x	x		x	
Lào Cai		x		x		x
Hà Giang		x		x	x	
Cao Bằng	x		x		x	
Bắc Cạn		x	x		x	
Yên Bái		x	x		x	
Lạng Sơn	x		x		x	
Hòa Bình		x	x		x	
Phú Thọ		x	x		x	
Bắc Giang		x	x		x	
Bắc Ninh	x		x		x	
Hà Tây	x		x		x	
Hưng Yên		x	x		x	
Hải Dương	x		x		x	
Nam Định		x	x		x	
Thanh Hóa	x		x		x	
Nghệ An	x		x		x	
Hà Tĩnh	x		x		x	
Quảng Trị		x	x		x	
TT-Huế	x		x		x	
Quảng Nam	x		x		x	
Quảng Ngãi		x	x		x	
Bình Định		x	x		x	
Phú Yên		x	x		x	
Ninh Thuận		x	x		x	

Province	Did PAEC grant contract for training / demonstration to research institutes?		Did research institutes carry out applied research trials with the participation of extension staff and farmers?		Are there still constraints to strengthening research / extension linkages?	
	Yes	No	Yes	No	Yes	No
Đak Lak		x	x			x
Dak Nong		x		x	x	
Kontum		x	x		x	
Bình Thuận	x	x	x		x	
BR–Vũng Tàu	x		x		x	
Long An	x		x		x	
Tiền Giang	x		x		x	
Sóc Trăng		x	x		x	
Trà Vinh	x		x		x	
Kiên Giang		x	x		x	
Cà Mau	x		x		x	
Đồng Tháp		x	x		x	
Bình Phước		x	x		x	
Bến Tre		x	x		x	
<b>Total</b>	<b>16</b>	<b>24</b>	<b>37</b>	<b>3</b>	<b>38</b>	<b>2</b>

PAEC = Provincial Agriculture Extension Center

Source: Provincial Extension Survey, 2008

## F. Staff Training: Reorientation toward New Skills

21. During the Program, the NAEC organized three training-of-trainers (TOT) courses in three regions, for 135 trainers from the 40 participating provinces. NAEC also signed contracts and provided the budget for 80 TOT courses in the 40 provinces (2 courses per province), which trained some 2,000 extension staff in two tranches in 2006 and 2007.

22. Within NAEC and in all 40 provinces participating in ASDP, training manuals were recompiled and updated to include new skills for extension staff. The recompiled manuals were generally those that covered new extension methodologies and skills. NAEC also recompiled a guidance manual on the application of participatory agricultural extension methodology (PAEM), which was sent to the 40 participating provinces for implementation. PAECs in the provinces supplemented existing materials, recompiled and added new training manuals to fill gaps in the preparation of extension staff in areas such as participatory training methods, communication skills, PAEM, rural finance, marketing, and postharvest technology.

23. All provinces implementing ASDP organized training programs using the recompiled manuals. In 2006, 330 courses were organized for 8,173 trainees, and in 2007, 418 courses were held for more than 10,000 trainees.

24. The links between PAEC and the research and training organizations in training have been close. During the Program, 37 out of 40 participating provinces invited teachers from institutes, universities, NGOs, etc., to participate in training programs organized by PAEC. According to reports from 29 participating provinces, 76 identifiable stakeholders from institutes, universities, and businesses participated in extension training activities with PAEC.

25. After the training, all the participating provinces reported an improvement in the coverage and the quality of extension staff skills. Most provinces found the TOT programs of NAEC to be adequate in quality, especially after the level and content of the training was renewed and updated (with the introduction of such topics as farm economic management, PAEM, marketing, and postharvest technology).

26. Some provinces proposed improvements in the TOT programs. They suggested that (i) the training manuals be compiled to suit the distinct characteristics of areas and regions, and (ii) increased time be made available for practice and field visits during the training.

27. Table A3.6, summarizes the major findings from the 40 participating provinces regarding the recompilation of training documentation, the courses held, stakeholder participation, and the impact of the new reorientation of training on staff capacity.

### G. Implementation of Participatory Agricultural Extension Methodology

28. The participatory agricultural extension methodology (PAEM) includes, among other things, commune development planning (CDP), village development planning (VDP), participatory agricultural extension demonstration (PAED), farmers' field school (FFS), and the development of farmer interest groups (FIG). PAEM has been applied in all 40 participating provinces.

**Table A3.6: Reorientation of Training for Extension Staff**

Province	Training manuals re-compiled by PAEC?		Did PAEC train extension staff with re-compiled manuals?		Did research institutes / universities participate in training programs held by PAEC?		Staff capacity better than pre-training?		TOT training proposal made?				
	Y	N	Y	N	Number of courses and of trainees (in brackets)		Y	N	Number of stakeholders	Y	N	Y	N
					2006	2007							
Lai Châu	x		x				x		2	x		x	
Điện Biên	x		x			5(157)	x			x			x
Lào Cai	x		x			90	x		2	x		x	
Hà Giang	x		x			2(50)	x		2	x		x	
Cao Bằng	x		x				x		2	x		x	
Bắc Cạn	x		x			6(150)	x		3	x		x	
Yên Bái	x		x		8(320)	11(450)	x		3	x		x	
Lạng Sơn	x		x		65	25	x		2	x		x	
Hòa Bình	x		x				x		2	x		x	
Phú Thọ	x		x				x		3	x		x	
Bắc Giang	x		x				x			x			x
Bắc Ninh	x		x				x		6	x		x	
Hà Tây	x		x		4(319)	4(136)	x		5	x		x	
Hưng Yên	x		x				x		3	x		x	
Hải Dương	x		x		5(125)	5(125)	x		7	x		x	
Nam Định	x		x			2(50)	x			x		x	
Thanh Hóa	x		x		450	450	x		2	x		x	
Nghệ An	x		x		5.840	6.344	x		3	x		x	
Hà Tĩnh	x		x		150	150		x		x		x	
Quảng Trị	x		x			150	x		3	x		x	
TT–Huế	x		x			130	x		4	x		x	
Quảng Nam	x		x		229		x			x		x	
Quảng Ngãi	x		x				x			x		x	
Bình Định	x		x		4(320)	4(320)		x		x		x	
Phú Yên	x		x				x		1	x		x	

Province	Training manuals re-compiled by PAEC?		Did PAEC train extension staff with re-compiled manuals?		Number of courses and of trainees (in brackets)	Did research institutes / universities participate in training programs held by PAEC?		Number of stake-holders	Staff capacity better than pre-training?		TOT training proposal made?	
	Y	N	Y	N		Y	N		Y	N	Y	N
Ninh Thuận	x		x			x			x		x	
Đak Lak	x		x		110	x		3	x		x	
Dak Nong	x		x			x		1	x			x
Kontum	x		x		6(197)	x		1	x		x	
Bình Thuận	x		x		2(91)	x		1	x		x	
BR-Vũng Tàu	x		x			x		2	x		x	
Long An	x		x		2(53)	x		4	x		x	
Tiền Giang	x		x			x		3	x		x	
Sóc Trăng	x		x			x		2	x		x	
Trà Vinh	x		x		2(48)	x		1	x		x	
Kiên Giang	x		x		444	x			x		x	
Cà Mau	x		x		44	x		1	x		x	
Đồng Tháp	x		x		400		x		x		x	
Bình Phước	x		x			x			x		x	
Bến Tre	x		x			x		2	x		x	
<b>Total</b>					<b>8.173</b>	<b>10.466</b>	<b>37</b>	<b>3</b>	<b>76</b>	<b>40</b>	<b>37</b>	<b>3</b>

PAEC = Provincial Agriculture Extension Centre; TOT = training of trainers  
Source: provincial extension survey, 2008

29. PAEM introduction has had the following positive impact: (i) extension staff and farmers at the grassroots can directly participate in the planning and implementation of extension programs and projects through CDP and VDP; (ii) PAED has helped farmers organize, monitor, and evaluate extension demonstration models themselves; (iii) good opportunities have been created for extension staff and farmers to participate in discussions and put forward proposals for suitable advanced technologies that could meet their needs; and (iii) FFS has changed the methods of training for farmers away from passive to active learning, such that trainees, instead of simply learning from teachers, now directly exchange views with teachers on lessons and practice. Although PAEM has been implemented in all 40 participating provinces, it is still applied only on a pilot scale, and there are restrictions on its expansion. Nearly all the provinces agreed that the expansion of PAEM will encounter difficulties, because it (i) is not yet institutionalized at the central and provincial levels; (ii) requires more budget, manpower, and extension staff skills than traditional top-down methods of planning; (iii) is not yet a homogeneous methodology (the manual for PAEM has come from many sources); and (iv) is still viewed as “complicated” vis-à-vis the average capacity of extension staff.

30. Among proposals made by the provinces to expand the scale of PAEM are the following: (i) NAFEC needs to organize more TOT training programs focusing specifically on PAEM; (ii) PAEM should be institutionalized as policy at the central level (within MARD and MOF) and at the provincial level (PPC) to put in place appropriate support mechanisms for PAEM application; and (iii) NAEC should assemble the available sources of PAEM manuals and documentation, simplify and recompile the manuals to produce homogeneous PAEM training materials that suit local conditions and the capacity of extension staff and farmers.

31. Table A3.7, summarizes the situation with regard to PAEM introduction, the numbers of districts and communes affected, and the overall reported impact in each province.

Table A3.7: Implementation of PAEM

Province	Did PAEC Implement PAEM?		Number of districts, commune applied	Did PAEM make any impact on improving planning?		Are there constraints in expanding PAEM?		Has PAEC made proposals for expanding PAEM application?	
	Yes	No		Yes	No	Yes	No	Yes	No
Lai Châu	x		4 dist., 29 com.	x		x		x	
Điện Biên	x		9 districts	x		x		x	
Lào Cai	x			x		x		x	
Hà Giang	x			x		x		x	
Cao Bằng	x			x		x		x	
Bắc Cạn	x			x		x		x	
Yên Bái	x			x		x		x	
Lạng Sơn	x		11 dist., 50 com.	x		x		x	
Hòa Bình	x			x		x		x	
Phú Thọ	x		2 districts	x		x		x	
Bắc Giang		x			x		x		x
Bắc Ninh	x			x		x		x	
Hà Tây	x			x		x		x	
Hưng Yên	x			x		x		x	
Hải Dương	x		3 dist., 6 com.	x		x		x	
Nam Định		x			x		x		x
Thanh Hóa	x			x		x		x	
Nghệ An	x			x		x		x	
Hà Tĩnh	x			x		x		x	
Quảng Trị	x		12 districts	x		x		x	
TT–Huế	x		5 districts	x		x		x	
Quảng Nam	x			x		x		x	
Quảng Ngãi	x			x		x		x	
Bình Định	x			x		x		x	
Phú Yên	x		5 districts	x		x		x	
Ninh Thuận	x			x		x		x	
Đak Lak	x			x		x		x	
Dak Nong	x		8 districts	x		x		x	
Kontum	x			x		x		x	
Bình Thuận	x			x		x		x	
BR–Vũng Tàu	x		4 huyện, 8 xã	x		x		x	
Long An	x			x		x		x	
Tiền Giang	x		1 dist., 1 com.	x		x		x	
Sóc Trăng	x		6 dist., 6 com.	x		x		x	
Trà Vinh	x		6 dist.	x		x		x	
Kiên Giang	x		1 dist., 1 com.	x		x		x	
Cà Mau	x		3 dist., 15 com.	x		x		x	
Đồng Tháp	x			x		x		x	
Bình Phước	x			x		x		x	
Bến Tre	x		155 communes	x		x		x	
Total	38	2	79 dist., 271com.	38	2	38	2	38	2

PAEC = Provincial Agriculture Extension Centre; PAEM = Participatory Agriculture Extension Methodology  
Source: provincial extension survey, 2008

## H. Recruitment of More Commune Extension Workers

32. The plan was to hire 6,000 CEWs for communes where there was a lack of CEWs in the 40 provinces that had established PEACs. Because the PEACs were to be established in two stages, the recruitment of 6,000 CEWs was also divided into two stages, with 3,000 CEWs to be recruited in each stage.

33. In hiring and allocating staff, (i) priority was given to communes that had no CEW; (ii) all 40 participating provinces would have at least one CEW in each commune; (iii) the remaining CEWs were allocated according to the percentage of communes in each province; and (iv) female and ethnic-minority CEWs would make up at least 10% each of the total number of CEWs hired.

34. By mid-June 2007, all 40 participating provinces had completed the recruitment of new CEWs. A total of 6,660 had been hired (11% higher than the goal). There were 1,414 new female CEWs (23.74% of the total hired) and 1,292 new ethnic-minority CEWs (34.7%).

35. In all provinces, new CEWs were trained, particularly in new technologies and extension skills, before they started working. The new staff were all mobilized to work in extension activities, especially in urgent campaigns to prevent and treat bird flu in poultry and foot-and-mouth disease in other livestock. The recruitment and the work of the CEWs were the highlight of ASDP in many provinces. Farmers appreciate in particular their involvement in demonstrations in communes and villages, and information that they provide about pest and disease control in animals.

