DETAILED EXECUTIVE SUMMARY
OF THE
SOCIAL ASSESSMENT REPORT, ENVIRONMENTAL
ASSESSMENT REPORT, AND PARTICIPATORY RAPID
ASSESSMENTS OF THE FEATI PROJECT

FOR THE

FARMER EMPOWERMENT THROUGH AGRICULTURAL
TECHNOLOGY AND INFORMATION PROJECT
(FEATIP)

BY THE

SOCIAL AND ENVIRONMENTAL ASSESSMENT TEAM

PT. INTERSYS KELOLA MAJU

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1.0. Building the Capacity of Both Farmers and Government Extension Services to Accommodate a Farmer Demand-Driven Delivery of Agricultural Services

1.1. An Approach for Capacity Building

The main issue is the capacity of the Government Extension Service to provide the necessary assistance to the 3,000 villages by themselves. The results of the PRAs carried out by the Social and Environmental Assessment Team indicated that there is not a sufficient number of extension workers (PPLs) at the field level; they do not have sufficient funds to carry out their duties; they do not have funds to setup demonstration plots; they lack sufficient knowledge of recent technologies useful for the farmers; and they apparently are aging without younger people being hired to eventually replace the senior PPLs.

The problem is not the PPLs but the resources they are provided with by the district and central governments. Without a sufficient number of PPLs from the local areas, the FEATI Project will have to combine their activities with the private service providers, volunteer field workers in the villages, and farmers trained in extension programs. Most of this has been proposed in the Main Report but it does not include the link to the villages, which can be through the agribusiness pesantren (or other religious institutions with roots in the villages) and the religious groups in the villages.

The Participatory Rural Assessments results in the villages found that the most active groups in the villages were these religious institutions and the second most active were the farmer groups. The DAFEP project was important in setting up farmer groups in Bolmong Kabupaten, which was one of the areas where the S&EA carried out PRAs. However, in the other kabupaten with DAFEP assistance that was in the S&EA, the program was not very successful in promoting farmer groups.

The problem is how to reach the farmers, gain their trust, setup farmer groups and provide them with sufficient incentives so that the farmers feel that the FEATI is benefiting them. The S&EA Team recommends that the best way to build capacity is to combine the government extension service with the religious institutions with roots in the villages (an example is the agribusiness pesantren), and the religious groups in the villages.

An approach that would combine the government’s extension services, the institutions with roots in the villages, and the religious institutions in the villages would be the following:

1. In the villages there are many TV sets and anybody in a rural village could have access to a set. The FEATI Project should promote empowerment of farmer families:

   • By providing assistance for the development of local TV programs relevant for farmers and their families.
   • By The provision of agriculture technology comic books that would also provide information to the farmers.
   • The VCD players and CDs with agricultural technology would also provide information for the farmer families.
2. In these villages there are a number of institutions, but it appeared that usually the religious based institutions were the most active and have a major role in the communities. These are:

- Majlis Ta’lim (Kelompok Pengajian),
- Dewan Kesejahteraan Masjid (DKM)
- Baitul Maal wat-Tamwil (BMT), local micro finance institution with profit-sharing procedures at the village level in some villages,

3. The FEATI Project should develop approaches to integrate the many agribusiness pesantren into the collaboration on farmer empowerment and Rural Producer Organizations (RPO), which could be in collaboration with these institutions based on religion:

- Provide technical assistance and funding for the Pesantren Agribis and other agriculture NGOs to support these village religious institutions that have the best opportunity of empowering rural villagers and farmers.
- Provide assistance in expanding their outreach programs
- Provide technical assistance to the agro-business units of these Pesantren
- Collaborate with and assist the Kelompok Tani in the villages

4. The FEATI Project should work with the 500 agribusiness pesantren (Deptan database but many not registered) for improving their rural producer organizations with training programs in agri-business, making technical information available, providing support for expansion of their RPOs, assisting in marketing, and arranging for partnerships with foreign and domestic firms.

5. The FEATI Project should collaborate with the Department of Agriculture’s program on strengthening of Self-reliant Institutions that have Roots in the Communities on the Basis of Agribusiness (Lembaga Mandiri yang Mengakar di Masyarakat / LM3):

- These institutions are an important channel for the empowerment of farmers and the development of rural producer organizations.
- These institutions are primarily based on religion, such as the Pondok Pesantren (Islam), Seminari (Christian), Vihara (Buddha), Paroki (Catholic), Pura (Hindu Bali), Subak (Bali) and others.
- Besides religious education, some of these LM3s provide practical skills to the students (para santri/murid) in agribusiness activities, such as food crops, horticulture, animal husbandry, fisheries and forestry.
- These LM3s have been welcomed by the communities near these institutions because they strengthen the economy and society of the communities. Of the 15,000 LM3s in Indonesia, approximately 2,000 are developing activities in agribusiness.
- The Department of Agriculture has been developing LM3s that are based on agribusiness through programs of facilities, institutional development and strengthening management quality in the technical and management fields for agribusiness.

6. Gender mainstreaming is occurring in some of these villages and in the Agribis Pesantren (example is Baitul Hamdi in Pendagelang. The FEATI Project could have a major impact on gender mainstreaming by including these progressive villages and
pesantren in the FEATI support programs. It is important to show that gender mainstreaming brings in benefits for the rural communities.

