



# Validation Report

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Reference Number: PCV: INO 2008-59  
Project Number: 29315  
Loan Number: 1526-INO  
May 2009

## Indonesia: Participatory Development of Agricultural Technology Project

Independent Evaluation Department

**Asian Development Bank**

## ABBREVIATIONS

ADB	–	Asian Development Bank
AEZ	–	agroecological zone
AIAT	–	Assessment Institute for Agricultural Technology
CASER	–	Center for Agro Socio-Economic Research
IAARD	–	Indonesian Agency for Agricultural Research and Development
PCR	–	project completion report
R&D	–	research and development
RRA	–	rapid rural appraisal
RRP	–	report and recommendation of the President

## NOTE

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

### Key Words

adb, capacity development, iaard, ied, independent evaluation department, indonesian agency for agricultural research and development, institutional strengthening, participation, project completion report, research and development, technology transfer, validation

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## PROJECT COMPLETION REPORT VALIDATION

A. Basic Project Data		PCR Validation Date:	May 2009	
<b>Project Number:</b>	29315		<b>Approved</b>	<b>Actual</b>
<b>Loan Number:</b>	1526-INO			
<b>Project Name:</b>	Participatory Development of Agricultural Technology Project	<b>Total Project Costs (\$M):</b>	108.2	97.4
<b>Country:</b>	Indonesia	<b>Loan/Grant (\$M): (SDR equivalent)</b>	63.8	49.5
<b>Sectors:</b>	Agriculture and Natural Resources	<b>Total Cofinancing (\$M):</b>	0	0
<b>ADB Financing (\$M):</b>	<b>ADF:</b> 49.5	<b>Borrower (\$M):</b>	44.3	47.8
	<b>OCR:</b> 0	<b>Beneficiaries (\$M):</b>	0	0
<b>Cofinancers:</b>	None	<b>Others (\$M):</b>	0	0
<b>Approval Date:</b>	1 July 1997	<b>Effectiveness Date:</b>	16 October 1997	27 August 1997
<b>Signing Date:</b>	16 July 1997	<b>Closing Date:</b>	30 September 2004	11 September 2006
<b>Project Officers:</b>	<b>Name:</b>	<b>Location (HQ or RM):</b>	<b>From (yr)</b>	<b>To (yr)</b>
<b>Appraisal Implementation</b>	C. B. Amerling	HQ	3 March 1997	26 March 1997
	C. B. Amerling	HQ	July 1997	July 1999
	M. Jayawant	HQ	August 1999	August 2001
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	S. Sahajanathan	HQ	June 2002	February 2003
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ADB = Asian Development Bank, ADF = Asian Development Fund, HQ = headquarters, OCR = ordinary capital resources, IED1 = Independent Evaluation Division 1, INO = Indonesia, M = million, N/A = not applicable, PCR = project completion report, RM = resident mission, SDR = special drawing rights, yr = year.

### B. Project Description (summarized from RRP)

- (i) **Rationale.** Indonesia's agriculture sector was changing from one dominated by rice production in irrigated or rain-fed conditions to one based on flexible, market-orientated production across environmental conditions. The Government of Indonesia viewed raising agricultural productivity and promoting the agribusiness sector—particularly at the provincial level—as an effective measure not only for export promotion and the changing pattern of food demand, but also for poverty alleviation, improved management of natural resources, reduction of rural-urban income disparities, and promotion of balanced regional growth.

The Indonesian Agency for Agricultural Research and Development (IAARD) was not ready to adapt to such changes; in particular, there was no effective agricultural research and development (R&D) capability in most Indonesian provinces. Three required reorientations in

agricultural R&D included:

- (a) a new geographical basis, with regions and provinces being the major drivers of agricultural R&D;
- (b) a shift from commodity-based planning to resource-based planning; and
- (c) greater stakeholder involvement in determining research priorities.

These reorientations could only be achieved through restructuring of agricultural research institutions, particularly through building capacity in the regions. The report and recommendation of the President (RRP) noted that the Participatory Development of Agricultural Technology Project (the Project) would build capacity in this regard as established under previous Asian Development Bank (ADB) and World Bank projects. It also quoted extensive research on the investment returns in agricultural research, with post-analyses showing investment returns for various commodities and countries in Asia—including Indonesia—in excess of 25%.