36. Table A3.8 summarizes the CEW recruitment, by province, training, and mobilization.

37. The most serious aspect of the CEW situation at present is financial sustainability. The ASDP budget covered the hiring of CEWs in 2006–2007 and 2007–2008. After the Program, the provinces were to fund both the operation of the PEACs and the hiring of CEWs out of the provincial budget. By mid-2008, 32 out of the 40 participating provinces had submitted proposals to their PPCs for the continued investment in CEWs from the provincial budget.

38. In some cases (e.g., Ha Tay), funding has already been made available, and CEWs have been recruited and are in place. But in provinces where funding has not—so far at least—been forthcoming, some CEWs are now being retrenched. In Tiền Giang, for example, the PAEC hired and trained 326 CEWs (2 per commune) in the 2 years of ASDP funding, but has recently had to cut the CEW staff by about half. Whether or not future funding does materialize, this situation appears both inefficient and somewhat inconsistent between different geographic locations.

**Table A3.8: Recruitment of New Commune Extension Workers**

Province	Planned quota for hire of new CEW				Were new CEW trained after hiring?		Did new CEW participate in preventing outbreaks?		Did DARD submit to PPC proposal on investment for CEW after ASDP completed?	
	Quota		Hired CEW		Of which, female and ethnic CEW		Yes	No	Yes	No
	Year 1	Year 2	2006	2007	Female	Ethnic				
Lai Châu	90	117		88			x		x	
Điện Biên	90	117		43			x		x	
Lào Cai	120	120		152			x		x	
Hà Giang	196	150		195			x		x	
Cao Bằng	190	150		161			x		x	
Bắc Cạn	130	130		130			x			x
Yên Bái	180	180		180			x		x	
Lạng Sơn	38	150		68			x		x	
Hòa Bình	0	150		150			x		x	
Phú Thọ	0	150		150			x		x	



Province	Planned quota for hire of new CEW						Were new CEW trained after hiring?		Did new CEW participate in preventing outbreaks?		Did DARD submit to PPC proposal on investment for CEW after ASDP completed?	
	Quota		Hired CEW		Of which, female and ethnic CEW		Yes	No	Yes	No	Yes	No
	Year 1	Year 2	2006	2007	Female	Ethnic						
Bắc Giang	0	150		229			x		x		x	
Bắc Ninh	110	110		110			x		x		x	
Hà Tây	0	150		314			x		x		x	
Hưng Yên	0	150		140			x		x		x	
Hải Dương	210	210		205			x		x			x
Nam Định	200	200		200			x		x		x	
Thanh Hóa	400	400		400			x		x			x
Nghệ An	475	470		475			x		x		x	
Hà Tĩnh	263	260		263			x		x		x	
Quảng Trị	136	136		136			x		x		x	
TT-Huế	120	120		130			x		x			x
Quảng Nam	229	220		229			x		x		x	
Quảng Ngãi	180	180		180			x		x			x
Bình Định	144	140		144			x		x		x	
Phú Yên	190	104		134			x		x		x	
Ninh Thuận	122	60		103			x		x			x
Đak Lak	150	150		172			x		x		x	
Dak Nong	80	80		66			x		x		x	
Kontum	80	107		94			x		x			x
Bình Thuận	80	107		80			x		x		x	
BR-Vũng Tàu	64	60		64			x		x		x	
Long An	196	180		188			x		x		x	
Tiền Giang	337	170		287			x		x		x	
Sóc Trăng	177	100		177			x		x			x
Trà Vinh	80	107		80			x		x		x	
Kiên Giang	159	130		193			x		x		x	
Cà Mau	80	80		80			x		x		x	
Đồng Tháp	281	140		216			x		x		x	
Bình Phước	90	94		94			x		x		x	
Bến Tre	160	160		160			x		x		x	
<b>Total</b>	<b>5,827</b>	<b>6,139</b>		<b>6,660</b>	<b>1,414</b>	<b>1,292</b>	<b>40</b>		<b>40</b>		<b>32</b>	<b>8</b>
Percentage (%)					23.74	34.73	100		100		80	20

CEW = Commune Extension Worker; DARD = Department Of Agriculture And Rural Development; PPC = Provincial People's Committee

Source: provincial extension survey, 2008

## I. Establishment of Subject-Matter Specialist (SMS) Teams in 10 Provinces

39. The SMS teams were set up to support extension workers in providing consulting services and technology transfer on specialist topics, to meet the specific and increasingly diversified needs of farmers.

40. Following the tranche conditions of ASDP, MARD developed and issued guidelines on the establishment of provincial SMS teams.<sup>5</sup> MARD selected 10 provinces out of the 40 participating provinces for the pilot establishment of SMS teams by April 2007. These provinces were Bắc Ninh, Hà Tây, Hải Dương, Hoà Bình, Nghệ An, Thanh Hoá, Thừa Thiên-Huế, Tiền Giang và Đắk Lắk and Yên Bái.

<sup>5</sup> Decision No 2725 QD/BNN-KHCN, dated 11 October 2005.

41. The SMS team members come from research institutes and centers (e.g., plant protection centers, and specialist institutes that happen to be located in particular provinces), local universities, colleges, state enterprises, etc., and include specialists in specific fields such as cultivation and plant protection, animal husbandry and health care, forestry, horticulture, irrigation, and food processing. Generally, the team composition is quite diverse, although almost of the members are technicians in the physical sciences (rather than in economics and finance, sociology, or the environment). According to feedback from provinces with SMS teams, most believe that the composition of the teams is reasonable, but a few provinces think that it should be oriented more toward the “softer” disciplines. In general, there seems to be a feeling that the experience of the SMS teams has been mixed, and that broader and deeper experience is still needed.

42. Since their establishment, the SMS teams have been mobilized by PEAC to participate in providing training in specific fields for extension staff, and consulting assistance to PAEC in identifying priorities in agriculture science and technology.

43. The SMS team is a new mode of technical backstopping for extension in Viet Nam that, surprisingly, has encountered few constraints in its activities, the biggest difficulty being the shortage of funds for mobilizing specialists. Many SMS team members still work part time and are essentially unremunerated. Additionally, some are regarded as “leaders” in other capacities (political, administrative, or technical) so their time and availability remains limited.

44. Table A3.9 summarizes some of the views of participating provinces about current SMS operations.

**Table A3.9: Provincial Subject-Matter Specialist (SMS) Teams**

Province	Is composition of SMS reasonable?		Is SMS operational after establishment?			Is there difficulty in mobilizing SMS?	
	Yes	No	Yes	No	If yes, number of activities?	Yes	No
Lai Châu							
Điện Biên							
Lào Cai							
Hà Giang							
Cao Bằng							
Bắc Cạn							
Yên Bái	x		x				x
Lạng Sơn							
Hòa Bình		x	x			x	
Phú Thọ							
Bắc Giang							
Bắc Ninh	x		x				x
Hà Tây	x		x				x
Hưng Yên							
Hải Dương	x		x				
Nam Định						x	
Thanh Hóa	x		x			x	
Nghệ An	x		x			x	
Hà Tĩnh							
Quảng Trị							

Province	Is composition of SMS reasonable?		Is SMS operational after establishment?		If yes, number of activities?	Is there difficulty in mobilizing SMS?	
	Yes	No	Yes	No		Yes	No
TT–Huế		x	x			x	
Quảng Nam							
Quảng Ngãi							
Bình Định							
Phú Yên							
Ninh Thuận							
Đak Lak		x		x		x	
Dak Nong							
Kontum							
Bình Thuận							
BR–Vũng Tàu							
Long An							
Tiền Giang	x		x				x
Sóc Trăng							
Trà Vinh							
Kiên Giang							
Cà Mau							
Đồng Tháp							
Bình Phước							
Bến Tre							
<b>Total</b>	<b>7</b>	<b>3</b>	<b>9</b>	<b>1</b>		<b>6</b>	<b>4</b>
Percentage (%)	70	30	90	10		60	40

SMS = subject matter specialists

Source: provincial extension survey, 2008

## J. Establishment of the National Agriculture Extension Center

45. NAEC was established in 2003,<sup>6</sup> after it split from the Department of Agricultural and Forestry Extension (DAFE), directly under MARD. In late 2007, the Ministry of Fishery merged with MARD,<sup>7</sup> and the National Agricultural and Fisheries Extension Center (NAFEC), combining NAEC and the Fishery Extension Center (FEC), was created.<sup>8</sup>

46. NAFEC is designed to implement extension activities in agriculture, forestry, fishery, irrigation, cooperatives and rural trades, postharvest preservation, and processing and salt production. The national extension system therefore exists at four levels—central (NAFEC), provincial (PAEC), communal (CEW), and village (extension collaborators).<sup>9</sup>

47. The main function of NAFEC is transferring research results approved by MARD, and other approved new technologies, into production by (i) developing demonstration models, (ii) training extension staff and farmers, (iii) carrying out information and communication activities, and (iv) providing consulting and technical services.

<sup>6</sup> According to Decree No. 86/ 2003/NĐ-CP, dated 18 July 2003, on the regulations about the function, mandate, rights, and organization structure of MARD, to separate between functions of state management and public services.

<sup>7</sup> Government Decree No. 01/2008/NĐ-CP, dated 13 January 2008, on the regulations about the function, mandate, rights, and organization structure of MARD.

<sup>8</sup> Decree No. 01/2008/NĐ-CP, dated 13 January 2008, and Decision No. 236/QĐ-BNN-TCCB, dated 28 January 2008. Construction of new offices for NAE with budget of D14 billion were included in ASDP funding.

<sup>9</sup> According to Decree No. 56/2005/NĐ-CP, dated 26 April 2005, on agriculture and fishery extension.

## K. Budget for Agriculture Extension

48. Between 2003 and 2006, the Government increased the central and provincial budget for extension in excess of tranche conditions (12% per year). The budget for 2005 (D308,553 million, \$19.4m) was 13.5% higher than the 2004 budget (D271,853 million, \$17.1). The budget invested in the extension activities of NAEC/NAFEC also increased: allocations were D97.8 billion (\$6.1m) in 2005, D109.54 billion (\$6.8m) in 2006, and D122.8 billion (\$7.7) in 2007 (an average increase of 12.07% yearly).

49. Annually, about 60% of the total budget of NAEC/NAFEC is allocated to the PAECs in 64 provinces throughout the country, and the remaining funds are used for activities of NAEC/NAFEC and allocated to central-level organizations involved in extension (research institutes and centers, universities, mass organizations, mass media). Also, provinces allocate funds for extension from their budgets, with the levels of investment depending on budget capacity. As might be expected, extension investment performance differs between provinces: some provinces invest increasingly more each year, whereas others have invested the same amount for years. Relatively poor and remote provinces still rely mainly on budget support from NAEC.

50. As ASDP funding comes to an end, the issue of provincial contributions—because of its impact on PEAC and CEW, for example—begins to predominate. Funds for PEAC (and other extension activities) are now supposed to come from provincial budgets; however, by mid-2008 (i) not all PEACs had submitted finance proposals to their PPCs, and (ii) only 6 out of the first tranche of 20 provinces had actually received any budget increase to include support for PEACs. Among 16 provinces surveyed by MARD in mid-2008, half had extension budget increases of more than 12% yearly, a fourth reported an unvarying budget, and the rest reported increases of less than 12% yearly.

51. As of early 2009, the situation still varied province by province, but even those that may have been regarded as models of a strengthened system (e.g., Tiền Giang, whose ASDP funding ended in August 2007) can find themselves struggling for incremental finance. On the other hand, Hà Tây province (now a part of Hanoi) has already had its budget increased by the city authorities over and above ASDP levels.

## L. Summary: An Assessment of Impact, Lessons, and Recommendations

52. ASDP was to be completed in the 20 provinces in stage 1 by the end of 2007, and in the 20 provinces in stage 2 by the end of 2008. The implementation of ASDP in the provinces was completed broadly according to schedule (most notably in the establishment of PEACs). The 40 participating provinces cooperated closely with MARD to meet fully the 13 loan tranche conditions relating to extension. One area with some delays was the hiring of CEWs. The delays were due to the late receipt of budget notices from MOF.

53. The extension system strengthening had the following overall impact:

- (i) The establishment of PEAC has promoted an extension “socialization” (inclusivity) process and developed well-prioritized multiple and pluralistic extension services. This has had a positive effect on the delivery of agriculture extension services.
- (ii) Provinces (as manifest in their PPCs) generally paid more attention to extension during ASDP implementation, thereby elevating the status of extension as a

- whole. Extension is also now not only the responsibility of the public extension system but also a joint responsibility of many organizations.
- (iii) ASDP has provided an opportunity for provinces to organize and strengthen their grassroots extension organization, especially for provinces that used to be without CEWs.
  - (iv) Many provinces have developed long-term plans (2008–2015) for the establishment of a grassroots extension system that have been approved by PPC. This has helped the provinces to improve the extension organization (in accordance with Decree No. 56/CP). According to most of the provinces surveyed, this was the most positive impact of ASDP as a whole.
  - (v) The establishment of PEACs and, to a lesser extent, SMS teams with research institutes and centers represented has strengthened the links between research and extension.

54. A summary of the views of the provinces on the impact of the extension component, by major impact area, is given in Table A3.10.

55. Despite this positive impact, (i) some provinces have neither developed nor submitted to PPC their plans for continued investment in the PEACs and CEWs from the provincial budget after ASDP, (ii) there is some confusion in function between the PAEC and the PEAC, (iii) the CEWs still have a relatively low skills base in relation to their tasks, and (iv) the success of PAEM still has to be tested on a larger (and more expensive) scale.