7. Since many farmers are reluctant to ask for loans and many do not have the necessary collateral to utilize the services of conventional banks, the FEATI Project should develop a program that encourages and assists banks that have programs based on the profit sharing banking procedures of Islamic Banking. The Agribisnes Pesantren could be a vital link between the farmers and these banks with profit sharing procedures in order to provide financial assistance to the farmers.

8. Indonesia has been instrumental in the development of Integrated Pest Management. In the villages there was awareness of the IPM components for the reduction and possible elimination of agro-chemicals to reduce production costs, improve productivity and reduce environmental impacts. Yet, they do not follow these components and only use pesticides which is the last component in the IPM process. The FEATI project should provide:

- additional support for improved extension on IPM,
- introduction of IPM to areas that are not using IPM, and
- Substantial support to convince the farmers of the benefits of IPM.

The FEATI should help the Government’s agricultural extension programs be more effective by combining the potential of the institutions with roots in the villages, the religious groups in the villages, and volunteer local extension persons/farmers in the villages with the government’s extension programs utilizing the PPLs.

### 1.2. Revitalization and Empowerment of Agriculture Extension

**Justification**

The PRA survey results show that generally agriculture extension activities in the villages are not in agreement with the needs and aspirations of farmers and other actors in the agriculture field. Farmers respond coolly to extension emphasizing technology because nowadays the primary needs of farmers are:

- **Provision of credits for farm management.** Sufficient financing would enable farmers and actors in agricultural ventures to apply innovative technologies.

- **Access to markets of agriculture products produced by farmers.** Farmers expect the provision of information regarding availability of markets, product selling price, product quality, and acreage under agriculture before they start soil preparation, in order that with the use of their own funds, they can formulate farming strategies. Moreover, farmers expect the establishment of markets in villages open to various agricultural products.

- **Availability of production infrastructure and inputs on time for the needs of farmers.** Primary needs of farmers are availability of irrigation water, fertilizers and seeds/seedlings. Furthermore, farmers expect availability of inexpensive means of transportation in the villages.
• **Availability of diverse activities leading to the production of products meeting market demands.** Generally, Indonesian farmers are relatively poor. Their survival more or less depends on the availability of other opportunities for employment, such as opportunities to work as farmhands, establishing small animal husbandries, become small traders, etc.

• **Creation of location specific regional regulations that controls agriculture management in a region.** For example, to control cattle herding in areas under agro-forestry or in recently established plantations, and limiting the expansion of large plantations without considerations of the environmental and social aspects.

• **Markets that guarantee decent prices at harvest time.** The influx of considerably large quantities of agriculture products from other regions affects local market prices. For instance, in Brebes District shallot (bawang merah / red onions) prices reach Rp 2,000./kg at abundant availability during peak production of shallots and influx of shallots from other regions, while during the time of low production of shallots in Brebes District and without an influx of shallots from other regions, shallot prices reach Rp 4,000./kg.

**Recommendations**

Based on the analyses of conditions at the farmer level and at the levels of other actors in the field of agriculture, the following recommendations:

• Information needed through extension activities are on aspects of capitalization, markets, technologies, other resources, social engineering, law (regional regulations), and farm management.

• In the provision of extension services, it is recommended to have horizontal and vertical integration of extension material, agriculture information, agriculture extension programs and verifications, institutional agriculture extension, and implementation of agriculture extension, in order to prevent the extension system standing on its own but receiving inputs and supervision as well as evaluation from relevant government agencies, specifically agencies related to agricultural research, food and horticultural crops, estate crops, animal husbandry and forestry (agro-forestry).

• Agriculture extension should be able to provide answers, training, and guidance on technologies needed by farmers. Ideally, literature in the Agriculture Extension Center (*Balai Penyuluhan Pertanian*) should include various disciplines of science needed by farmers and other stakeholders in the field of agriculture, including literature on agriculture, animal husbandry, plantation, forestry, social sciences, economics, law, and farm management.

To be able to provide agricultural materials by the extension service, what will be needed is the formation of the following institutions:

• Association of farmers/farmers’ groups. The association is an organization whose members are farmers and other persons active in field of agriculture, animal husbandry, forestry, and agriculture product processing and marketing. The establishment of the association needs support and stimulants that are able to meet the farmers’ needs and the needs of other persons active in the field of agriculture. Establishment of these associations would be impossible without such
support. Activities of the association include on-farm and off-farm activities in upstream as well as downstream sectors of agriculture.

- Business partnerships. The business partnerships should act as provider of farming credits, extension workers, and marketers of farming products. At least at sub-district level these types of business partnerships should be encouraged.

### 1.3. Ensuring the Proportional Participation of Marginal and Vulnerable Groups

One of the topics that was not explicitly approached by the Main Team for the FEATI was how to ensure the proportional participation of women, the poor, youths and minority ethnic groups in (i) project preparation, (ii) project activities, (iii) project monitoring, and (vi) project benefits.

The steps that will be necessary for ensuring proportional participation are the following:

1. FEATI has to demonstrate by its actions and policy decisions that the vulnerable groups are a major concern of the Program. The FEATI should ensure that members of these disadvantaged groups (primarily women) are included on the steering committees, working groups and PIUs at the national, provincial, district and sub-district levels. The project management offices (CPMU, CPIUs, PPMUs, and DPMUs) must have women and minority groups in leadership positions.