**(ii) Expected impact.** The expected impact of the Project was improved farm incomes and reduced rural poverty through increased generation, transfer, and adoption of location-specific, user-oriented technology.

**(iii) Objectives or expected outcomes.** The Project's expected outcomes were (a) strengthened capacity of IAARD to manage and implement regional participatory agricultural R&D; (b) improved capacity of the national agricultural research system to generate strategic technologies; and (c) accelerated transfer and adoption of location-specific, user-orientated technologies.

**(iv) Components and/or outputs.** The RRP and project targets in the logframe did not match; the latter, however, formed the basis of the project completion report (PCR), and the following summary of components draws on the logframe. The Project had four components and 12 subcomponents.

- (a) **Component 1: Build regional participatory R&D and technology transfer capability.**
  - (1) Build the capacity of provincial R&D centers.
  - (2) Strengthen regional participatory R&D.
  - (3) Enhance technology transfer and delivery systems.
- (b) **Component 2: Strengthen national strategic R&D capacity.**
  - (1) Conduct national and regional research priority-setting studies.
  - (2) Strengthen comprehensive strategic research.
  - (3) Develop human resources for priority strategic research.
  - (4) IAARD strategic research fund. This fund did not appear in the RRP or in the more detailed project description in its annex but was given as a subcomponent in the RRP logframe and carried over to the PCR logframe. A fund as a project component is out of line with other components, and there is overlap with subcomponent 3a.
- (c) **Component 3: Enhance R&D collaboration and communication.**
  - (1) Strengthen regional and national R&D networking.
  - (2) Enhance links with international R&D organizations.
  - (3) Improve science and technology communication.
- (d) **Component 4: Institutional reforms and management development.**
  - (1) Support IAARD's institutional reforms and management development.
  - (2) Support project implementation.

### C. Evaluation of Design and Implementation (PCR assessment and Validation)

**(i) Relevance of design and formulation:** The PCR considered the Project to have been relevant at the time of design and to have remained highly relevant throughout its implementation. It was consistent with (a) the Government's overall development priorities, (b) ADB's support for agricultural development in Indonesia, (c) ADB's research policy on

agriculture, and (d) Indonesia's decentralization program.

The Project's formulation covered capacity building particularly in the provinces, and geared R&D to specific agroecological conditions and the farming population's needs. This allowed the project design to be somewhat flexible, although its overall design was overly prescriptive in its outputs and activities.

- (ii) **Project Outputs:** The PCR presented a detailed logframe providing qualitative and quantitative information on project outputs although the RRP failed to give any quantitative targets and there is not therefore a genuine comparison at the quantitative level of envisioned to actual outputs. The source of quantitative data is not always clear. It is assumed that the impact assessment study referred to in the PCR, as having been carried out in late 2004 and early 2005, is that mentioned in the back-to-office report (BTOR) of December 2005 as being in the process of compilation. The government provided its own PCR to the ADB PCR mission which used it as one of its references.

As the Project was composed of four components and 12 subcomponents, it was unnecessarily complicated. In addition, the terminology of some components and subcomponents did not always reflect the associated activities, and there were instances of the same activity being covered in more than one subcomponent. The constant use of the term "strategic research" was misleading and should have been referred to as "applied research" or "breeding programs."

(a) **Component 1: Build regional participatory R&D and technology transfer capability**

- (1) **Build the capacity of provincial R&D centers.** This subcomponent was an odd mix of staff capacity building and technology transfer to farmers. It covered physical infrastructure development at 12 centers, either through new construction or rehabilitation, and appeared to bring all 12 up to a similar level. Technology transfer occurred through various demonstrations and by improving access to information via the internet and upgraded libraries. However, internet and library facilities were also covered in component 3, where they may be more appropriate. Of the activities originally listed as performance targets, the PCR did not reference the establishment of a provincial management information system; implementing procedures for a new government accounting system; or the utilization of improved R&D management processes, procedures, or tools.
- (2) **Strengthen regional participatory R&D.** This subcomponent covered the on-farm verification of technology packages and had a significant demonstration element that was not specifically differentiated from those of the previous subcomponent. Within this subcomponent, the PCR also reported the mapping of agroecological zones (AEZs), which seemed to be also covered under component 2. The PCR reported a satisfactory level of achievement in mapping, trials, and studies.
- (3) **Enhance technology transfer and delivery systems.** This subcomponent covered a range of extension activities from which the PCR concluded that 180,000 farmers directly or indirectly benefited through increased annual incomes by 5% to 10%. The source of these figures was not attributed. However, the PCR reported that only 5% of farmers in the project area benefited. Within this subcomponent, the PCR logframe referred to the updated management information system database and updated regional management information system databases, but it was not clear if these were the same as the provincial management information system facility referred to in the first subcomponent.