56. Most important, of course (as mentioned above), is the issue of increased funding from provincial sources to continue recent innovations, especially the hiring of CEWs, PEAC functioning, and future SMS support.

**Table A3.10: Assessment of Impact of Extension Component under ASDP**

Province	ASDP has had impact on					
	Promotion of agriculture production	Improving extension	Society	Gender	Poverty reduction	Environment
Lai Châu	x	x	x	x	x	x
Điện Biên	x	x	x	x	x	x
Lào Cai	x	x	x	x	x	x
Hà Giang	x	x	x	x	x	x
Cao Bằng	x	x	x	x	x	x
Bắc Cạn	x	x		x	x	
Yên Bái	x	x	x	x	x	
Lạng Sơn	x	x	x	x	x	x
Hòa Bình	x	x				
Phú Thọ	x	x	x		x	
Bắc Giang	x	x	x		x	
Bắc Ninh	x	x	x	x	x	x
Hà Tây	x	x	x	x	x	x
Hưng Yên	x	x	x		x	
Hải Dương	x	x	x			
Nam Định	x	x	x			x
Thanh Hóa	x	x	x	x	x	x
Nghệ An	x	x			x	
Hà Tĩnh	x	x	x	x	x	x
Quảng Trị	x	x	x	x	x	x
TT-Huế	x	x	x		x	
Quảng Nam	x	x	x		x	

Province	ASDP has had impact on					
	Promotion of agriculture production	Improving extension	Society	Gender	Poverty reduction	Environment
Quảng Ngãi	x	x	x		x	
Bình Định	x	x			x	
Phú Yên		x	x		x	
Ninh Thuận	x	x		x	x	x
Đắk Lắk	x	x				
Dak Nong						
Kontum	x	x			x	
Bình Thuận	x	x	x		x	
BR–Vũng Tàu	x	x			x	
Long An	x	x	x			
Tiền Giang	x	x	x			x
Sóc Trăng	x	x	x	x	x	x
Trà Vinh	x	x	x		x	
Kiên Giang	x	x	x		x	
Cà Mau						
Đồng Tháp	x	x	x		x	
Bình Phước	x	x	x		x	
Bến Tre	x	x			x	x
<b>Total</b>	<b>37 of 40</b>	<b>38 of 40</b>	<b>29 of 40</b>	<b>15 of 40</b>	<b>32 of 40</b>	<b>16 of 40</b>

Source: provincial extension survey, 2008

57. To further strengthen the agriculture extension system, national and provincial authorities specifically recommend the following, on the basis of the ASDP experience:

- (i) The PEAC is a necessary requirement of a modern extension service that includes multiple, highly participative services.
- (ii) PEACs should be further strengthened where necessary, but “non-active” members should be let go and PEAC should be trimmed down to include only those members who can participate actively.
- (iii) NAFEC should organize more TOT programs to train key trainers for the provinces, and the content should focus on knowledge and skills that extension staff are still poor in, such as rural finance, production planning and project planning, agriculture business management, marketing, and postharvest technology.
- (iv) MARD should take the main responsibility for institutionalizing and developing a financial supporting mechanism for PAEM implementation.
- (v) NAFEC should conduct an overall assessment of the PAEM experience in the provinces at present to help finalize the training manuals.
- (vi) MARD should organize a workshop to assess the performance and impact of the implementation of extension activities under ASDP in the 40 participating provinces. The assessment would cover the operation of PEACs after their establishment, and experience and lessons could be drawn to guiding the activities of the PEACs in the coming years.

58. In fact, the evolution of the agriculture extension system in Viet Nam is under continuous scrutiny, and current discussions within MARD center around the Agriculture Extension Development Plan 2010–2015 and Vision to 2020 which contains other options, such as reverting to the formation of a department of agriculture extension within MARD, or reformulating NAEC with regional bases.

59. NAFEC reports that this development plan has been informed by the ASDP experience, especially as regards the establishment and activities of PAECs; the completion of the extension system to the grassroots level through the recruitment of CEWs; and the adoption of multiple, pluralistic, and bottom–up approaches. To that extent, the ASDP experience has already been institutionalized within NASFEC and MARD.

## ESTABLISHMENT OF AN AGRICULTURE MARKET INFORMATION SYSTEM

### A. Introduction

1. An agricultural extension and market information system (AMIS) was set up in the Information Center for Agriculture and Rural Development (ICARD) under the Ministry of Agriculture and Rural Development (MARD) and in 20 provinces covering 100 districts. The budget for strengthening market information activities was D37 billion (\$2.3 million), or about 4% of the Agriculture Sector Development Program loan.

2. The system collects information about the price of agricultural products (e.g., rice varieties, maize, sweet potato, vegetables, rubber, coffee, tea, fruits, and meat, beef, poultry, and cattle) and the price of materials as production inputs (e.g., fertilizers, pesticides, seedlings and breeding animals, petrol) at 328 markets. Most provinces collect information across all items daily, or least twice weekly. Price information is consistent by item across the province, although some quality or grade of information on commodities varies by province or is absent.

3. Collected information is disseminated through (i) published materials, (ii) television, (iii) radio broadcasting, and (iv) the internet. Published information takes the form of a weekly newsletter, *Production and Market* (1,500 copies produced by ICARD and 300 in each participating province). Provincial radio and television carry weekly programs on market and input price information, and this is supplemented by programs on national television. Daily information is updated on MARD's website ([www.mard.gov.vn](http://www.mard.gov.vn)).

4. Along with the establishment of agricultural extension and market information system in ICARD, an online Viet Nam agriculture newspaper<sup>35</sup> has been designed by MARD. This is now based on installed and test-operated systems, and includes “news, society, health-life, family, culture, entertainment, agriculture extension, science and technology” topics. It is published and updated daily. This website can be accessed by people nationwide to collect general agriculture, rural, market and extension information.

### B. Operational Issues and Constraints

5. The main features of the AMIS implementation experience are summarized in Table A4.1.

6. While the overall AMIS establishment was largely successful, there have been problems with budget amounts for tasks required, equipment supplies and installation, etc., across about two thirds of the provinces.

**Table A4.1: Overview of the Agriculture Market Information System**

Feature	Major Characteristics and Implementation Facts
AMIS establishment	20 provinces, 100 districts
Products included in the AMIS	<p>Cultivation: Rice, paddy, special rice varieties by locality (and other localities), maize, sweet potato, cassava, Indian taro, potato; tea buds, dry tea, processed tea, scented tea, green tea, mustard greens, cabbage, chayote, kohlrabi, cucumber, bitter melon, pumpkin, tomato, onion, garlic</p> <p>Animal husbandry: Beef, pork, chicken, duck, swan, chicken eggs, duck eggs</p> <p>Fishery: Carp, major carp, tench bream, blackfish.</p> <p>Fruit: Orange, mandarin orange, pomelo, mango, apple, jackfruit, watermelon, chuối mông cầu, rambutan, papaya, grape, pineapple, longan, durian, guava</p> <p>Vegetables: All vegetable varieties, tỏi, hành, dưa leo, tomato, potato, khổ qua, carrot, pumpkin</p> <p>Province-specific items are added individually as necessary</p>

<sup>35</sup> Available: <http://nongnghiep.vn/nongnghiepv.vn/vi-VN/43/0/Default.aspx>



Feature	Major Characteristics and Implementation Facts
Type of information sent through the AMIS	<p>Sale quantity of products: The above products have detailed quantities sold when purchasers collect at the collection spot.</p> <p>Sale quality of products: Some agricultural products will be categorized as type 1, type 2, etc., and also according to any processing that may have been done.</p> <p>Price of products: Retail price, wholesale price, farm price. For processing enterprises (e.g., SOEs), export-import prices may be recorded.</p> <p>Market trends: According to crop and product status (key development items, provincial development priorities, etc.)</p> <p>Input prices: Provided by farm owners, small businessmen, enterprises, farmer households at main market of the province.</p> <p>(Note: Some provinces report prices only, not quantities sold.)</p>
Periodicity / Frequency of collection	<p>Under the guidance of CPMU on procedures for collecting and updating information, most provinces undertake the following:</p> <p>Daily: All product groups including vegetables, fruit, and tea (all varieties)</p> <p>Twice a week: Paddy, rice, maize, potato, cassava, livestock, and fisheries.</p>
Information dissemination	<p>Publishing: Information is published in newsletter</p> <p>Radio/TV: Agricultural product market price information is broadcast once a week over provincial TV (supplementary national programs)</p> <p>Internet: Information updated daily on website</p> <p>Newspaper: Product market and extension information in <i>Thai Nguyen</i> newspaper twice a month</p> <p>Information is also disseminated via ad hoc seminars, conferences, training course for management and technical staff, etc., and to farmer groups.</p>
Frequency of reporting market information	<p>Daily: Similar to frequency of information collection.</p> <p>Information collected at markets is transferred to part-time staff in districts, who check the data, enter the data into the system, and send the information to MARD before 10 a.m. (In cases of technical problems of connection/power outage, etc., district staff will use a fax/phone. (Note: Lào Cai province reports market information only twice a week.)</p>
AMIS sharing information with other market information networks in public or private sector	<p>In some provinces, information is shared directly with TV, newspapers, the MARD website of the MARD (Agroviet), and other newsletters. Extension information is shared on LAN network of DARD.</p>
Information subscriptions	<p>Management agencies, farmers' associations, agricultural product processing enterprises, extension technical staff, individual farmers, private businessmen access data</p>
Hardware supplied under ASDP	<p>A. Provincial level: 1. 01 main server IBM X206; 2. 01 Laptop IBM Thinkpad T60; 3. 03 desktop PC SingPC Techpro 2.8 Ghz; 4. 01 Switch Planet; 5. 01 UPS APC Smart - UPS 1000 VA; 6. 03 UPS 500 VA APC Back - UPS ES 500; 7. 01 Printer A4 size HP Laserjet 1320; 8. 01 Fax machine Panasonic KX-FP 362; 9. 01 Scanner machine A4 size HP Scanjet 485010. 01 Camera KTS Canon PowerShot A630; 11. 01 Recorder KTS Sony ICD - SX46; 12. 01 TV-DVB-T Digital; 13. 01 Air conditioner LG; 14. 01 Software Windows Server 2003; 15. 01 Software CSDL SQL Server 2005; 16. 01 Software Virus Symantec 10. B. District level: 1. 05 Desktop PC SingPC Techpro 2.8 Ghz ;2. 05 UPS 500 VA APC Back - UPS ES 500; 3. 05 Printer A4 size HP Laserjet 1320; 4. 05 Fax machine Sharp FO - A660; 5. 05 Scanner A4 size HP Scanjet 2400; 6. 05 Camera KTS Canon PowerShot A630; 7. 05 Recorder KTS Sony ICD - SX46</p>
Delay in implementing AMIS	<p>In 2007, implementation was delayed (in 14 out of 20 provinces) because no advice was received regarding fund allocation until mid-2007. Disbursements were slow, although the systems were supposed to start operating from the beginning of the year.</p>
Deviation between cost at planning and actual cost for ASDP projects	<p>Funds for designing newsletter, TV programs, and for information collection were reportedly underestimated. ASDP funds for supervision and monitoring were also insufficient. Implementation workshops and training, interprovincial learning, etc., were all funded by the provinces themselves</p>
Suppliers' and contractors' performance	<p>Equipment contractors: equipment performed satisfactorily at purchase, but 70% of provinces reported hardware problems after that, and also some problems with guarantees. The Pmard software used in districts is now stable but had initial problems. Extension database software has some imperfect functions.</p>
Use of counterpart funds	<p>Total fund allocated according to Letter 688 TTg-QHQT (VNĐ):</p> <ul style="list-style-type: none"> <li>- 2006: D47,400,000 (\$3,000) planned; D38,132,430 (\$2,200) implemented.</li> <li>- 2007: D298,280,000 (\$1,900) planned</li> </ul>

<b>Feature</b>	<b>Major Characteristics and Implementation Facts</b>
Executing Agency's performance and capacity to appraise subprojects	Executing Agency closely followed project activities. Staff were qualified. However, project preparation characterized by lack of synchronicity (between equipment supply and training). Some training was irrelevant to the project. Price collection format was not consistent with facts in localities (some columns could not be filled in, e.g., total quantity of some products), and software problems occurred. Financial disbursements were delayed.
Impact on staff skills	Qualifications of project staff were enhanced, especially with respect to skills in agricultural extension and market information collection, and analysis and evaluation of market trends
Measures taken to continue operation of the project	Strengthening of the capability of staff in IT applications; newswriting and editing; management, monitoring, and supervision; building up of counterpart funds using plan for project provinces; maintenance of hardware. DARD funds have been used to support the project, and PPCs have committed to maintain the system after project completion.
Project completion	December 2008.