2. FEATI should ensure that the selection of consultants is based on gender mainstreaming, even among the consultants.

3. The selection of the Sub-Districts (kecamatan) that will be in the FEATI Project in the Districts (kabupaten) should be given priority if they can show that they have already promoted the participation of women, the poor and minority groups in the leadership of the sub-districts and in their programs. As an example is a sub-district that has women appointed as heads of departments, especially for extension programs and empowerment programs.

4. The FEATI must state that the main selection criteria for villages in the program is evidence that women and vulnerable groups already have a leadership role in the villages. A village with a woman as the village leader should automatically be selected as a priority village for assistance.

5. Villages with women in leadership roles, such as the heads of RTs (kampongs) in the village should be given priority. Villages with institutions (eg. farmer groups) that have women in leadership roles should be given priority.

6. The FEATI must ensure that there are women, young people, and the poor in leadership positions in the UPKPD (Village Extension Activities Management Unit), which will be the implementing units at the village level of the FEATI program.

7. The Steps of Applying for Village Farmer Managed Activities (FMA) Grant Proposals in Component 1 on Strengthening Farmer Driven Extension (Tables 4.1 and 4.2) must incorporate gender mainstreaming and assistance to the poor, the landless and near landless, the youth and the unemployed in the village. The steps are:
The initial approach to the village is the Socialization of the project by a team that must have equal representation of men and women.

The Establishment of a Village Management Unit must include women and the poor. The FEATI must set guidelines for the formation of this Unit that includes gender mainstreaming.

The BPPK (District Agricultural Extension Center) will train the farmer trainers and members of the village management unit. The BPPK must have women on the team. They will carry out training support for the implementation of the Village PRA and household profile, farmer business meeting with private entities, household agri-business plan, and the community business support activity plans. They must make sure that those who are trainers and implementers include women, the poor, and the youth.

The Village Management Unit (with women and the poor on the team) will prepare the Village Extension Plan that prioritizes extension activities to be financed by the project, which must consider programs for women and the poor.

The Extension Plan should only be approved by the FEATI if the plan has sufficient representation of programs that provide assistance to women, the poor, the landless, and the unemployed.

The Implementation of village extension activities should include gender and poor mainstreaming: farmer training, FFS, farmer experiment, farmer technology meetings, farmer education visit, farmer media development, farmer networking, develop farmer organization.

The Village Management Unit will also assist the input suppliers, product processors / traders, the household agri-business, the group and community actions and the partnership development. Guidelines for these activities must include gender and poor mainstreaming.

With sufficient recognition by the CPMU, CPIUs, PPMUs, and DPMUs that gender and disadvantaged mainstreaming are essential parts of the FEATI, then the project will be successful.

1.4. Environmental Assessment

The essential environmental issue concerns the delicate balance between improving existing farming practices and the ability of the natural resources base and the participants in the FEATI project to sustain such improvements. Sustainability is essentially the maintenance of that balance. This is where the quality of the FEATI design and implementation arrangements is absolutely critical.

To achieve sustainable outcomes beyond the life of the project it is important that the FEATI Team sees the natural resources base as both offering opportunities for as well as constraints to the successful design and implementation of FEATI project components. It is important to view the “Environment” as the sum of climatic, soils, and other natural conditions that form the resources base upon which the FEATI project must function.
At the same time, the social, cultural and economic conditions that characterize the human dimension also offer opportunities and constraints that will influence the outcomes of the FEATI project. The "natural" and human dimensions are not independent as is witnessed by the great variations in farming systems and resulting environmental conditions in the 14 Desa where PRAs have been undertaken. In some Desa, there are both natural and man-induced environmental constraints ranging from periodic shortages of water to irrigate crops to problems of decline in soil fertility resulting from poor farming practices as well as problems of pests and diseases, some of which are a result of inappropriate pest management and continuous cropping cycles that offer a continuous host for pests and diseases.

Although many of the Desa studies by S&EA Team were not in the areas that have subsequently been selected for consideration by the FEATI Team, they do offer a representative cross-section of the social, economic, cultural and environmental conditions that are characteristic of the major agro-ecosystems throughout Indonesia. The findings of these PRAs should offer the FEATI Team a sound background against which to test their ideas and corroborate the findings from their own PRAs.

The findings of the initial EA/SA are meant to identify conditions that should help to inform the FEATI Team and identify critical potential environmental, social or economic issues they need to take on board in the FEATI project design process. Environmental, social and economic conditions common in the Desa in the five main agro-ecosystems include:

1) **Lowland non-irrigated rice**
   - a. Shortage of water
   - b. Pests and diseases

2) **Lowland, intensive irrigated rice**
   - a. Unreliable water supplies- too much water at times;
   - b. Water pollution
   - c. Water thefts
   - d. Erosion of water channels;
   - e. Pests and diseases reducing production and leading to post-harvest losses
   - f. Soil and water pollution due to intensive use of pesticides

3) **Upland rain fed mixed arable crops**
   - a. Semi-technical irrigation system- Unreliable water supplies-with water shortages at critical times need for improved irrigation;
   - b. Pests and diseases of crops;
   - c. Decline in soil fertility;
   - d. Erosion on exposed slopes where forest clearance has taken place as a means of gaining cash;
   - e. Main river is eroding its banks- question of watershed management upstream.
   - f. High level of use of pesticides, question of effects on surface and ground water quality;
   - g. Continuous cropping system creates continuous host for pests;
   - h. Poor quality seed;
   - i. No availability of pest and disease resistant prime seedlings and seeds, also able to survive in dry season conditions.
   - j. Agriculture lands are less productive because of clay soils.
k. Farmers dependency on rain water; difficult to get water due to unstable supply from wells
l. Extensive erosion due to clay and limestone mining.