At appraisal, this component accounted for 55.6% of project costs, which fell to 22.5% at project completion. The PCR stated that this change is due to all recurrent costs for the Project (constituting 62% of project expenditures) having originally been allocated into this component; these were subsequently distributed among all components.

(b) **Component 2: Strengthen national strategic R&D capacity**

- (1) **Conduct national and regional research priority-setting studies.** This subcomponent's main activities related to AEZ surveys, rapid rural appraisals, and other in-depth studies and surveys. The difference between these and the AEZ surveys conducted under component 1 was not clarified. There appears to have been a high level of activity related to this subcomponent, although it is difficult to know due to the similar activities covered under other subcomponents. However, the PCR noted that these surveys were well-supported by the local authorities.
- (2) **Strengthen comprehensive strategic research.** This subcomponent implemented strategic research, though, as noted above, the term "strategic" was never adequately defined. Under this subcomponent, the PCR reported the release of 37 new rice varieties and high-yielding maize, significant progress in producing high-yielding varieties, and improved technology for a range of other crops. Given the time required in most breeding programs, it seems possible that much of this work was already in progress, but new research and breeding work initiated as a result of the Project, and work that was ongoing but benefited from project support, were not differentiated.
- (3) **Develop human resources for priority strategic research.** As with other parts of the Project, it was difficult to distinguish between achievements under this subcomponent and—in this case—some under component 3. The figures given in the PCR logframe for students attending various levels of formal training (299) did not match the figures given in the PCR text (554). This latter figure is closer to the figures given in the back-to-office report of the August 2005 Review Mission, which was 528, including ongoing studies. The PCR also reported 133 staff members participating in exchange programs, but they may be double-counted if these are included in the 155 researchers who are reported as attending scientific exchange programs in component 3. The expenditure of only \$6.6 million (out of an allocation of \$9.2 million) seems fairly low for training, comprising around 225 person-years of international and 830 person-years of local training, which were the figures in the August 2005 back-to-office report. However, it is not easy to segregate within subcomponents as one category in the allocation of loan proceeds, such as for consulting services, may involve several components and/or subcomponents.
- (4) **IAARD strategic research fund.** This subcomponent was not mentioned in the text of the RRP or in the detailed project description (Appendix 5) but appeared in the PCR logframe. It is not clear what distinguished it from other funded research, but the PCR reported against this output that some funds were released to research collaborators and that support was given to Prima Tani, a strategic technology innovation program.

Component 2 was allocated \$19.9 million (21% of project budget) at appraisal, and its actual expenditure was \$37.9 million (43%). The PCR offered no explanation for this increase, and the Validator could not determine the reason for this significant increase from the available figures, though it may in part relate to the allocation of recurrent costs.

(c) **Component 3: Enhance R&D collaboration and communication**

- (1) **Strengthen regional and national R&D networking.** This subcomponent focused on setting up regional advisory committees and collaborative programs. The regional committees apparently meet only once a year, which seems inadequate. About 157 collaboration agreements and 157 R&D collaborative activities were recorded, but the PCR did not explain their relationship to one another. The PCR also included 34 collaboration agreements with international centers against this subcomponent, though it would seem that they should be recorded in the next subcomponent. Figures given in the PCR logframe cannot be wholly reconciled with the figures in the PCR text. Overall, the PCR reported a high level of activity in this subcomponent, but it is impossible to validate the real achievements largely because the performance targets in the RRP were not properly formulated.
- (2) **Enhance links with international R&D organizations.** The PCR recorded 49 collaborative training programs, 34 research collaborations, and 134 attendees at

seminars and other exchange fora. The 34 research collaborations are probably those already recorded in the previous subcomponent, and some of the exchanges may already have been counted in component 2.