DARD = Department of Agriculture And Rural Development; PPC = Provincial People's Committee

Source: provincial extension survey, 2008

### **C. Impact of Agricultural Market Information System**

7. Table A4.2 summarizes the main reported impact from AMIS establishment and functioning so far.

**Table A4.2: Reported Impact of the Agriculture Market Information System**

<b>Agriculture and rural development</b>	Contributes to rural agricultural economic structure transformation by (among others) supporting commercial agriculture product development and orientation
<b>Social</b>	Contributes to economic cooperation and to national and international transactions, improves the knowledge base and awareness, and contributes to job creation, income enhancement, livelihood support, etc.
<b>Poverty reduction</b>	Helps to redirect farmers (including the poorest) toward productive investment, and serves as a tool for market participation and market access
<b>Research</b>	Is an important information source for scientific research, technology application, planning, etc.
<b>Gender</b>	Improves widespread gender equality in information access (television, radio, internet)
<b>Environment</b>	Provides scientific and technological information, environmentally sustainable production models (e.g., for animal husbandry, garden-pond-cage), limits environmental pollution (by providing information relating to the damaging effects of production and measures for mitigating these effects)

Source: provincial extension survey, 2008

## **VIETNAM BANK FOR AGRICULTURE AND RURAL DEVELOPMENT**

### **A. Organization of the Bank**

1. Founded on 26 March 1988, and operated under the Law on Credit Institutions of Viet Nam, the Vietnam Bank for Agriculture and Rural Development (VBARD) (now trading since 2007 as AGRIBANK) is a leading commercial bank that has played a significant role in financing the economic development of the rural and agriculture sectors.

2. VBARD has over 2,200 branches and transaction offices nationwide, staffed by nearly 30,000 employees. It leads in the development of foreign direct investment projects, especially those financed by the Asian Development Bank, the World Bank, and bilateral financiers (e.g., Agence Française de Développement [AFD]). By 2008, it had implemented well over 100 foreign direct investment projects with combined assets of \$4 billion. It is, however, now facing increasing competition from people's credit funds, postal deposits, etc.

3. Between 2003 and 2007, VBARD gradually adjusted its operational policy toward both meeting its social objectives and ensuring its profitability primarily by (i) adjusting its interest rate policy, and (ii) abandoning state-directed lending. With a policy of flexible deposit and loan interest rates (based on the benchmark interest rates of the State Bank of Vietnam [SBV]) VBARD has liberalized and adjusted loan interest rates, making sure that operating expenses are covered and that profits accrue.

4. In 2003 and 2004, the post-tax profits of VBARD were less than zero,<sup>1</sup> in accordance with international accounting standards. By applying the policy of market-determined interest rates (under the direction of SBV), VBARD has achieved average growth rates of 28% per year for assets and 141% per year for profits since 2003. In 2007, VBARD's chartered capital increased from D6,513,450 million (\$408 million) to D10,548,160 million (\$662 million), making it one of the largest commercial banks in Viet Nam in equity terms.

5. VBARD has also significantly improved its control of bad debts and arrears. In 2007, its percentage of bad debts (as defined under the new, internationally consistent standards) was 1.9%. VBARD looks forward to achieving a capital adequacy ratio of 8% by 2010. The capital adequacy ratio in 2007 was 7.21.

6. In 2009, interest rates have declined as inflation has waned (now about 10% yearly on ASDP subloans, versus 20% in 2008), and the Government is subsidizing up to 4% of lending to SMEs and others. Despite this, VBARD is reporting difficulties in maintaining earlier business levels.

### **B. Financial Position**

7. Audited balance sheets, income statements and financial performance indicators for 2002–2007 are summarized in Tables A5.1–A5.3.

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<sup>1</sup> Net losses were D1,113,030 in 2003 and D298,100 million in 2004.

**Table A5.1: Vietnam Bank for Agriculture and Rural Development Audited Balance Sheets, 2002–2007** (year ending 31 December)

Item	2003	2004	2005	2006	2007
<b>Assets</b>					
Cash and Cash Equivalents on Hand			2,861,458	4,487,937	5,812,128
Cash and Balances with the State Bank of Vietnam	9,384,768	12,106,250	11,085,616	14,428,361	17,628,700
Current Accounts with Banks			680,267	2,657,856	12,150,335
Gold and Precious Metal	82,705	103,086			
Loans and Advances to Banks	3,019,180	2,612,982	5,612,837	10,961,028	
Treasury Bills	3,092,028	4,841,360			97,977
Loans and Advances to Customers	99,205,174	129,204,040	154,001,928	181,252,956	246,188,332
Investments Securities:	3,872,375	6,373,255	16,192,570	20,537,470	33,348,536
- Available for Sale	558,360	2,439,925	10,646,616	15,827,522	28,671,563
- Held to Maturity	3,314,015	3,933,330	5,545,954	4,709,948	4,676,973
Investments in Associated Undertakings	80,221	201,391	162,883	176,596	157,571
Intangible Assets	7,461	94,705	150,210	166,539	312,160
Property, Plan, and Equipment	1,683,519	2,106,470	1,994,035	1,856,525	2,234,051
Deferred Income Tax Assets		36,750			
Construction in Progress			390,037	606,633	
Other Assets	2,329,160	4,076,880	1,023,014	1,363,325	3,514,350
<b>Total Assets</b>	<b>122,756,591</b>	<b>161,757,169</b>	<b>194,154,855</b>	<b>238,495,226</b>	<b>321,444,140</b>

Item	2003	2004	2005	2006	2007
<b>Liabilities and Funds Employed</b>					
Current Accounts of the State Bank of Vietnam and Banks			20,355,684	23,352,816	25,993,416
Deposits and Borrowings from Other Banks	13,848,283	24,529,378	20,882,022	14,915,303	17,850,522
Deposits and Borrowings from State Bank of Vietnam	17,439,141	21,366,513	2,806,785	1,359,165	
Deposit from Customers	71,912,683	92,212,207	129,927,346	178,154,744	233,638,843
Debts Security in Issue	6,576,246	7,391,126			
Other Borrowed Funds	10,200,503	12,913,886	15,480,720	14,044,407	28,189,096
Enterprise Income Tax Payable			914,792	907,942	955,990
Other Liabilities	2,158,522	2,701,561	2,274,271	3,106,111	4,167,119
Provision for Loss on Commitments and Guarantees	378,077	158,879			
Deferred Income Tax Liabilities	117,001				21,478
<b>Total Liabilities</b>	<b>122,630,456</b>	<b>161,273,550</b>	<b>192,641,620</b>	<b>235,840,488</b>	<b>310,816,464</b>
<b>Capital and Reserves</b>					
Chartered Capital			6,382,035	6,513,450	10,548,160
Other Capital			436,962	441,421	186,054
Foreign Exchange Translation Reserve			25,078	26,448	26,630
Statutory Reserves			1,267,712	1,786,291	2,922,696
Available-for-sale Reserve				317,833	90,460
Accumulated Losses			(6,598,552)	(6,430,705)	(3,322,827)
Capital	5,423,660	6,113,660			
Retained Earnings and Reserves	(5,297,525)	(5,630,041)			
<b>Funds Employed</b>	<b>126,135</b>	<b>483,619</b>	<b>1,513,235</b>	<b>2,654,738</b>	<b>10,451,173</b>
<b>Benefits for Minority S/H</b>					<b>176,503</b>
<b>Total Liabilities and Equity</b>	<b>122,756,591</b>	<b>161,757,169</b>	<b>194,154,855</b>	<b>238,495,226</b>	<b>321,444,140</b>
<b>Contingencies and Commitments</b>	<b>7,841,988</b>	<b>8,095,546</b>			
<b>Off-Balance Sheet Items</b>			<b>7,760,166</b>	<b>10,921,865</b>	

Source: VBARD Audited Balance Sheets

**Table A5.2: Vietnam Bank for Agriculture and Rural Development Audited Income Statements, 2002–2007 (D million)**

<b>Year Ending 31 December</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Interest Income and Similar Income	9,032,860	12,392,386	17,251,457	22,078,323	29,055,125
Interest Expense and Similar Charges	(5,132,503)	(7,018,834)	(9,285,449)	(13,167,755)	(17,137,863)
<b>Net Interest Income</b>	<b>3,900,357</b>	<b>5,373,552</b>	<b>7,966,008</b>	<b>8,910,568</b>	<b>11,917,262</b>
Fee and Commission Income	294,640	333,652			
Fee and Commission Expense	(42,517)	(64,501)			
Net Fee and Commission Income	252,123	269,151	360,018	368,981	597,219
Dividends Income	3,356	2,637		4,642	33,957
Net Trading (Loss)/Income and Foreign Exchange Difference	159,852	(5,963)	<b>604,372</b>	<b>661,642</b>	67,384
Other Operating Income	494,666	428,716	706,566	238,444	246,441
<b>Total Operating Income</b>			<b>9,636,964</b>	<b>10,184,277</b>	<b>12,862,263</b>
<b>Operating Expenses</b>					
Payroll and Other Staff Costs			(1,555,043)	(2,314,829)	(4,372,070)
Depreciation Charges			(425,881)	(475,523)	(662,618)
Other Operating Expenses			(2,315,158)	(2,394,570)	(2,695,157)
<b>Total Operating Expenses</b>			<b>(4,296,082)</b>	<b>(5,184,922)</b>	<b>(7,729,845)</b>
Share in Profit of Joint Ventures and Associates			7,978	10,664	4,520
Provision for Credit Losses			(3,456,550)	(4,484,679)	(3,170,271)
Impairment Losses on Loans and Advances	(2,753,844)	(2,765,582)			
Provision for Other Assets				(4,174)	
Recovery of Loans Written-Off			432,647	932,716	3,188,840
Reversal of Impairment Losses for Offbalance Sheet					
Exposures	(118,848)	219,198			
Operating Expenses	(2,624,147)	(3,406,956)			
Non-Income based Taxes	(13,194)	(16,417)			
<b>Operating Profit/Loss</b>	<b>(699,679)</b>	<b>98,336</b>	<b>2,324,957</b>	<b>1,453,882</b>	<b>5,155,507</b>
Income Tax Expense	(413,351)	(396,436)	(600,214)	(346,961)	(640,236)
<b>Net Loss for the Year</b>	<b>(1,113,030)</b>	<b>(298,100)</b>	<b>1,724,743</b>	<b>1,106,921</b>	<b>4,515,271</b>

Source: VBARD Audited Balance Sheets

Table A5.3: Vietnam Bank for Agriculture and Rural Development Financial Ratios

Item	Unit	2002	2003	2004	2005	2006	2007
<b>Capital Adequacy</b>	%				1.5	4.97	7.21
Cumulative Provision (Loan Portfolio)	%	7.80	7.53	7.79	6.10	4.92	3.34
Frozen Loans/Loan Portfolio	%	4.70	1.84	0.68	0.04	0.02	0.01
Average Loans/Average Deposits	%	125.38	111.06	111.37	109.02	111.10	105.91
Return on Average Total Assets (Net Profit on Average Total Assets)	%				0.17	0.51	1.61
Net Profit on Average Equity (Average Capital and Reserves)	%				48.00	53.12	69.37
Interest Expenses/Total borrowings	%	4.90	5.01	5.12	5.64	6.25	6.13
Interest Income/Total Deposits and Borrowings	%	8.18	8.95	9.41	10.27	11.44	11.25
<b>Total Expenses/Total Assets</b>	%	<b>3.78</b>	<b>4.19</b>	<b>4.34</b>	<b>4.83</b>	<b>5.52</b>	<b>5.33</b>
Total Income/Total Assets	%	7.47	8.19	8.09	9.07	10.19	10.33
Total Expenses/Total Assets	%	6.96	7.62	8.27	8.92	9.72	8.92
Total Expenses/Total Income	%	93.20	93.04	102.28	98.34	95.44	86.40
<b>Interest Income/Average Total Loans and Deposits with Other Banks</b>	%	<b>7.92</b>	<b>8.90</b>	<b>9.41</b>	<b>10.27</b>	<b>11.44</b>	<b>11.25</b>
Average Total Assets	D m	91,944,911	122,630,456	161,757,169	192,319,498	238,495,226	321,444,140
Cumulative Provisions for Loan Losses	D m	6,112,270	7,693,332	10,471,520	9,638,195	9,593,071	8,640,749
Frozen Loans	D m	3,684,253	1,884,323	914,091	57,173	36,646	30,417

Source: VBARD Audited Balance Sheets

# **AGRICULTURE SECTOR DEVELOPMENT PROGRAM (LOAN 1972-VIE[SF])**

## **COMPLIANCE WITH LOAN COVENANTS**

<b>Covenant</b>	<b>Reference in LA</b>	<b>Timing</b>	<b>Status</b>
<b>A. Implementation Arrangements</b>  1. MARD shall be responsible for requesting tranche releases from the Bank.	Sched 5, para 1	1st tranche—upon loan effectiveness; 2nd tranche—about 18 months later; 3rd tranche - within 36 months of the first tranche	First tranche was disbursed on 18 Dec 2003, or 1.7 months after loan effectiveness. Second tranche was disbursed on 19 December 2005, and third tranche on 12 December 2007
2. MARD shall coordinate with the Ministry of Finance (MOF), Ministry of Planning and Investment (MPI), State Bank of Vietnam (SBV), and Vietnam Bank for Agriculture and Rural Development (VBARD) on the policy reforms and be responsible for day-to-day Program implementation and evaluating the impact of the reforms on stakeholders.	Sched 5, para 2	During implementation	Complied with
3. MARD has appointed a Program Director and established a Steering Committee. The Steering Committee shall be chaired by a Vice Minister and composed of senior staff from MARD, MOF, MPI, SBV and VBARD who shall meet at least quarterly. The Steering Committee shall ensure that the reforms are undertaken in line with the agreed timetable.	Sched 5, para 3	Quarterly meetings as appropriate	Complied with. Program Director was appointed. A Steering Committee (SC) was established on 24 June 2003, chaired by Vice Minister, MARD and composed of senior staff of MARD, VBARD and other relevant agencies. The first meeting was held on 29 July 2003. The Program Implementation Unit (PIU) sent semi-annual progress reports on ASDP implementation to the members of the SC.
4. MARD has established a PIU under the direction of the Steering Committee. The PIU shall be headed by a Program Director to oversee Program implementation and the policy reforms, and a Deputy Program Director, appointed from MARD's Agricultural Projects Management Board, to monitor and evaluate the implementation of the	Sched 5, para 4	Program commencement	Complied with. PIU was established on 16 January 2003, headed by a Program Director. Deputy Program Director, Chief Accountant, and Secretary/ Accountant also appointed.