4) Small-scale tree crops - including small-holder cocoa production
   a. High rainfall means water supply is adequate, but there are problems of mud on access roads reducing accessibility
   b. Lack of facilities for post harvest drying of cocoa pods is critical issue;
   c. Decline is soil fertility;
   d. Perceived need for developing more integrated farming systems;
   e. Lack of land certificates makes access to credit very difficult

5) Agro-forestry
   a. Environmental damage to soils and water resources from mining in adjacent areas;
   b. Fear of landslides/mudslides
   c. Shortage of suitable seeds
   d. Lack of skills to develop more robust and diversified agro-forestry systems;
   e. Shortage of working capital;
   f. Lack of adequate technical support;
   g. Lack of motivation to utilize Integrated Pest Management

Initial Identification of Environmental Factors that Could Influence the Design and Implementation of the FEATI Project include:

• **Strengthening demand-driven research and development:** This component should not involve adverse environmental impacts if the FEATI Design Team fully considers:

  1. Whether the demand for specific forms of research is appropriate to the ecological, social and economic situations where the outputs of the research will be applied;

  2. The potential environmental effects of the proposed research. For example, will the request for information on how to expand cocoa production lead to extension of existing holdings into areas set aside for conservation of water resources and protection of communities from landslide hazards?

  3. Whether the natural resources base, skills base of the farmers, and the materials needed to sustain the planned research outputs and recommendations will be available. For example, the soils may be capable of sustaining a new form of crop, but diurnal temperature changes may constrain plant production and harvestable levels of the planned crop, the existing farming system may form a continuous host for pests that would attack the planned new crop, the complexity and costs of the pest management regime required to sustain an economic level of new crop production would be beyond the ability of the farmers to fund or to apply on a sustainable basis, etc.

  4. Whether it is feasible for the Government to provide the training and resources required to provide the level of continuous extension services to sustain the outcomes of the research outputs of the research.

• **Strengthening agricultural extension:** This component has great potential for achieving positive environmental effects. However, where extension agents are not well trained, where proper institutional and financial back-up facilities are not
provided, and where the agents are not effective in communicating with farmers, there may be little positive environmental benefit. Without effective and sustained technical support from the extension services, there is a significant risk that farmers will attempt to introduce new cropping systems or farming technologies and research findings without a full and robust understanding of how to achieve sustainable results and avoid adverse impacts.

- **Revitalizing producer/farmer organizations**: This component has the potential for creating major environmental benefits by helping to extend the benefits of research and extension advice through the farmer organizations, as well as acting as a channel for communicating research needs from the farming communities to appropriate institutions.

  However, the FEATI Design Team needs to be aware of the potential for negative environmental effects from intensification (one example would be increased agro-chemical use without proper environmental safeguards) can lead to pollution of soils and water resources, increased emphasis upon irrigation can lead to over-abstraction of water, over-irrigation with consequent water-logging and possible salinization), as well as creating pressures to extend the area under agriculture, which may encroach upon natural areas that serve functions of biodiversity, water resources conservation, etc.

- **Information and Communications Technology.** In itself, this component has the potential to help correct many existing environmental problems, such as decline in soil fertility, by providing much needed information and advice to farmers. The potential for negative environmental effects can be reduced through very careful design of the information to be conveyed and in designing the effectiveness of the communications mechanisms. The information needs to be comprehensive in illustrating what opportunities are available to improve farming systems within the five main agro-ecosystems; the appropriate way to develop those systems; the materials, tools and skills required; the financial requirements and potential economic benefits; and how to safeguard the natural resources required to sustain those systems.

- **Promoting public-private partnerships between farmers/agribusiness/technology centers.** There can be significant potential environmental, social and economic benefits from this form of project activity. The primary environmental issues to consider in designing this component is the potential for negative environmental effects from intensification (increased agro-chemical use without proper extension can lead to pollution of soils and water resources, increased emphasis upon irrigation can lead to over-abstraction of water, over-irrigation with consequent water-logging and possible salinization), as well as creating pressures to extend the area under agriculture, which may encroach upon natural areas that serve functions of biodiversity, water resources conservation, etc.

- **Project management support.** The key to avoiding potential adverse effects from this component is the provision of the required human skills and supporting resources to ensure sustainable outputs and outcomes from the planned project components. Inadequate skills and under-resourcing of the management process can have serious adverse environmental effects. For example, the information designed to help farmers improve cocoa production may be conveyed to farmers solely in terms of the need to reduce losses from pests through the application of new pesticides without the accompanying information of safe handling of the chemicals, the correct timing and
dosage of the chemicals to optimize their effectiveness and protect the user from harmful effects.