- (3) **Improve science and technology communication.** Under this subcomponent, library facilities—including a computerized reference library for farming systems research—and internet connections were established. The RRP referred to this being based on the Centre for Agricultural Library and Research Communication, but in the PCR, the focus for the work was the Indonesian Center for Agricultural Library and Technology Dissemination; it is assumed that the latter simply succeeded the former. In the stated achievements of this subcomponent, there was no reference to the intended establishment of a comprehensive information system on mature technologies, though the inclusion of such a specific activity in the RRP was symptomatic of an overly prescriptive project design.

The component's cost was \$1.0 million, compared to an estimated cost of \$4.9 million, and the reasons for this increase should be determined.

(d) **Component 4: Institutional reforms and management development**

- (1) **Support IAARD's institutional reforms and management development.** This subcomponent supported capacity building for the Assessment Institute for Agricultural Technology (AIAT). The PCR considered this subcomponent achieved by the establishment of an assistance team drawn from research institutions. The PCR also noted the establishment of a national AIAT to supervise the activities of the regional AIATs, which was not envisaged at appraisal. The Validator again raises the issue of whether this subcomponent could have been incorporated into another capacity-building subcomponent.
- (2) **Support project implementation.** The PCR reported the satisfactory establishment of a project management unit, project implementation units, regional advisory committees, and technical working groups.

At appraisal, this component's estimated cost was \$5 million, compared to its actual cost of \$29 million. The PCR attributed this increase to assigning most recurrent costs to this component.

(iii) **Project Cost, Disbursements, Borrower Contribution, and Conformance to Schedule:**

Project costs decreased from an estimated \$101.8 million at appraisal to an actual amount of \$97.4 million, which the PCR attributed to the depreciation of the rupiah. Disbursement of the loan remained relatively low during the first 4 years of the Project in most activities, with disbursement peaking in years 5 to 7. As noted previously, there are considerable discrepancies in estimated versus actual costs on a component-by-component basis, which the PCR largely attributed to the allocation of recurrent costs. From the few available figures, the Validator could not determine exactly what occurred. The expenditures were recorded according to the allocation of loan proceeds, and the expenses according to each component and subcomponent have not been assessed.

The proposed implementation period at appraisal was 7 years, which was extended to 8.5 years mainly to allow for slow progress during the first 3 years. The PCR attributed the slow progress largely to the economic crisis in Indonesia. The Validator notes that according to the implementation schedule given in the PCR, the fielding of consultants ran 9 months behind schedule, which often causes delays in overall implementation. However, after these initial delays, the Project proceeded on schedule. In addition, borrower contribution increased from 41% to 49%.

(iv) **Implementation arrangements, conditions and covenants, related technical assistance, and procurement and consultant performance.** The PCR described the implementation arrangements essentially as they were proposed in the RRP. A key element of the

implementation arrangements was that the Center for Agro-Socioeconomic Research (CASER) would be responsible for coordinating AIATs' regional activities and organizing their technical and methodological backstopping. CASER was to be supported by an in-house, multidisciplinary R&D specialist team composed of senior IAARD researchers with experience in farming systems and on-farm adaptive research, based on existing institutional arrangements in which CASER had some coordinating function over the AIATs. The RRP also assigned to CASER overall responsibility for project benefit monitoring and evaluation. These functions were allocated despite a strong statement in the RRP that "CASER, as a research institute, lacks the managerial capacity to coordinate the activities of a network of 27 provincial R&D centers." However, the PCR made no reference to CASER (other than in the list of covenants) in either a coordinating function or as being responsible for monitoring and evaluation. It is possible that, at some stage, the national AIAT assumed the coordinating function. No information is given as to who took on the responsibility for monitoring and evaluation.

The PCR believed that the Government complied with all covenants other than the establishment of a national advisory committee, which was regarded as unnecessary. However, the PCR referred to a national R&D committee that may have, in fact, met this covenant, though there is a need for clarification of its functions.

Procurement of consultants, which was divided into four packages, was described in the PCR as "time-consuming and inefficient," and the Validator notes, as above, that it ran 9 months behind schedule. One of the packages was considered unnecessary, and the available funds were used to extend inputs in overall project management and support.