Covenant	Reference in LA	Timing	Status
policy reforms. The PIU shall have the following functions: (a) prepare the semi-annual reports, as well as submit brief monthly reports to the Bank and MARD, on the progress and issues relating to Program implementation; (b) coordinate, monitor, and supervise Program implementation; and (c) assess the impact of the Program. Both the Steering Committee and the PIU shall coordinate their activities with MARD's existing Science and Technology and Trade Promotion Advisory Committees.		Monthly reports and semi-annual reports	Substantially complied with (after some initial delays, and reports supplied by TA consultants)
<b>B. Policy Reform</b>  5. The Borrower shall: (a) ensure that the policies adopted and actions taken as described in the Policy Letter prior to the Loan Agreement continue to be in effect; (b) timely adopt the other policies and take other actions included in the Program as specified in the Policy Letter, the Policy Matrix, and the Loan Agreement; and (c) ensure that such policies and actions continue to be in effect for the duration of the Program implementation period and thereafter.	Sched 5, para 5	During and after Program implementation	Being complied with
6. The Borrower shall keep the Bank informed of, and the Borrower and the Bank shall from time to time exchange views on, the progress made in carrying out the policies and actions set out in the Policy Letter, the Policy Matrix, and the Loan Agreement. The Borrower shall promptly discuss with the Bank problems and constraints encountered during implementation of the Program and appropriate measures to overcome or mitigate such problems and constraints.	Sched 5, para 6	During implementation	Complied with
7. The Borrower shall keep the Bank informed of policy discussions with other multilateral and bilateral agencies that have implications for	Sched 5, para 7	During implementation	Complied with

Covenant	Reference in LA	Timing	Status
implementation of the Program, and shall provide the Bank with an opportunity to comment on any resulting policy proposals. The Borrower shall take the Bank's views into consideration before finalizing and implementing any such proposals.			
8. The Borrower shall ensure that after Program implementation, the level of financing reached during Program implementation for agricultural research and extension shall be sustained in a manner consistent with the Borrower's approved 10-year development plan (2001–2010).	Sched 5, para 8	After Program implementation	Complied with
<b>C. Monitoring and Evaluation of the Program</b>  9. MARD, through the PIU and MARD's concerned departments, shall collect baseline data at the start of Program implementation. Both the Borrower and the Bank shall undertake regular and close monitoring of Program implementation.	Sched 5, para 9	Beginning and during Program implementation	Baseline survey undertaken by PIU.
10. Program impact shall be assessed, by independent research agencies appointed by MARD in consultation with the Bank, from the perspective of: (a) productivity gains for farmers, and (b) consumption patterns of the urban and rural poor due to shifts in market prices of staple food items.	Sched 5, para 10	During implementation	Complied with. SME impact survey by Hanoi Economics University in 2005, Program Loan completion/assessment report commissioned by MARD and project loan completion report commissioned by VBARD
11. MARD shall establish and maintain a program performance management system that includes a database of the status of policy reform measures and program indicators.	Sched 5, para 11	During implementation	Complied with. PIU and working group initiated system in late November 2003.
12. The Borrower, MARD, and the Bank shall conduct a comprehensive midterm review, at the end of year two of Program implementation, to evaluate the progress of reform measures, the impact on beneficiaries and the sector in general, and the performance of the PIU.	Sched 5, para 12	At the end of year 2 of Program implementation	Complied with (May 2006)

Covenant	Reference in LA	Timing	Status
<b>D. Counterpart Funds</b>  13. The Borrower shall ensure that the Counterpart Funds shall be used to finance the local currency costs relating to the implementation of the Program and other activities consistent with the objectives of the Program, and shall provide necessary timely budget appropriations to finance the structural adjustment costs relating to the implementation of the reforms under the Program and the Project.	Sched 5 para 13	During implementation	Complied with. ASDP counterpart funds have been allocated in 2004 through the State Budget of MOF to support agriculture science and technology, agricultural extension, and market information activities. On 3 June 2005, the Government approved the use of the ASDP counterpart funds for implementation of ASDP measures based on the proposed list of projects and programs submitted by MARD.
14. The Borrower shall open an account (the Deposit Account) at a commercial bank acceptable to the Bank, into which all withdrawals from the Loan Account shall be deposited. Separate accounts and records in respect of the Deposit Account shall be maintained in accordance with consistently maintained sound accounting principles.	Sched 3, para 4(b)	Prior to submitting the first withdrawal application	Complied with. Deposit Account has been established at VBARD Thang Long Branch. Separate accounts maintained by MOF in respect of the Deposit Account, and MOF and MARD in respect of the counterpart funds.
15. The Borrower shall submit trade statistics to assess the Borrower's compliance with the formula for determining Eligible imports.	Sched. 3, para 4(c)	During implementation	Complied with.
16. The Borrower shall maintain records and documents adequate to identify the eligible items financed out of the proceeds of the Loan and to record the progress of the Program.	Art. IV, para 4.04(a)	During implementation	Complied with.
17. The Borrower shall furnish to the Bank semi-annual reports on the carrying out of the Program and on the accomplishment of the targets and carrying out of the actions set out in the Policy Letter	Art. IV, para 4.05(b)	Semi-annual	Complied with.
18. Promptly after the closing date of withdrawals, but not later than 3 months thereafter, the Borrower shall prepare and furnish to the Bank a report on the execution of the Program.	Art. IV, para 4.05(c)	Not later than 3 months after loan closing	Being complied with (March 2009)

Covenant	Reference in LA	Timing	Status
<b>FIRST-TRANCHE CONDITIONS</b>	Attach. 2 to Sched. 3	By 31 Dec 2002	Substantially complied with by Dec 2003. First tranche was disbursed on 18 Dec 2003.
<p>1. MARD will have approved an agricultural research reorganization plan, that is in substance acceptable to ADB and which is based on the Master Plan for Agricultural Research prepared with the assistance of the Food and Agriculture Organization pursuant to which (i) the number of research institutes and centers is reduced to about 25 including two new regional centers for the central coast and northern highland agroecological regions are created; (ii) the functions and responsibilities of each institute are clarified and duplications eliminated to ensure more focus on important agricultural problems in food crops, perennial and cash crops, livestock, post-harvest and engineering, soil and water resources, forestry, and agricultural policy, (iii) standards and performance-based evaluation of agricultural research institute staff are established to provide financial and other rewards to good performers; and (iv) prioritize agricultural research toward more adaptive on-farm research which should be undertaken in a participatory manner involving extension staff and farmers. The plan should also propose how to deal with the surplus staff that will result from the reorganization of the agricultural research institutes and centers.</p>			<p>Complied with. As of 18 July 2003, (i) MARD reduced the number of research institutes from 32 to 25 (including two new regional institutes); (ii) MARD clarified the functions and responsibilities of research institutes; (iii) MARD was provided with broad authority to develop standards and performance evaluation criteria, and incentive packages by individual institutes; and (iv) MARD proposed emphasis on adaptive on-farm agricultural researches to be undertaken through regional research institutes.</p>
<p>2. MARD will have issued regulatory instructions to research institutes, acceptable to ADB, to phase out commercial activities (including mass production and sale of certified seeds) by allowing only the sale of breeder and foundation seeds (pre-basic and basic seeds) to private and public seed companies.</p>			<p>Complied with. MARD issued regulatory instructions dated 10 September 2003 (Letter No 3068/BNN-KHCN), to relevant institutes to phase out mass production and sale of certified seeds, and to sell only breeder and foundation seeds to private and public seed companies.</p>

Covenant	Reference in LA	Timing	Status
3. The Ministry of Science and Technology (MOST) and MARD will have established a system of competitive grants for agricultural research institutes with rationalized criteria for the award of grants.			Complied with. The system for competitive grants was established in both MOST and MARD. (Ministerial decisions from Minister of MOST, No 16/2003/QD-BKHCN, 18 June 2003 including regulation and Decision of the Minister of MARD, No 41-2003/QD/BNN 28 January 2003)
4. MARD will have issued regulations acceptable to ADB giving agricultural research institutes and centers autonomy to effectively carry out research, obtain funding from sources other than the national budget, provide financial incentives to research staff, and develop personnel and administrative policies in accordance with their autonomy status.			Complied with. Prime Minister's Decree dated 16 January 2002 on Financial Regulations for Revenue-raising for Public Service Units granted financial autonomy to the research institutes. MARD then issued necessary decisions (details on institution-by-institution basis in Appendix 3)
5. To provide adequate recurrent and operating budget to agricultural research institutes and centers, the Government will submit a national budget for 2003 that increases research allocation at a rate of at least 12%. To provide adequate recurrent and operating budget to agricultural extension, the Government will submit a national budget for 2003 that increases extension allocation at a rate of at least 12%.			Complied with. The budget for agricultural research was increased by 15% in FY2003.  Complied with. The budget for agricultural extension was increased by 20% in FY2003.
6. MARD will have issued to at least 20 provinces operational guidelines for the establishment of Provincial Extension Advisory Councils (PEACs) to provide a forum for stakeholder participation in the preparation of extension activities.			Complied with. MARD issued regulatory instructions decision (No. 2625 QD/BNN-KNKL, dated 6 August 2003) to 20 selected provinces to establish PEACs. MARD drafted a Circular with Operational Guidelines for establishment of PEACs.
7. MARD will have issued a regulation to contract out extension services to NGOs, universities, farmers' organizations, private companies, input suppliers, and agribusinesses, where possible.			Complied with. MARD issued instructions (letter No. 2294 CV BNN-KNKL 1st September 2003) to Provincial People's Committees (PPCs) to contract out extension services to NGOs, universities, farmer's organizations, private companies, input suppliers and agribusiness.

Covenant	Reference in LA	Timing	Status
<p>8. MARD will have approved a plan, acceptable to ADB, to establish and strengthen an agricultural market information system that links provinces and districts, and includes market demand and risk analyses for trade promotion. The plan will include (i) a strategy for the establishment of the agricultural market information system, and (ii) outputs, activities, monitoring indicators, cost estimates, cost recovery, and implementation arrangements for the phased investment in the establishment of an agricultural market information system in the country.</p>			<p>Complied with. MARD approved a plan to establish and strengthen the agricultural market information system. (ICARD forwarded proposal no: 87/TTTT 5th August 2003 to establish AMIS. Minister of MARD approved the proposal with Decision 4030/OD/BNN-KH 15th September 2003).</p>
<p>9. MARD will have (i) terminated subsidies on hybrid maize seed; (ii) issued letters to the four provinces that currently subsidize the commercial production of hybrid rice to terminate the subsidy, and the provinces will have terminated the subsidy; and (iii) issued letters to the 18 provinces that currently support poverty reduction for poor farmers through subsidized hybrid rice seeds indicating that (a) the subsidy be limited to poor farmers identified in the commune list of poor farmers; (b) the subsidy to the same farmer be phased out over a 3-crop period; and (c) the amount used for the subsidy should be limited and the funds should be used for extension.</p>			<p>Complied with. MARD issued (i) regulatory instructions (No 139 CV/BNN-KNKL 17 June 2003) (a) to PPCs to terminate subsidies to hybrid maize seed, and (b) to four provinces to terminate subsidy on commercial production of hybrid rice seed; and (ii) instructions to 18 PPCs (No. 2023 CV/BNN-KNKL 05 August 2003) to PPC to apply seed subsidies only to poor farmers to (a) limit the seed subsidies to only those poor farmers identified in the commune list of poor farmers; (b) phase out subsidy to these farmers over a 3-crop period; and (c) the revenue generated from subsidy savings shall be reallocated for additional extension activities.</p>
<p>10. (i) The Government will have paid additional legal capital into VBARD of no less than D480 billion; and (ii) VBARD will have approximately classified its loans, and adequately provisioned for expected loan losses, and solvency requirements consistent with SBV Decision 488 dated 27 Nov 2000.</p>			<p>Complied with. (i) The Government issued the official letter dated 15 July 2003 that provided additional legal capital to VBARD totalling D2,200 billion; and (ii) VBARD informed ADB of its official instruction (88/HDQT-03) on asset classification and risk provisions in compliance with SBV Decision 488.</p>