The PRAs conducted by the SA/EA Team indicate there are environmental problems and issue adversely affecting virtually all of the agro-ecosystems. Examples include:

- pests and diseases reducing harvests,
- reducing the quality of the harvested crops and then post-harvest losses;
- a need for improved irrigation water supplies and increased efficiency in water management,
- declining soil fertility,
- landslides and other geohazards.

There are also social, cultural, economic and governance issues that constrain the potential for enhancing the productivity of the agro-ecosystems and the social and economic benefits of the rural communities. For example, the lack of land titles constrains access to credit needed to fund the purchase of improved seeds, tools and fertilizers. Such problems constrain the potential for introducing improvements in agriculture and the empowerment of farmers and form the baseline from which the FEATI Design Team will have to develop solutions that are appropriate to the specific ecological, social-cultural and economic settings and the current agricultural systems, and that will yield sustainable outcomes.

It will be the attention to such detail- often unique to a specific area or cultural group- that will form the key parameter in ensuring the avoidance of potential adverse impacts. Where some form of adverse impact cannot be avoided, mitigation measures will have to be adopted to counter-balance those impacts. For example, if the only way to ensure a viable level of cocoa production in a selected area is to recommend the extension of the area under cultivation, and the only area that might be available is an area of protected forest (Hutan Lindung), it may be possible to replant an area of degraded and abandoned land to compensate for the loss of the protection forest.

Environmental assessment should therefore not be viewed as a constraint upon a project’s design, but as a means of ensuring due care and attention is paid to environmental issues that could otherwise constrain the desired outcomes of project activities. At this stage in the development of the FEATI project, if the environmental, social and economic information derived from the PRAs is used to guide the FEATI Team’s consideration of options for project locations and the selection of activities that are appropriate to those locations and the needs of the planned participants, any adverse environmental effects could be avoided or successfully mitigated.

However, if due care and attention is not given to the natural and man induced environmental conditions, problems and issues, significant adverse environmental and consequent economic and social impacts could be created that would be technically very difficult and costly to rectify, would reduce the beneficial effects of the loan, and could result in irreversible loss of future development opportunities, loss of biological diversity, and bring the World Bank into disrepute.

Summary of existing environmental conditions and potential environmental risks based on PRAs carried out by PT. Intersys in 14 Districts

<table>
<thead>
<tr>
<th>Environmental Issues</th>
<th>Lowland rice</th>
<th>Lowland intensive rice</th>
<th>Upland mixed arable</th>
<th>Small scale tree crops</th>
<th>Agro-forestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of biodiversity</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Water shortages</td>
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### Environmental Issues

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<th>Lowland rice</th>
<th>Lowland intensive rice</th>
<th>Upland mixed arable</th>
<th>Small scale tree crops</th>
<th>Agro-forestry</th>
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<td>Mud/landslides</td>
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<td>Pests and disease</td>
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<td>Water pollution</td>
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### Environmental Risk Analysis

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<tr>
<th>Intensification measures</th>
<th>(+/-) Should help to address pests and diseases, but requires specific measures to minimize effects of agri-inputs, and increased competition for water resources</th>
<th>(+/-) Should help to address pests and diseases, but carries significant risk of increases in water pollution and increased competition for water resources</th>
<th>(+) Very careful analysis of suitability of intensification needed in these areas, which are under significant environmental stress</th>
<th>(+/-) Intensification could lead to accelerated loss of soil fertility, specific measures to address agri-inputs necessary. Safeguards needed to avoid encroachment into protected areas and forests</th>
<th>(+/-) May help to reduce losses of biodiversity, but requires safeguards to minimize soil erosion, water pollution, encroachment into protected areas and forests</th>
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<tr>
<td>Extensification measures</td>
<td>Limited potential for extensification</td>
<td>Limited potential for extensification</td>
<td>(-) Could extend existing environmental impacts into more environmentally fragile areas</td>
<td>(-) Could lead to net losses in biodiversity, increased geo-hazards such as landslides, and loss of watershed protection areas, forests and natural habitats.</td>
<td>(-) Could lead to net losses in biodiversity, geo-hazards such as landslides, and loss of watershed protection areas, forests and natural habitats.</td>
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<tr>
<td>Diversification measures</td>
<td>(+) Could reduce incidence of pests and disease</td>
<td>(+) Could reduce incidence of pests and disease</td>
<td>(+) Careful analysis of suitable new crops and integrated framing systems, and integrated pest management could lead to net environmental benefits.</td>
<td>(+) Careful analysis of suitable new crops and integrated framing systems, and integrated pest management could lead to net environmental benefits.</td>
<td>Limited potential for further diversification</td>
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</tbody>
</table>
The PRAs have indicated that many of the agricultural systems commonly used in Indonesia have existing environmental problems that hinder both pre and post-harvest production. Areas of upland rainfed mixed arable and small scale tree crops are among the most prone to environmental problems, and that FEATI technical support could help address environmental problems while increasing the production of the farming systems in these areas.

FEATI research and extension programs could provide positive benefits if they could focus on issues of water shortages and pests and disease issues.