The PCR rated the performance of consultants *partially satisfactory* only; two consultants involved in project management had to be replaced, and consultants were not utilized effectively. The consultants were hindered by inadequate provision for travel made in the Loan Agreement. Procurement was in accordance with ADB guidelines, but the PCR noted that the procurement of laboratory equipment suffered long bureaucratic delays.

- (v) **Performance of the Borrower and Executing Agency.** Despite the economic and organizational upheavals during the early years of project implementation, the Executing Agency appeared to have enjoyed considerable success in the implementation of the Project. The PCR rated the performance *satisfactory*, and the IED concurs.
- (vi) **Performance of the Asian Development Bank.** The PCR rated ADB's performance *satisfactory*. Six project officers were involved over the period of 8.5 years in its execution. However, project progress did not seem to have been affected by this and in general, continuity of approach was maintained. IED concurs with the PCR rating.

#### D. Evaluation of Performance (PCR assessment and validation)

- (i) **Relevance.** The PCR rated the Project *highly relevant*, and IED concurs that the Project was consistent with the policies of the Government and ADB. Toward the Government's reorganization to a decentralized system, the emphasis placed on the regional structure was increasingly relevant as the Project progressed. The direct link between research and local conditions and needs was highly relevant in addressing rural livelihoods and the country's economic well-being. However, the Project's relevance was diminished by it not being contextualized in the prevailing market, financial, and physical conditions and lacking a clear plan for wider-scale adoption of technology packages through appropriate channels, particularly extension services. For these reasons, IED consider that a *relevant* rating is more appropriate.
- (ii) **Effectiveness in achieving outcomes.** The PCR assessed the Project *effective* in meeting target outcomes of (a) IAARD's strengthened capacity to manage regional participatory

agricultural R&D; (b) national research institutes' improved ability to generate strategy technologies; and (c) accelerated transfer and adoption of location-specific, user-oriented technologies. It did not comment on the effectiveness in achieving the outputs required to meet these outcomes but presented a detailed logframe relating achievements to RRP performance targets/indicators. The RRP provided no quantitative measures; therefore, the PCR could not draw comparisons between intended and achieved outputs. Examined qualitatively, the Project demonstrated actual activities against almost all of the 76 performance targets. However, some achievements recorded elsewhere may have related in part to achievements in other components or subcomponents. There were also instances of the same achievements relating to different targets. This largely comes down to a too-detailed project design and the distinction between two or more targets being unclear. IED concurs with the *effective* rating.

**(iii) Efficiency in achieving outcome and outputs.** The Project efficiently applied the available funds to achieve its outputs and outcome. The PCR reported the result of an IAARD study showing that for 200 technology packages, the benefit–cost ratio was 1.5–2.0. The technology packages disseminated to farmers provided them with more than 50% returns on their investment and increased farm income by 30% to 200% over 3 years. The AIATs' integrated farming systems incorporating livestock with crops doubled their income. Investments in these new farming systems were highly profitable, with financial rates of returns of more than 40%. However, the PCR reported that the Project assisted less than 5% of farmers in the project area and that unless project benefits are extended to more farmers, the disparity in farm incomes between project and non-project farmers will continue to widen. This raised the broader issue of responsibility between the role of applied research and the role of extension services. Yet without access to the detailed mandates of IAARD or AIATs, it was not possible for the Validator to comment on the extent to which it was their responsibility not only to develop, test, and demonstrate the technologies but to disseminate and support their implementation. IED rates the Project *efficient*, as in the PCR.

**(iv) Preliminary assessment of sustainability.** The PCR distinguished between sustainability at the institutional level, which it rated *likely*, and sustainability of benefits to the farming households, which it rated *less likely*. Despite this, the PCR gave an overall rating of *likely sustainable* to the Project. Certainly, there are very positive indicators that the approaches developed and implemented during the Project will be continued. The PCR noted that the Government continued to fund recurrent expenditures after project completion, and the private sector, as well as external entities, has shown interest in funding some of these activities. Significant training expenditures produced several well-qualified scientists, many of who are probably likely to stay in a research environment. However, the PCR did not mention the issues of persuading such well-qualified staff to work on a long-term basis in more remote locations, an issue that is known to affect the sustainability of many development initiatives in Indonesia. The down-rating of sustainability at the beneficiary level is attributed to the limited reach of technology packages, the need to finance extensification, the lack of market information that led to some inappropriate packages, and poor infrastructure and access by the farmers to finance.