Covenant	Reference in LA	Timing	Status
11. VBARD will have provided commercial loans at interest rates negotiated between VBARD and its borrowers			Complied with. VBARD issued instructions dated 21 May 2003 providing guidance to the directors of VBARD member units to extend commercial loans at interest rates negotiated between VBARD and its borrowers.
<b>SECOND-TRANCHE CONDITIONS</b>	Attach. 3 to Sched. 3	Within 18 months of the First Tranche (i.e. by 30 June 2005)	Second tranche was disbursed on 19 December, 2005
1. MARD will have commenced implementation of the agricultural research reorganization plan by (i) consolidating the research institutes and centers to about 25 (including the two new regional institutes), (ii) defining the responsibilities of the regional centers with respect to improving the development of farming systems appropriate to their regions, and (iii) preparing a plan acceptable to ADB, to further reduce the number of research institutes to an appropriate number based on the priorities established by MARD.			Complied with. On 9 September 2005, the Government approved the implementation of the detailed reorganization plan for agricultural research institutes in two steps. The plan called for reducing the number of institutes to 12 in 2005, and then to six consolidated institutes by 2008. The plan emphasized the important role of regional research institutes (three) in carrying out research activities adapted to different agro-ecological conditions. (The Government commenced the plan implementation with technical assistance from ADB).
2. MARD will have completed the phase out of commercial activities (i.e. the sale of certified seeds) by the agricultural research institutes.			Substantially complied with. MARD released Document No. 3068 BNN-KHCN dated 10/9/2003 to its research institutes on the implementation of commitments under the ADB-funded ASDP. MARD also released Document No. 2782/QD-BNN-KHCN 13/09/2004 Framework for Seed Production and supply for Food Crops in Research and Breeding Intuitions up to 2010. (These covered the production of basic seed for further multiplication through linkages to the private sector. A transition period from 2004-2008 to phase out the sales of certified seed from research institutes was

Covenant	Reference in LA	Timing	Status
			expected, and seed supply was to be reorganized through contracting seed supply companies or by establishing independent companies for certified seed multiplication processing and sales. From 2008 certified seed sale from research institutes would be phased out).
3. MOST and MARD will have issued at least 10 competitive grants to agricultural research institutes on the basis of specific criteria.			Complied with. Grants were allocated to 4 research projects in agricultural biotechnology and 6 projects in agricultural marketing and exports.
4. MARD will approve a human resource development plan for strengthening agricultural research over the next 5–10 years.			Complied with. MARD held a series of consultations to formulate a human resource development plan to strengthen agricultural research, and approved the plan on 24 October 2005 (Decision 2889/QD/BNN-KHCN 24)
5. The Government will continue to increase the national budget for agricultural research and extension in 2004 at a rate of at least 12%.			Complied with. Budget increase for agricultural research (D233,476 million in 2004) was at 12.4% over 2003 budget (D207,666 million) and the increase for agricultural extension (D271,853 million in 2004) at 13.8% over 2003 budget (D238,784 million).
6. MARD will have commenced the pilot-testing, at one of its regional research institutes in the central region, of a rural system for integrated research and extension to increase rural incomes and livelihood.			Complied with. MARD initiated an integrated system for agricultural research and extension services at a research station in Ninh Thuận Province in south-central Viet Nam. (This involved the provincial agricultural extension center and covered cattle breeding, hybrid maize, and fruit production.)
7. Provincial Extension Advisory Councils (PEACs) will have been established in at least 20 provinces.			Complied with. Northern Upland Region: Hà Giang, Cao Bằng, Hoà Bình, and Lạng Sơn provinces; Northern Midland Region: Bắc Giang and Phú Thọ, provinces; Red River Delta



Covenant	Reference in LA	Timing	Status
			<p>Region: Hà Tây and Hưng Yên provinces; Northern Central Region: Nghệ An province  Middle Central Region: Bình Định, Hà Tĩnh, Quảng Nam, and Phú Yên provinces; Southern Central Coast Region: Ninh Thuận province; Southeast Region: Bà Rịa–Vũng Tàu province; Mekong Delta Region: Đồng Tháp, Long An, Sóc Trăng and Tiền Giang provinces; Southern Lowland Region: Kiên Giang province</p>
<p>8. MARD and the provincial governments will have approved a joint plan for extension work, acceptable to ADB, that (i) develops extension strategies and priorities, that focus extension efforts in remote and upland areas where there are large numbers of poor farmers; (ii) strengthens linkages between research and extension; (iii) redirects training of extension staff towards a new set of skills including participatory extension methodology, marketing, post-harvest activities, and rural finance; (iv) institutionalizes the participatory approach in extension services; (v) expands the provision of extension services at the district and commune levels by hiring about 5,000 new extension staff; (vi) increases funding to train extension staff and farmers; and (vii) improves the delivery of extension services to the poor, women, and ethnic groups by hiring of at least 10% more staff from ethnic minorities and women over a period of 36 months.</p>			<p>Complied with. In line with Decree 56, MARD formulated a joint plan in consultation with the 20 provinces where provincial advisory councils were established. The plan was approved by MARD on 11 October 2005.</p>
<p>9. Multiple extension services will be operating in at least 5 provinces.</p>			<p>Complied with. Multiple extension services were being operated in 6 provinces. All provinces had contractual arrangements with competent local partners to plan and implement part or whole of the extension services.</p>

Covenant	Reference in LA	Timing	Status
10. MARD will have issued a circular acceptable to ADB to reorganize the Department of Agriculture and Forestry Extension by transferring its National Agricultural Extension Center (NAEC) to a separate entity responsible for agricultural extension.			Complied with. Decree 86 dated 18 July 2003 divided the previous Agricultural and Forestry Extension Department into the Department of Agriculture and NAEC. NAEC became operational with 5 divisions and about 30 staff members.
11. MARD, in cooperation with local authorities, will have issued a circular acceptable to ADB for the establishment of provincial level teams of subject matter specialists, composed of experts in the fields of agronomy, horticulture, soil fertility, crop protection, livestock production, forestry, farm management and sociology to train extension staff in specific skills and to assist extension staff in providing advisory services to farmers' groups.			Complied with. NAEC prepared operational guidelines for the establishment of provincial teams of subject-matter specialists. MARD issued the guidelines in conjunction with the joint plan for extension work and provided this to all provincial agricultural extension centers. (Decision QD/BNN-KHCN 11 October 2005)
12. MARD and the provincial governments will have established the agricultural market information system in at least 50 districts within 10 provinces.			Substantially complied with. Pilot operations underway in 7 provinces, and plans to expand AMIS approved.
13. The Government will have increased VBARD's legal capital to no less than D1.44 trillion.			Complied with. VBARD's legal capital increased to D5.40 trillion as of 31 December 2003.
<b>THIRD-TRANCHE CONDITIONS</b>	Attach. 4 to sched. 3	Within 36 months of the First Tranche	Third tranche was disbursed on 12 December 2007
1. The reorganization, consolidation, and restructuring of the agricultural research institutes will have been completed according to the agricultural research reorganization plan. All staff affected will have been reassigned to other agencies of the Government or provided a severance package consistent with the Government's Resolution no. 16/2000/NQ-CP of 18 October 2000.			Complied with. 373 former VASI staff were re-assigned to strengthen the regional research institutes (FCRI, 175 staff; NOMAFSI, 55 staff; NCASI, 95 staff, and SCASI, 48 staff). 10 staff from VASI left employment and benefited from the severance allowances for redundancies (under Resolution No. 16/2000/NQ-CP on the streamlining of administrative Agencies and Non-business Units and the Resolution No. 09/2003/NQ-CP of July 28, 2003 – amending the former).

Covenant	Reference in LA	Timing	Status
2. MARD will have implemented the approved plan for staff standards and performance-based evaluation.			Complied with. DOP (with assistance of TA 4619 and based on experience from TA 4105) developed a methodology for a simplified format for staff performance assessment and evaluation and issued to research institutes for implementation
3. The research institutes will have commenced operations as autonomous organizations.			Complied with. The framework for autonomy in operations of MARD research institutes was according to Decree 11, and the schedule involved a transition period from 2006-2009 - leading to full operational autonomy. MARD established a Steering Committee that guided finalize transformation proposals, to have assets valued and submitted to MARD prior to issuance of Decisions on allotting asset to STOs.
4. The Government will have continued to increase the national budget for agricultural research and extension in 2005 at the rate of at least 12% over the previous year's budget allocation.			Complied with. The budget for agricultural research (D262,660 million in 2005) was at 12.5% over the 2004 budget (D233,476 million). The budget increase for agricultural extension (D308,553 million in 2005) was 13.5% over the 2004 budget (D271,853 million).
5. Provincial Extension Advisory Councils will have been established in about 20 more provinces.			Complied with. In accordance with MARD's approved operational guidelines for the advisory councils, the council was established in an additional 20 provinces selected from different agro-ecological regions, as follows: North West: Điện Biên, Lai Châu; Northern Upland: Bắc Cạn; Central Northern Mountains: Lào Cai, Yên Bái; Red River Delta: Bắc Ninh, Hải Dương, Nam Định; North Central Coast: Thanh Hoá, Quảng Trị, Thừa Thiên-Huế; Southern Central Coastal: Quảng Ngãi. Bình Thuận; Central Region: Đắk Nông, Đắk Lắk, Kon Tum; South East: Bình Phước; Mekong Delta Region: Bến Tre, Trà Vinh;

Covenant	Reference in LA	Timing	Status
			Southern Lowland Region: Cà Mau
6. The participatory extension approach will have been implemented in at least 40 communes in 40 districts in at least 10 provinces.			Complied with. The National Agricultural Extension Center (NAEC) of MARD guided the provinces to select 4 suitable districts and a commune in each of the selected district to implement the participatory approach in 40 communes in 40 districts in Lai Châu, Lạng Sơn, Lào Cai, Cao Bằng, Nghệ An, Quảng Nam, Phú Yên, Long An, Sóc Trăng, and Kiên Giang provinces
7. Local authorities will have hired about 1,000 new extension staff to fill vacancies at the commune level, at least 10% of whom will be women and 10% from ethnic minorities.			Complied with. In 2006, the total budget was D10.8 billion for the recruitment of 3,000 extension workers in 20 provinces (first stage PEAC), including women (20.8 %) and those from ethnic-minority groups (46.3%).
8. About 1,000 staff will have been provided training in various fields, including participatory extension methodology, marketing, post-harvest activities, and rural finance.			Complied with. Includes (for example) training in post-harvest technology (Mekong Delta region, and in Son La and Hà Giang provinces), training of training (central level - 135), TOT at the provincial level (1,101 in 8 provinces). 2000 further trainees 2006-2007
9. Multiple extension services will be operating in at least 10 provinces.			Complied with. (2006 survey of 20 provinces identified Bắc Ninh, Bến Tre, Đắk Lắk, Hà Giang, Hải Dương, Hà Tây, Lào Cai, Long An, Nghệ An, Ninh Thuận, Phú Thọ and Thừa Thiên-Huế, as especially active in involving local partners/NGOs).
10. NAEC will have been established and become operational.			Complied with. NAEC was established on 18 July 2003 and became operational thereafter.
11. Teams of subject matter specialists will have been established in at least 10 provinces.			Complied with. SMS teams established in Bắc Ninh, Đắk Lắk, Hải Dương, Hà Tây, Hoà Bình, Nghệ An, Thanh Hóa, Thừa Thiên-Huế, Tiền Giang and Yên Bái

Covenant	Reference in LA	Timing	Status
12. MARD and the provincial governments will have expanded the agricultural market information system to cover an additional 50 districts within 10 provinces (in addition to those districts and provinces where the system was established as a condition for the release of the Second Tranche).			Complied with. Twenty provinces were selected (10 in the first stage and another 10 in second stage); 100 districts now covered.
13. MARD will have terminated subsidies for the commercial production of hybrid rice seeds, and will have used those funds for the transfer of hybrid rice seed technology through extension activities.			Complied with. MARD does not subsidize hybrid seed production. (Some provinces have regulations for subsidizing the purchase of hybrid rice or maize seeds by farmers in remote areas; such subsidies are provided by committees for ethnic minorities).
14. The Government will have provided financial support to VBARD for VBARD to forgive eligible non-performing loans identified as of 31 December 2000, in accordance with the Prime Minister's Decision No. 149 of 5 October 2001 on non-performing loan resolution for state owned commercial banks.			Complied with. The total amount of the resolved non-performing loans was D5.34 trillion as of 31 December 2005, of which D2.40 trillion were financed by the Government, D1.34 trillion with VBARD's loan loss provisions, and D1.60 trillion recovered from the borrowers. The remaining amount was D38.3 billion or less than 1% of the total amount of the non-performing loans. This remaining amount was resolved before December 2007.
15. The Government will have increased VBARD's legal capital to no less than D1.92 trillion.			Complied with. The Government increased VBARD's legal capital to D5.4 trillion (\$340.1 million) by the end of 2003 and to D6.2 trillion (\$390.5 million) by the end of 2004.