In general, policies of diversification, rather than intensification and extensification are likely to pose lower environmental risks. Where intensification is necessary, there is a clear need to address the management of agricultural inputs.
2.0. Recommendations for Action Plans

2.1. Component 1: Strengthening Farmer-driven Extension

2.1.1. Subcomponent A: The Objective of Component 1 on the Empowerment of Farmers

As stated in the Main Report, “The main objective of Strengthening Farmer-Driven Extension Component is to empower farmers to increase their income and improve livelihood through strengthening their capacity to adopt improved technology, agribusiness management practices and partnerships by implementing farmer managed extension approach and revitalizing of agricultural extension system.

The main targets are: farming households and farmer groups, particularly poor families, including women and rural youth. Other stakeholders would be targeted by the project including public extension agents, private extension providers willing to work with farmers in agribusiness partnership, farmer trainers, and providers of training and education relevant for the project objectives.”

The Issues that may need more Consideration

The issues related to the objectives are the following:

- The issue is that there is very little discussion on how this farmer driven extension will actually reach these groups of villagers.
- The target should also be the landless, near-landless, and disadvantaged people in the villages, including women and rural youth.
- The project is aimed at farm families, yet they may be a minority in these villages. A large percentage of the people in rural villages are landless laborers. This extension assistance should also have programs for reaching and assisting these less advantaged people and not just farmers, which normally means land owner and land renter farmers.
- One of the targets of the project should be farm laborers also. On Java many farmers are also farm laborers on other peoples’ farms.
- The issue is the term farmer should be defined. Does this include farmer renters (most likely), share-croppers, farm laborers, processors of farm products?

Recommendations for Strengthening Farmer Driven Extension in Component 1

Recommendations for strengthening farmer driven extension are the following:

- The FEATI Project should incorporate the above recommendations in sections 1.1, 1.2. and 1.3 that are related to strengthening Farmer Driven Extension.
- Strengthening Farmer Driven Extension means that all information, know-how and the necessary agriculture technology provided by the relevant institutions should be useful for all levels of village society who rely on farming activities as their
main job. To achieve this, the adoption process must be elaborated with specific approaches which are responsive to the needs of women, youths and vulnerable groups, including provision of relevant methods, special trained extension worker, training treatment and also facilities which would be required for the specific condition mentioned above.

- Participatory agribusiness plans and a community based extension plans should be combined to provide specific programs for each category of farmers. For example for progressive farmers and rural agroprocessors, the extension process should be aimed at improved technology and agribusiness management, while for the others (landless, farm laborers, youth) it should be aimed at improving non-land based farming activities, such as processing of agricultural products.

2.1.2. Sub-Component B on Farmer Managed Activities in Component 1

Sub-Component B on Farmer Managed Activities (FMA) in 3,000 villages will 

"(i) Establish and manage village extension and agribusiness training center; (ii) Conduct village PRA and prepare household profile; (iii) Conduct community business meetings with private enterprises, (iv) Prepare household agribusiness plans, group and community action plans, and village extension plan; (v) Conduct farmer training and extension activities including village media, demonstration, and agricultural fair; (vi) Conduct farmer studies on local specific technology; (vii) Conduct technology and business meeting to develop farmer networking and partnership; (viii) Develop and operate community audio/radio tower system; and (ix) Provide technical advice on agribusiness implementation and problem solving."

The Issues that may need more Consideration

- If all of these activities are going to be successful, it will require a substantial amount of assistance to these villages, especially if the project covers 3,000 villages.

- Other major projects supported by multi-lateral donors that are covering a large number of villages (WSLIC-2) have employed community facilitator teams of two or three persons who cover several villages and live in the villages.

Recommendations for Strengthening Sub-Component B on Farmer Managed Activities in Component 1

- FEATI should consider hiring 6,000 community facilitators to work in the 3,000 villages. They will be needed since the project proposes to 150,000 farmer households prepare household business plans by midterm and 300,000 households by EOP; 15,000 farmer groups prepare and implement farmer group activity plans by midterm and 30,000 farmer groups prepare and implement group activity by EOP; at least one agribusiness partnership developed in all participating villages at EOP; At least 1,000,000 male farmers and 150,000 female farmers (Gender mainstreaming) and rural youth trained in appropriate and improved technologies and efficient farm management by EOP.

- The FEATI has proposed working with private extension services including self-reliant institutions that have roots in the communities on the bases of agribusiness called Lembaga Mandiri yang Mengakar di Masyarakat (LM3) to will be promoted through collaboration with farmer organizations. The Issue is that they will be
selected through competitive grants. Since these LM3s will be needed in all of the kabupatens, there should be a technical selection process to select several LM3s in each kabupaten, and not having competitive selection.

- A community facilitation service should be created by the FEATI assisted extension workers (PPLs) and village community facilitators. Both extension workers and community facilitators would assist groups of villagers to develop agribusiness action plans.

- To fulfill the community facilitators and extension workers man-woman-power requirements, the Ministry of Agriculture should: a) should recruit and establish at least 6,000 government officer village extension workers as a first step in the extension workers assistance plan, and b) FEATI project management should provide an integrated long term assistance consultancy contract (including recruitment of village community facilitators) to ensure compatibility and sustainability of the program.

2.1.3. Sub-Component C on Scaling Up DAFEP’s FMA of Component 1

Sub-Component C on “Scaling Up DAFEP’s FMA: (i) Preparing and testing a manual on procedures of the proposal application for scaling up FMA; (ii) Meetings for Technical Review Teams (TRT) to screen the proposals; (iii) Provision of competitive grant funds; (iv) Orientation on the procedure of the FMA proposal screening for TRTs; and (v) Monitoring and evaluation of financial returns for participating households.”