The Management Review Meeting held on 28 February 1997 had observed that agricultural development required extension services, irrigation services, credit facilities, and market services, and suggested that a phased approach to the Project might be appropriate. The appraisal mission responded by saying that in Indonesia, adequate support services existed and that this did not, therefore, constitute a risk for the Project. However, There are issues which should undoubtedly have been addressed during project preparation. The extent to which the Project should have been expected to support the widespread adoption of demonstrably effective technology packages is the most important of these. Additionally, however, greater selectivity in the Project's geographical location and the requirements for long-term sustainability of the packages, should have been addressed at an earlier stage. It could be argued that it was not the Project's purpose to support widespread adoption directly but simply to demonstrate effective technology packages. In this approach responsibility for

selecting appropriate packages and supporting their adoption should be assumed to be the responsibility of the extension services, which judged whether the physical, financial, and market infrastructure was able to sustain these as viable farm enterprises at any given location. So, in validating the PCR's conclusions regarding sustainability, it is important to understand the extent to which widespread adoption was a project responsibility, but this aspect was inadequately addressed in the project design. The PCR has attributed a *likely sustainable* rating at the institutional level but the sustainability for farming households to be *less likely*. The objectives of the Project are primarily focused on the building of capacity and therefore validation supports the *likely sustainable* rating. However, in view of the perceived lack of sustainability at the farm level, and given that the expected impact of the Project was improved farm incomes and reduced rural poverty which has not been shown to be sustainable, validation has added a *less likely sustainable* rating to the overall summary of ratings.

- (v) **Impact.** The PCR reported that new technologies succeeded in increasing farm productivity and income and optimizing land utilization and resource conservation. However, the PCR considered the Project as having *insignificant* impact. The RRP defined the Project's intended impact as improving farm incomes and reducing rural poverty through the increased generation, transfer, and adoption of appropriate technologies. The PCR ascribed its reduced impact to (a) lack of support to individual households in adopting new technologies, (b) poor rural infrastructure, (c) lack of working capital, and (d) inadequate capacity of local government officials to support project activities. These were conditions that were known to prevail at the time of project design, and, on that basis, the Project should not have proceeded. In fact, the Project had an important impact in generating around 400 technology packages, fostering collaborative research, mapping AEZs, and bringing tangible benefits to an estimated 180,000 farmers. A project designed to develop, test, and disseminate new technology should not have been envisaged to have an immediate impact on a high proportion of the population. In this respect, it was a failure of project design not to have quantified the adoption rates expected in the Project, thereby setting a realistic target for adoption rates within the Project's time frame.

#### E. Overall Assessment, Lessons, and Recommendations (Validation of PCR assessment)

- (i) **Overall assessment.** The PCR rated the Project *successful* based on the assessment of relevance, effectiveness, and efficiency in achieving the outcome and output targets. IED endorses that conclusion with two provisions:
- (a) It was not the Project's purpose to support directly farmers' widespread adoption of the technology packages, but only to develop these and demonstrate their viability under specific circumstances.
  - (b) It was not the responsibility of the research and assessment agencies to direct the development of technology packages on assumed levels of physical, financial, and market infrastructure. It is the decision of local governments and the extension services as to which packages are appropriate to local circumstances.
- (ii) **Lessons.** The PCR listed 11 lessons, though to some extent, these constituted recommendations. All have been largely covered in the preceding reviews of the Project, and all are reasonable. IED has drawn the following main lessons.
- (a) In the design of a project covering research, testing, demonstration, and farmer adoption, the responsibilities of research-based agencies and extension services must be made clear. Realistic targets must be detailed in the project design as to adoption by farmers directly as a result of project intervention and wider-scale adoption supported by the extension services, drawing on the demonstration activities of the research agencies.
  - (b) Applied research should take realistic account of the environment within which technology packages will be applied. There is little point in expending effort on packages requiring levels of extension, infrastructure, financial, and marketing services that are not generally found. In this same context, ADB must be clearer in directing its support and in distinguishing between research and extension activities; the proposal made at the Management Review Meeting that the Project should take a phased approach might have

merited more favorable consideration.

- (c) The interface between research, testing, demonstration, and the extension services must be built into project design. Problems encountered in the Project might have been averted if a more phased approach had been adopted, as suggested at the Management Review Meeting.