ADB = Asian Development Bank, ASDP = Agriculture Sector Development Program, DOP = Department of Organization and Personnel, MARD = Ministry of Agriculture and Rural Development, MOF = Ministry of Finance, MOST = Ministry of Science and Technology, MPI = Ministry of Planning and Investment, NAEC = National Agricultural Extension Center, NGOs = nongovernment organizations, PEACs = Provincial Extension Advisory Councils, PIU = Program Implementation Unit, PPCs = Provincial People's Committees, SBV = State Bank of Vietnam, SC = Steering Committee, SMEs = small and medium-sized enterprises, STOs = science and technology organizations, TA = technical assistance, VASI = Vietnam Agricultural Science Institute, VBARD = Vietnam Bank for Agriculture and Rural Development

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## AGRICULTURE SECTOR DEVELOPMENT PROJECT (LOAN 1973-VIE)

### COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference in Loan Agreement	Timing	Status
<b>A. Project Executing Agency</b>  1. The Borrower shall ensure that the PIU established within VBARD is adequately staffed at all times by competent personnel, including a full time director, a credit officer responsible for ensuring and facilitating implementation of the credit line, an evaluation officer to monitor and evaluate the implementation of the Loan, and a budget officer to prepare relevant withdrawal applications and submit periodic reports to the Bank.	Sched 5, para 1		Complied with. A PIU within VBARD was established on 28 April 2004. PIU members were appointed, (including a Director, Deputy Director General, VBARD, Vice Director, a credit officer, an evaluation officer, and a budget officer).
2. The PIU shall be the Project-specific contact and focal point for the Bank in respect of all matters relating to the implementation, management, and coordination of the Project. The PIU shall be specifically responsible for: (i) submitting withdrawal applications to the Bank; (ii) coordinating and consolidating Project reporting requirements; (iii) overseeing the implementation of the Project; (iv) undertaking project performance monitoring; (v) advertising the credit lines and supervising their implementation; (vi) conducting workshops to clarify the objectives, scope, targets and implementation plans for the Project; (vii) carrying out the mid-term review and evaluation; and (viii) production of progress reports, project completion reports and other reports required by the Bank.	Sched 5, para 2	During implementation	Complied with.
<b>B. Project Performance Monitoring</b>  3. (i) VABRD shall carry out a baseline survey of a stratified sample of agro-industry SMEs that is representative of the SME sector as a whole. The PIU shall carry out monitoring and evaluation of the Project in accordance	Sched 5, para 3		Complied with. (i) Baseline survey was undertaken by the National Economics University to and completed in August 2005. (ii) Mid-term review was conducted in May 2006.

Covenant	Reference in Loan Agreement	Timing	Status
<p>with the Bank's Project Performance Management System.</p> <p>(ii) The Borrower, the Bank, and VBARD shall carry out a comprehensive mid-term review at the end of the second year of Project implementation to evaluate the actual physical and financial progress of the Project, review the allocations of the proceeds of the Loan, the performance of the PIU, and generally, compliance with the loan and Project covenants. Based on this review, modifications and improvements to the Project may be made and implemented.</p>			
<p><b>C. Relending Terms under the Subsidiary Loan Agreement</b></p> <p>4. The proceeds of the Loan shall be relent to VBARD on the basis of the Subsidiary Loan Agreement, which shall include the following terms:</p> <p>(i) the Subsidiary Loan shall be denominated in the currency of the Borrower and the Borrower shall bear the foreign exchange risk;</p> <p>(ii) the Subsidiary Loan shall have a maturity of 20 years including a grace period of 5 years;</p> <p>(iii) repayment of principal and interest shall be in equal semi-annual installments; and</p> <p>(iv) the relending interest rate from the Borrower to VBARD shall be variable and within a range between the weighted average cost in the banking system, of (a) time deposit funds, and (b) mobilized savings funds of 12 months or more, as computed and informed by SBV at the end of each quarter.</p>	Sched 5, para 4	During implementation	Complied with. Subsidiary Loan Agreement was signed on 1 March 2004. Terms and conditions were compliant to requirements of Loan Agreement.
<p><b>D. Revolving Fund</b></p> <p>5. VBARD shall establish a revolving fund (the Agroindustry SME Fund) to onlend to eligible agroindustry SMEs. Proceeds from the repayment of the principal of the Subloans shall be used to fund and maintain the Agroindustry SME Fund. Financing from the Agroindustry SME Fund shall be used for the same purposes and under the</p>	Sched 5, para 5	At the beginning of the Project	Substantially complied with. But, VBARD managed this manually, separate from internal accounting system.

Covenant	Reference in Loan Agreement	Timing	Status
same terms and conditions set out in the Loan Agreement.			
<p><b>E. Sub-borrowers and Subproject Eligibility Criteria</b></p> <p>6. Each Sub-borrower shall, in order to be eligible to receive a Sub-loan, meet at least the following criteria:</p> <p>(i) It is a legally established SME under the Borrower's laws.</p> <p>(ii) If it is a current borrower, it shall have a satisfactory credit history with no current arrears or rescheduled borrowings.</p> <p>(iii) It shall be able to contribute a minimum of 20% equity to the Subproject.</p> <p>(iv) It shall be in compliance with the terms and conditions of the agreements for all its outstanding loans.</p> <p>(v) It shall be in compliance with the regulations of VBARD.</p>	Sched 5, para 6	During implementation	<p>Complied with (as provided in VBARD's implementation guidelines, approved in July 2004).</p> <p>These were later revised to more closely conform to the objectives of the loan, regarding qualifying activities, locations and size of businesses (in terms of numbers of employees)</p>
<p>7. Each Subproject, in order to be eligible for financing through a Subloan, shall meet at least the following criteria:</p> <p>(i) It shall be located in a rural area.</p> <p>(ii) It shall be a potentially profitable and environmentally sound rural or agro-based business, primarily engaged in non-farm activities (i.e., activities that do not involve primary agricultural production).</p> <p>(iii) It shall require medium- or long-term credit including semi-permanent working capital for business start-up or growth.</p> <p>(iv) It shall have the potential for creating new employment.</p> <p>(v) It shall not involve any land acquisition or involuntary resettlement effects.</p> <p>(vi) It shall not result in any adverse environmental consequence.</p>	Sched 5, para 7	During implementation	Substantially complied with
<p>8. The Borrower shall ensure that no portion of the Loan proceeds is used to purchase or acquire any land.</p>	Sched 5, para 8	During implementation	Complied with
<p>9. Subloans for amounts less than the equivalent of D5 billion shall be appraised and approved in accordance</p>	Sched 5, para 9	During implementation	Complied with.





Covenant	Reference in Loan Agreement	Timing	Status
<b>H. Environment</b>  13. VBARD shall require all Subborrowers to be financed with Subloans comply with ADB's environmental policies and procedures and the Borrower's environmental laws and regulations, and shall provide for appropriate waste disposal facilities and procedures. In the lending processes VBARD shall raise customer's awareness of environmental responsibilities by requiring (i) Subborrowers to provide copies of all environmental permits prior to disbursement under the Subloan, where such permits are required, (ii) the inclusion of a standard environmental loan covenant in all Subloan Agreements specifying the Subborrower's environmental responsibilities, and (iii) the monitoring of compliance with environment related covenants in the Subloan Agreements and taking corrective action if non-compliance is detected.	Sched 5 para 13	During implementation	Partially complied with. (VBARD's capacity to monitor environmental impacts remained an issue)
<b>I. Financial Matters</b>  14. External auditors shall be engaged to audit project accounts, including the imprest account and VBARD.	Sched 5, para 14	In early 2005	Complied with. (External auditors - Pricewaterhouse Coopers).
15. The Borrower shall ensure that VBARD shall have increased its modified core capital adequacy ratio (defined as paid-up capital, retained earnings, and reserves, excluding reserves for bad debts, divided by weighted risk assets [defined as total assets, less loan loss provisions and risk free assets]) to at least 4% by 2005, and that VBARD shall have achieved a minimum core capital adequacy ratio of 8% on total equity on or before 31 December 2010.	Sched. 5, para 15	During and after implementation	Complied with. VBARD's core capital adequacy ratio was increased to 4.6% as of 31 December 2003, and increased to 5.2% as of 31 December 2004. On 31 <sup>st</sup> December 2006 it was 4.97%, and a year later it was 7.2%
16. The Borrower shall ensure that the proceeds of the Loan are not used to finance any loan to state owned enterprises or equitized enterprises where the Borrower has majority control.	Sched. 5 para 16	During implementation	Complied with.

Covenant	Reference in Loan Agreement	Timing	Status
<p><b>J. Progress Reports</b></p> <p>17. The Borrower shall furnish to the Bank quarterly reports on the Project's implementation and its overall operations and management. Such reports shall indicate, among other things, (i) expenditures for the different Subprojects, by industry and subsector; (ii) credit disbursement, recoveries, overdues, outstanding loans and status of revolving fund; and (iii) physical progress of all Subprojects, including Subborrower's compliance with covenants.</p>	Art. IV, para 4.03(b)	Quarterly	<p>Complied with.</p> <p>(Revised/Improved progress reports more in line with the loan agreement and recommendations of the TA consultant submitted to ADB after Q2 2005. Post-2007 included information on the status of the agro-industry SME revolving funds, physical progress of all subprojects, including VBARD' and sub-borrowers' compliance with the project covenants.).</p>
<p>18. Promptly after the physical completion of the Project, but not later than 3 months thereafter, the Borrower shall prepare and furnish to the Bank a report, in such form and detail as the Bank shall reasonably request, on the utilization and the impact of the Loan on intended beneficiaries, and the performances by the Borrower and VBARD of their obligations under the Loan Agreement</p>	Art. IV, para 4.03(c)	Not later than 3 months after physical completion of the Project	Complied with (consultant report available March 2009)
<p><b>V. K. PROJECT AUDITING</b></p> <p>19. VBARD shall maintain separate accounts for the Project and have its accounts and financial statements, and the Imprest Account audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors acceptable to the Bank and, not later than 9 months after the close of the fiscal year to which they relate, furnish to the Bank (i) certified copies of such audited accounts and financial statements and (ii) the report of the auditors relating thereto (including the auditors' opinion on the use of Loan proceeds, the revolving fund, all in the English language.</p>	Project Agreement, Section 3.06 (a)	Audited project accounts and financial statements to be submitted not later than 30 September of each year, starting from year 2005	Complied with.

ADB = Asian Development Bank, PIU= Program Implementation Unit, SME = small and medium-sized enterprise, TA = technical assistance, VBARD = Vietnam Bank for Agriculture and Rural Development.

## FINANCIAL AND ECONOMIC ANALYSES

### A. Introduction and Background

1. In the Agriculture Sector Development Project (ASDP) design, the investments under the program and project loans were expected to “improve the competitiveness of the agriculture sector in domestic and international markets and contribute to a positive growth in the sector rate, translating into income growth for rural producers, including the poor.”

2. A cross-temporal assessment of the proposed institutional reforms suggests that short-term gains would be more likely from the introduction of participatory extension services, market information, and the application of existing or off-the-shelf technologies, while the full benefits from a restructured research system and expanded extension service would be more likely to occur in the medium term.

3. The Program's financial and economic analyses in the report and recommendation of the President (RRP) concentrated entirely on indicative subprojects, in the form of loans to small and medium-sized enterprises (SMEs) in agro-industry, undertaking various types of commodity processing (e.g., coffee, starch, fruits, and cassava) as well as mechanical services, and transport.<sup>1</sup> No attempt was made to identify, quantify, or value the impact of strengthened agriculture research and extension systems.

4. Besides demonstrating overall subproject financial sustainability and economic viability, the analyses suggested that job creation by rural SMEs as a result of the Vietnam Bank for Agriculture and Rural Development (VBARD) loans would be significant (e.g., with some 7,500 loans of about \$10,000 on average each creating about 11,750 jobs, at an average cost per job of about \$6,400).

5. Evidence regarding the financial and economic situation of rural SMEs collected during the implementation of ASDP confirmed the general analysis orientation and problem identification of the program design process. A survey of SMEs conducted by the Hanoi National Economics University in 2005 made the following points of direct relevance to considering and understanding the likely impact of ASDP: (i) rural SMEs' technology base is low, and they face difficulties in competing in both domestic and international markets; (ii) SMEs are labor intensive and create jobs (both permanent and seasonal, many of these low skilled and unskilled) at relatively low cost, and are assisted in this by a simple enterprise management structure; (iii) SMEs have problems gaining access to formal credit sources, because of collateral and other considerations; (iv) recent enterprise profitability had been very variable (even declining overall) in the face of fluctuating input and output prices; and (v) environmental considerations do not figure significantly in the operations of rural SMEs, which typically have difficulties understanding and applying environmental regulations.

### B. Use of Agriculture Sector Development Project Loan Funds: A Summary

6. The Loan Agreement between the Government and the Asian Development Bank was signed on 22 April 2003 and the Subsidiary Loan Agreement between the Ministry of Finance and VBARD (as Executing Agency) was signed on 1 March 2003.

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<sup>1</sup> ADB. 2002. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Vietnam for the Agriculture Sector Development Program. Manila. Loan 1972/73-VIE, for \$30 million, approved on 16 December, Supplementary Appendix J.

7. Under the loan, VBARD was to provide subloans for privately owned agro-industry SMEs<sup>2</sup> under its credit lines, thereby increasing the value and quality of their products. The project loan targeted (i) agricultural input producers and suppliers; (ii) agro-industrial crop processors; (iii) fish and livestock processors; (iv) service providers (e.g., providers of mechanical and maintenance services); (v) manufacturers of small-scale handicrafts (such as bags, furniture, matting, basketry, and weaving); and (vi) preservation and marketing enterprises. The importance of lending to SMEs as determinants of sector productivity and output can be seen from the fact that SMEs account for 81% of all agro-industry enterprises.