Recommendations for Strengthening Sub-Component C of Component 1

- The first step should be a trial of the project methodology in a selected kabupaten with reasonable access to Jakarta. This trial should include a role for agribusiness pesantren and other religion based RPOs in training, research and outreach to the villages. At the village level there should be a role for the religious institutions in setting up these FMAs. The trial should determine how the extension service can assist these villages with all of these activities. The trial should be carried out by an independent group.

- A second step would be Participatory Rapid Appraisals (at least one week in the village) in a sample of villages in each province before the project begins that would assess the appropriate approaches adjusted by local cultural, institutional and agro-ecosystems. The Manual on Procedures could then be formulated for specific kabupaten and village situations.

- A third step that has been proposed is base-line surveys which should be carried out in all of the participating villages. This information not only should act as a baseline but should also be analyzed by researchers for information on economic development in rural Indonesia.

- The FEATI Project implementation period could be divided into three stages/phases. The first phase would be the preparation of the Project Master Plan, recruitment of personnel and socialization of the project at the provincial, district (kabupaten. The second phase is full implementation of the project plan, establishing the FMA and Partnerships process including mentoring and assistance process; and the third phase would be the transfer of the FMA and partnerships responsibility to RPO with its partner.
2.1.4. Sub-Component D on Strengthening Capacity of Provincial and District Extension Systems and Management

Sub-Component D on “Strengthening capacity of (new) provincial and district extension system and management: (i) Rehabilitate old RECs or build new RECs; (ii) Prepare and implement sub-district, district and provincial extension programs; (iii) Develop farmer information and technology service including rural broadcasting program; (iv) Establish and provide ICT service, (v) Facilitate agribusiness partnership development; (vi) Promote private and farmer-led extension services; (vii) Prepare and socialize methods and techniques on participatory agricultural extension; (viii) Facilitate the development of Farmer Agricultural Rural Training Centers (FARTC/P4S); (ix) Develop procedure on extension program verification; and (x) Develop extension data base.”

The Issues that may need more consideration for strengthening their capacity:

- The issue is that the number of extension workers in the kecamatans is quite limited, they are aging, have very little resources for carrying out activities in the field; and are not trained for some of these activities.

- The issue is that this activity will be managed by the district extension service in all participating districts in collaboration with agricultural training centers, assessment institute for agricultural technology, plant protection centers and other support institutions in the district or province. Since this will be in 53 districts, the number of trained extension personnel will have to be greatly increased in a very short period of time. The funding of these extension personnel will need to be reviewed because of the lack of resources in many of these kabupatens.

Recommendations for Strengthening Sub-Component D on the Extension Systems and Management in Component 1

- Lack of the extension personnel should be fulfilled with the recruitment of at least 6,000 persons. These personnel should be from a variety of sources including universities, extension colleges, and agribusiness pesantren. They should be recruited from the kabupatens where they will be assigned.

- The new extension workers (established as government officers) should be trained with special FEATI Programs. These new extension personnel should work together with the proposed village community facilitators assigned by the FEATI Consultant to implement the FEATI Development Plan.

2.1.5. Sub-Component G on Farmer Organizations

“Support to farmer organizations (FOs) through training: (i) Curriculum development and training of trainers in FO principles and operations; (ii) Tailor-made training for FO’s leaders, and members on FO management and principles; (iii) Training for extension staff working with FO’s on FO principles and operations; (iv) Develop FO networking through exchange visits, workshop, and joint ventures to exchange their experiences; and (v) Monitoring and evaluation of FO functioning and satisfaction of FO members.”

The Issues that may need more consideration for support to Farmer Organizations:
• The issue is the PRA results showed that many of the Farmer Organizations were not active and in name only. The most active were in Bolmong Kabupaten where the DAPEP project helped setup farmer organizations.

• The issue is this will be implemented in the 17 provinces and 53 districts, which will require substantial trained man and woman power to work with these Farmer Organizations.

Recommendations for Strengthening Sub-Component G on support to the Farmer Organizations

• The religious organizations in these villages are the most active and have the best relationships with the farmers. Assistance in setting up these farmer organizations should be through the assistance of these religious organizations. Training programs should include these village institutions as one of the promoters of these organizations.

• The Agribusiness Pesantren and other institutions with roots in the villages (LM3) have many contacts with the villages and are involved with Farmer Organizations in these villages. These pesantren and other religious institutions could provide information, experience and training of extension workers for strengthening these farmer organizations.

• This strengthening should be integrated with the Farmers Self-reliant Agricultural Training Centers establishment which have been developed by some of the Progressive Farmers/Kontak Tani Andalan. MoA/AHRD has been supporting these farmer initiatives by conducting two types of training, i.e. ToT for Farmer Facilitators and Training for Self-reliant Extension Workers.

2.1.6. Subcomponent on Locations

Other than component A, the other components will be implemented in 17 provinces that satisfy specific criteria.

The Issues that may need more consideration for the selection of locations:

• The issue is what resources will have to be provided by the districts and provinces if they participate in the FEATI. It would appear that they would need to supply substantial man-woman power since they support the extension activities, funds which would have to be approved by the local legislatures, and develop regulations for establishing these farmer organizations and partnerships.