At a more general level, the Project had four components, 12 subcomponents, and 76 performance targets (effectively activities). Several targets were poorly differentiated, and the Project was highly prescriptive, leaving little flexibility during implementation. Perhaps guidelines would have helped in designing subprojects, in which there is adequate detail to ensure that goals and outcomes are met without excessive prescription.

Moreover, although there were positive indications that the Project carried out an adequate monitoring and evaluation system, its design, implementation, and utilization was not well described. The PCR should have provided for better coverage of this.

**(iii) Recommendations.** The PCR listed eight project-related recommendations, covering dissemination of findings, use of indigenous technology, the management information system database, apportionment of funds received by AIATs, record keeping, market data, and the drawing up of agricultural development plans. IED notes:

- (a) the proposal that farmers should maintain daily records of expenses and revenue appears to be very ambitious, unless significant support could be provided to them; and
- (b) market demand and supply should be adequately assessed, since it is clear that with limited resources, agricultural R&D must be guided by prevailing market conditions.

The PCR made two general recommendations:

- (a) Most LGUs need a larger allocation from central Government to accelerate the development process, especially for establishing supporting infrastructure for adopting new technologies, and public financial management should be reformed.
- (b) Local stakeholders, including local government units, should be involved in planning, administering, and preparing the follow-up activities of investment in R&D.

In light of the PCR's findings and recommendations, as well as observations from supporting documentation, IED recommends that in the design of similar projects, more attention be paid to the project's broader context and targets, with more distinct direct and longer-term impacts. At the front end, R&D must be guided by prevailing conditions of physical, financial, marketing, and extension infrastructure. In agreeing to support similar projects, ADB must ensure that this information is available to R&D organizations; if not, the information must be generated in the project's early stages. In regionalizing its approach, the Project went some way toward this, but there were still concerns that not enough attention was given to the practicalities of large-scale adoption. Also, the role of R&D and that of extension services must be more clearly defined. The project design must incorporate a plan for how the project passes responsibility for wider adoption to the extension services.

#### **F. Monitoring and Evaluation Design, Implementation, and Utilization (PCR assessment and validation).**

The RRP accorded CASER overall responsibility for monitoring and evaluation for the Project. AIATs during the first 2–3 years of the Project were to focus on developing a knowledge base regarding the provincial AEZs and farming systems through rapid rural appraisals (RRAs) supported by quantitative baseline studies financed by the Project. The Project was to support a minimum of four RRA studies in each project province; the RRAs would provide benchmark datasets to measure beneficiary impacts. Project-supported special studies conducted in years four and seven would also analyze the Project's impact on beneficiaries.

The PCR did not specifically report on monitoring and evaluation, although in its logframe, it noted

“well-prepared [monitoring and evaluation] reports.” In assessing compliance with covenants, the PCR stated that

a third round of the [monitoring and evaluation] survey was completed in 2003, preliminary impact study was conducted in 2004, and a more comprehensive study carried out in 2005. RRAs have been conducted in all AIATs as a standard procedure for initiating R&D programs in different agroecological zones. Baseline data were collected for each of the 12 provinces.

Since the PCR was able to quote rates of technology packages adoption and their impact on farm incomes, apparently, such information was adequately collected. However, there was no reference to any CASER role or to an overall assessment of monitoring and evaluation.

**G. Other (e.g., safeguards, including governance and anticorruption; fiduciary aspects; government assessment of the Project, as applicable) (PCR assessment and validation).**

None.

H. Ratings	PCR	IED Review	Reason for Disagreement/Comments
<b>Relevance:</b>	Highly Relevant	Relevant	The Project was <i>highly relevant</i> at design and completion in respect to both government and ADB objectives. Its decentralized approach was consistent with ongoing government realignment in Indonesia. However, inadequate attention in the design to some aspects of the contextual setting, particularly market conditions, and the lack of interface with the longer-term role of extension services, diminished its relevance.
<b>Effectiveness in Achieving Outcome:</b>	Effective	Effective	While concurring with an <i>effective</i> rating, the design contained no quantitative measures of performance targets. Although the PCR provided quantified data, there was no basis of comparison with targets. There were also instances of achievements being double-counted.
<b>Efficiency in Achieving Outcome and Outputs:</b>	Efficient	Efficient	Agreed.
<b>Preliminary Assessment of Sustainability:</b>	Likely Sustainable	Likely Sustainable (Institutional)  Less likely sustainable (farming households)	The PCR rated the institutional sustainability to be <i>likely</i> but the sustainability for farming households to be <i>less likely</i> . The latter consideration needs to be contextualized through a better understanding of the extent to which continuation of project activities—not extension services—should provide wider adoption of technology packages.
<b>Borrower and EA:</b>	Satisfactory	Satisfactory	Despite the difficulties created by major organizational restructuring in early stages of the Project, the EA performed well, although there was some criticism of its consultant management. The Borrower was, at the time of the PCR mission, continuing to fund recurrent costs.