8. The loan was channeled through 23<sup>3</sup> branches of VBARD. These were in Bắc Ninh, Bình Thuận, Đắk Lắk, Đắk Nông, Điện Biên, Gia Lai, Hà Nam, Hà Tây, Hà Tĩnh, Hưng Yên, Lai Châu, Lào Cai, Nam Định, Phú Yên, Ninh Bình, Quảng Bình, Quảng Nam, Tây Ninh, Thừa Thiên-Huế, Trà Vinh, Tuyên Quang, Vũng Tàu and Yên Bái.

9. The average subloan size was about \$29,000 (D488 million). The subloans disbursed (as of 31 September 2008, and including those from the revolving fund) totalled around \$111.25 million (D1,845 billion), covering some 3,775 subborrowers. The borrowers' own capital contribution to investments was about 31%, Asian Development Bank capital about 46%, and VBARD capital about 23%.

10. Overall, therefore, the total capital lent was about 30% larger than had been expected at project design, the average loan size was almost three times larger than expected (in the RRP financial and economic analyses), but the total number of subloans was only about half what had been anticipated.

11. A distribution of subloans by enterprise activity and geographic location is shown in Tables A9.1 and A9.2.

12. From these tables, the following major points emerge: (i) some 60% of loans by value (and over 50% by volume) went to trading and "other" activities (including transportation and storage), some 11% by value (and 17% by volume) went to input supply (fertilizers, livestock, and fish food), and less than 10% by value (and 10% by volume) to the processing of crops, fish, and livestock; (ii) the highest number of loans went to the Central Highlands (34%), especially Đắk Lắk province, but average amounts were lower there than in other regions; and (iii) the Northern Uplands and the Red River Delta accounted for about half of all lending.

13. The situation varies province by province, but one reason for the outturn of activities' distributions being mainly toward non-agri-processing activities (especially transportation, storage, etc.) is that provinces near major urban centers (especially Hanoi and Ho Chi Minh City, and provinces such as Bắc Ninh, Nam Định, Dong Noi) have become much more urbanized in recent years (since ASDP design) and agricultural production no longer predominates in the way that it used to.

<sup>2</sup> SMEs are defined in Viet Nam (Decree 90) as having no more than 300 employees and chartered capital of no more than D10 billion (\$0.63 million).

<sup>3</sup> The splitting of Vũng Tàu into two branches (Vũng Tàu) and Bà Rịa-Vũng Tàu) during implementation increased the number of branches to 24.

**Table A8.1: Enterprise Activity Distribution of Subloans**

Enterprise Activity	Number	Amount		Percentage	
		D '000	\$ Million	Number	Amount
Agricultural Inputs	636	209,826,174	12.65	17	11
Processing of Crop Products	276	135,377,334	8.16	7	7
Processing of Fish Products	38	17,489,507	1.05	1	1
Processing of Livestock Products	25	11,015,262	0.66	1	1
Mechanical Services (repairs, etc.)	225	100,188,501	6.04	6	5
Small-Scale Manufacturing	590	257,823,332	15.54	16	14
Trading	921	440,273,440	26.54	24	24
Others	1,064	673,248,741	40.59	28	36
<b>Total</b>	<b>3,775</b>	<b>1,845,242,291</b>	<b>111.25</b>	<b>100</b>	<b>100</b>

Source: VBARD

**Table A8.2: Geographic Distribution of Subloans**

Region	Number	Amount		Percentage	
		D'000	\$ Million	Number	Amount
Northern Upland	783	437,747,353	26.39	21	24
Red River Delta	837	443,581,526	26.74	22	24
North Central	321	154,114,765	9.29	9	8
Central Coast	95	29,316,290	1.76	3	2
Central Highlands	1,295	515,455,521	31.08	34	28
Southeast	392	235,787,836	14.22	10	13
Mekong River Delta	52	29,239,000	1.76	1	2
<b>Total</b>	<b>3,775</b>	<b>1,845,242,291</b>	<b>111.25</b>	<b>100</b>	<b>100</b>

Source: VBARD

### C. Financial and Economic Impact of Loans to Small and Medium-Sized Enterprises

14. Because loans were made to established SMEs with significant capital already invested in their enterprise and with ongoing operations (and not to households without other assets, just about to start an activity), the financial and economic analyses in the ASDP RRP were somewhat unrealistic, and a comparison of current enterprise profitability with the expected economic internal rates of return from the RRP would be largely meaningless. Estimating returns to the SME loans in the current circumstances would require considerable investigation into enterprise pre- and post-subloan circumstances; the financial and economic analyses here therefore summarize the major features of SME operations and the impact that can be attributed to the loans taken under ASDP.

15. Visits in early 2009 to a number of rural SME subborrowers under the Project in northern provinces (Bắc Ninh, Nam Định) and southern provinces Bà Rịa–Vũng Tàu revealed the following points about the nature of the project loans in relation to particular agro-industrial SMEs (Table A8.3): (i) loans usually made up only a relatively small proportion of capital invested in the business; (ii) both enterprise scale and productivity escalations resulted from the

use of loan funds (e.g., the pig and fish business was a case of simple scale expansion; the loans to enterprises engaged in brickworks, fish processing, and garment manufacture were for technology upgrades); (iii) significant numbers of jobs in rural areas were created, even if activities were not entirely agricultural; and (iv) all of these enterprises had borrowed previously from VBARD.

16. The results of a survey of 20 SMEs taking subloans under the Project are summarized in Table A8.4. What is most notable from this survey is that (i) in 2007 all the surveyed enterprises were reportedly profitable, and thus likely to repay the subloans as scheduled; and (ii) all of the enterprises created new jobs in association with investments made under the subloans.

17. In relation to the second of these points, VBARD figures (up to 30 September 2008) show that just under 46,000 new jobs (full-time and part-time, seasonal and permanent) were created,<sup>4</sup> at an average cost of about \$3,600 each. This is comparable to RRP estimates of about 11,750 jobs at an average cost of \$6,000 each. This is almost certainly the single-biggest impact of the ASP as a whole observable at program closing.

18. What is also notable is that in 2008, as the economic crisis began to take effect in Viet Nam, enterprise profitability was lower than in 2007. Only 6 out of the sample were at least as profitable as they were the previous year, and 13 were less profitable ("Less" in Table A8.4), and one (in construction services) had actually become loss making.

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<sup>4</sup> Almost half the jobs are in Đắk Lắk, a province with about 20% of all subborrowers.

**Table A8.3: Example Loan and Enterprise Characteristics of Subborrowers (early 2009)**

Province	Enterprise Type	VBARD Loan / Enterprise Capital	Business Features / Loan Issues
Bắc Ninh	Carton paper manufacture (from waste), double-sided, size and volume cut to order	Loan from VBARD of D2 billion (\$125,000) over 5 years. Already D7 billion invested in the business.	Loan was used to purchase Karap equipment; 10% of loan already repaid. Also takes short-term loans to purchase materials. Business has 50 full-time employees. Started as a household venture; now located on industrial estate (50-year lease) within Bắc Ninh. Price of carton paper is now going down, but input prices are also falling. Environment issues: on one hand, very positive (paper from waste), but only one visit from Ministry of Natural Resources and Environment in 7 years and obviously poor compliance with effluent and air discharges.
Bắc Ninh	Pig and fish production	Well-established business, with history of successful borrowing from VBARD (now up to D4 billion) (\$250,000)	25 full-time employees; 1000+ pigs for meat sales, 120 breeders; 14 ha of ponds (raises fingerlings and sells in bulk; claims very high yields). Land for ponds rented, but pond costs borne by business. Studied fish breeding; no input from extension agencies, but friends in Thailand, Philippines. Age 41; started from household scale. Would like to borrow D15 billion (approx. \$800,000) to expand scale of current enterprise. (Note: Not technology upgrade. Fish fertilizer levels, pond flushing as possible environmental issues.)
Nam Định	Brickworks (river-based)	D2 billion (\$125,000), enterprise value about D10 billion (\$625,000)	125 full-time workers. Production line of trolleys/runners to produce 2-hole brick shapes (or tiles) from coal dust and river silt (helps to de-silt river?). Largest of 18 enterprises of similar type in the area; now made much more efficient by full-time (not stop/start) work and consistency in brick mixture. Owns 2 ha land, rents 4 ha on 25-year lease; would like to borrow more to expand scale significantly. Brick prices going down (D700), but so are inputs (D300).
Nam Định	Garments	D450 million (\$28,000) loan; capital invested about D12 billion (\$750,000)	Specialist embroidery and printing. Used loan to buy one modernized embroidery line. 100 workers, 3 full-time shifts, within urban area of Nam Định. Well established, started at household level. Run by couple, mid-40s.
Bà Rịa–Vũng Tàu	Seafood processing	D2 billion (\$125,000) loan; capital in business about D25 billion (\$1.5 million)	General fish, squid, shrimp, etc., cleaning and freezing, mainly for export. Used loan to buy quick-freezing line, which added 10% capacity and 15% to workers (50 jobs), but increased turnover significantly (by producing higher-value-added products). Making interest payments and also capital quite satisfactorily; confident of repaying loan, despite economic slowdown. Recently postponed purchase of new equipment that would have required additional VBARD lending.

VBARD = Vietnam Bank for Agriculture and Rural Development  
Source: Completion Report mission (January 2009)



Table A8.4: Sample Loan and Enterprise Summary

Location Details				Subproject Cost		Subloan from ADB		Annual Turnover		Jobs Created			Net Profit (Profit/Less/Loss)	
Province	Borrower	Legal status	Business activity	D mill	\$	D mill	\$	D mill	\$	Employees prior to loan	Employees after loan	Expected IRR (%)	2007	2008
Bắc Ninh	Nguyễn Năng Dũng	Individual	Trading	625	35,745	268	15,327	450	25,736	3	7	32	Profit	Profit
Bắc Ninh	HTX giấy Toản Thắng	Partnership	Manufacturing	375	21,447	201	11,496	13,000	743,494	118	168	31	Profit	Less
Hà Tĩnh	DNTN Hiền Liên	Limited company	Mechanical services	5,000	285,959	2,680	153,274	4,524	258,736	5	11	34	Profit	Profit
Hà Tĩnh	XN xây dựng Hải Hồng	Private company	Agricultural inputs	500	28,596	268	15,327	1,800	102,945	12	20	38	Profit	Less
Nam Định	Cty TNHH Đại Thắng	Limited company	Agricultural inputs	1,675	95,796	896	51,244	8,800	503,289	30	45	36	Profit	Less
Nam Định	Trần Văn Thuận	Individual	Small-Scale Manufacturing	313	17,901	167	9,551	428	24,478	10	18	21	Profit	Less
Hà Nam	Cty TNHH Việt Đức	Limited company	Mechanical Services	625	35,745	335	19,159	1,350	77,209	50	70	22	Profit	Profit
Hà Nam	Cty TNHH Quang Đông	Limited company	Small-Scale Manufacturing	250	14,298	134	7,664	1,000	57,192	15	35	> 0	Profit	Less
Tuyên Quang	Cty TNHH Hoàng Ngọc	Limited company	Mechanical Services	500	28,596	268	15,327	1,498	85,673	8	14	11.2	Profit	Profit
Tuyên Quang	Cty TNHH Mai Linh	Limited company	Mechanical services	1,055	60,337	498	28,482	770	44,038	3	7	13	Profit	Profit

Location Details				Subproject Cost		Subloan from ADB		Annual Turnover		Jobs Created			Net Profit (Profit/Less/Loss)	
Province	Borrower	Legal status	Business activity	D mill	\$	D mill	\$	D mill	\$	Employees prior to loan	Employees after loan	Expected IRR (%)	2007	2008
Vũng Tàu)	Cty TNHH Phước Ngọc	Limited company	Small-Scale Manufacturing	1,112	63,597	596	34,086	2,800	160,137	7	12	32	Profit	Less
Vũng Tàu)	DNTN Công Dững	Private company	Services	575	32,885	308	17,615	1,250	71,490	3	7	34	Profit	Less
Hue	Cty TNHH Đại Dương	Limited company	Fish processing	1,026	58,679	348	19,903	4,420	252,788	20	45	42	Profit	Less
Lào Cai	Cty TNHH Trường Giang	Limited company	Trading	240	13,726	134	7,664	3,000	171,576	10	18	41	Profit	Less
Lào Cai	DNTN Khánh Hải	Private company	Services	5,500	314,555	2,144	122,619	1,576	90,134	23	38	27	Profit	Less
Quảng Bình	CT TNHH Đức Đạt	Limited company	Small-Scale Manufacturing	275	15,728	147	8,407	692	39,577	17	29	> 0	Profit	Less
Quảng Bình	CT TNHH Thông Ngân	Limited company	Construction services	913	52,216	489	27,967	2,100	120,103	20	52	> 0	Profit	Loss
Gia Lai	Phạm Quang Hải	Individual	Agricultural inputs	254	14,527	134	7,664	253	14,470	2	5	36	Profit	Less
Gia Lai	Bùi Thị Thanh Nga	Individual	Mechanical services	903	51,644	469	26,823	300	17,158	2	3	13	Profit	Profit
Ninh Bình	CT TNHH Giấy Tiến Dững	Limited company	Processing	8,000	457,535	2,680	153,274	5,000	285,959	30	54	41	Profit	Less

Source: enterprise survey for Project Loan Completion report (draft, 2008)