H. Ratings	PCR	IED Review	Reason for Disagreement/Comments
<b>Performance of ADB:</b>	Satisfactory	Satisfactory	Agreed.
<b>Impact:</b>	Not Significant	Not Rated	The purpose of the Project was to develop and demonstrate technology packages and their viability under specific circumstances. It did not include dissemination of these technologies.
<b>Overall Assessment:</b>	Successful	Successful	The overall <i>successful</i> rating should be conditional on a mechanism being put into place for extension services to foster and support a large-scale adoption of successful technology packages.
<b>Quality of PCR:</b>		Satisfactory	

#### I. Comments on Project Completion Report Quality

The PCR was well-prepared and contained good quantitative information on project achievements, although it contained no targets for comparison. Sometimes, the PCR appeared to double count achievements, but a very narrow and detailed design blurred the distinction between the targets for different subcomponents. The PCR, while largely endorsing the Project's achievements, was critical of its relatively small proportion of direct beneficiaries; however, this assessment should have been made in the context of the interface between R&D and extension services. The PCR would have also been improved by a better presentation of the Project's monitoring and evaluation. Finally, the PCR made almost no reference to any coordination between the Project and the Agricultural Research Management Project funded by the World Bank. The importance of coordination was stressed at the Management Review Meeting, and an appropriate mechanism was put in place. The IAARD steering committee was established to ensure coordination, but the PCR did not report on its functions or its achievements.

#### J. Recommendation for Operations Evaluation Development Follow-Up

Throughout the PCR and this validation report, it was difficult to assess how funds were disbursed in relation to specific activities. The focus on allocation of loan proceeds was mostly prepared in accordance with the expenditure categories. In order to draw further conclusions on the Project, the allocation of funds should be analyzed on the basis of components and subcomponents.

#### K. Data Sources for Validation

Data sources for validation included RRP, PCR, and project files.

## REGIONAL DEPARTMENT'S RESPONSE TO THE PROJECT COMPLETION REPORT VALIDATION REPORT

On 2 December 2008, the Independent Evaluation Department (IED) received the following comments from the Agriculture, Environment, and Natural Resources Division (SEAE), Southeast Asia Department (SERD):

Overall, the report is well prepared and the following are our comments and/or inputs to further strengthen the report:

1. **Successful Project** – IED has provided some additional complementarily critical analysis to validate that the Project, in overall, is rated successful.
2. **Impact and Sustainability** – Sustainability of the successful technology packages was inadequately addressed in the Project design. To make sustainable investments, we support IED's recommendation to assess and include in the project design the comprehensive interlinks between the technology packages, extension services, market demands, infrastructural and financial supports.
3. **Paragraph number** – We suggest that IED indicate the paragraph number referred to in its PCR Validation Report (like the PCR standardized form) so we can comment on the relevant paragraphs easier.
4. **PCR Data Sources/References** – PCR team did not record completely the references used for the PCR as it is not guided in the PCR form. We suggest that OED recommend ADB to update its PCR form to include all sources and references used for the PCR.
5. **Standardized Progress Report and BTOR supporting documents** – the executing agencies' (EAs) progress reports and the ADB back to office report (BTOR) mostly record the Project financial progress in accordance with schedule 3 of the loan agreement. We suggest that IED recommend ADB to standardize forms of the EA progress reports and the BTOR of ADB project officer to also update the financial progress in accordance with the component/ sub-component accounts.
6. **Monitor and Update Design & Monitoring Framework (DMF)** – We also suggest that IED could recommend the ADB project officer administering loans to assist EAs to monitor and update DMF to address potential gaps in the project design.