• This issue that the provinces and districts (kabupaten) not included in the project should be given an opportunity to join the FEATI Project once they have met the required criteria.

• The issue is that two of the selection criteria were (i) experience in implementing Participatory Projects and (ii) Initiatives for Local Governance Reforms Projects, yet the FEATI should select provinces that do not have these advantages to show what could be done in less experienced provinces.

Recommendations for Selection of Provinces and Districts (Kabupaten)
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- Experience with other projects (Sustainable Capacity Building for Decentralization Project) found that it takes time for the local legislatures in the province and kabupaten to approve funds for the project and at least one kabupaten decided not to participate. The FEATI Project should ensure that the already selected provinces and kabupatens have the resources and desire to participate.

- The districts and provinces not proposed for FEATI coverage (such as Kalimantan Timur, Kalimantan Barat and Lampung) have experience with farmer participation project, which could meet the required criteria.

- By leaving open the possibility of a district joining the FEATI Project, this would be an incentive for them to meet the criteria for participation.

2.2. Component 2: Support to Farmer Organizations

The general objective of this component is "to strengthen the management and organizational capacity of FOs that are engaged in partnerships with research, extension and agribusiness. The specific objectives are (i) to build farmers organizational capabilities at the grassroots level around concrete economic activities with full member participation and leadership accountability; and to promote the formation of federations and the organizational management of FOs at the regional, national and/or apex levels."

2.2.1. Subcomponent A – Promoting and building the organizational management capability of Farmer Organizations at the village and/or inter-village levels

The issues that may need more consideration for support to Farmer Organizations (FOs) are the following:

- The issue is the importance of the Village Extension Activities Management Unit (UPKPD) as the potential embryo for viable FOs at the village level. Since FEATI is built around the success of establishing FOs in 3,000 villages, the man-and-woman-power for ensuring this establishment is very great and requires substantial training of the PPLs and PSPs (Private Service Providers). As already mentioned in the discussion of Component 1, this level of intense assistance can only be provided by community facilitators. Many unemployed or underemployed youth could be employed as these facilitators. Other projects have done this successfully.

- The issue is that the trained and experienced man-and-woman-power is rather substantial with a team in each of the 15 provinces and a coordinator in each of the 40 districts, yet the importance of this component is the key to the success of FEATI. The problem will be maintaining continuous assistance to the FOs with a limited number of specialists in Organizational Development (OD). Once again, it would seem that community facilitators could assist these OD specialists in maintaining continuous contact with these FOs, the consolidation at higher levels, and the partnerships.

- The issue is the availability of sufficient facilities and experts at the Extension Colleges and Training Centers (ECTC) for providing training for extension workers, private service providers and leaders/officers of FOs.
Recommendations for Sub-Component A:

- The key for most of the FEATI’s activities is the Village Extension Activities Management Unit (UPKPD), which will have to be formed in each of the 3,000 villages. The tasks for this unit are many and varied. They will require intensive support and guidance, which could be provided by trained Community Facilitators from the local area. These villages have many unemployed and underemployed educated youth who could easily become facilitators.

- These community facilitators could be trained at the Agribusiness Pesantren that could be included in the ECTCs. Most kabupatens have these pesantren or other religious institutions with roots in the villages. These Extension Colleges and Training Centers (ECTC) are to provide training for extension workers, private service providers and leaders/officers of FOs. These facilities and experts could be expanded if the FEATI would select Agribusiness Pesantren to also be included in the ECTCs.

- Some of Pesantren have strata’s (from basic to diploma) of general education and special training including agribusiness practices like Sunan Drajat, Baitul Hamdi and others. These institutions could be included both for training and agribusiness partnerships.

- In the villages there are many agribusiness activities which could be developed into village Rural Producer Organizations that could then form partnerships on such activities as orchid farming, vegetable marketing, duck-egg processing, medicinal herbs cultivation and processing, compost production, fruits processing, sheep husbandry etc. These activities could be developed in partnership with agro-processors/traders.

2.2.2. Sub-Component B – Consolidation of Farmer Organizations at the community, district, regional and national levels

The issue that may need more consideration for consolidation of Farmer Organizations is the following:

- The issue is that to encourage this FO consolidation, the FEATI project is providing an incentive of possible partnerships with agribusiness enterprises and public/private research and extension institutions. However, it appears that there are only two major partnerships to be funded by FEATI. These are assistance to cocoa farmers and cattle husbandry.

Recommendation for Sub-Component B:

- Although these two proposed partnerships are important, there are many villages where these are not possible Farmer Organization activities. To provide this incentive for the formation and consolidation of FOs, there should be more activities included in the Public Private Partnerships.
2.3. Component 3: Enhancing Demand-Driven Research and Development

"The objectives of the R&D component of FEATI will be to both introduce farmer and market demand-driven technologies and to improve the capacity of AIATs to function more effectively. FEATI will formulate an innovative program to upgrade both public and private sector R&D institutions through forging partnerships with more players including the private sector.

The research and development plan is composed of three sub-components: (i) institutional strengthening; (ii) developing more effective research, extension, agribusiness, and farmer organization partnerships; and (iii) sustainable research finance."

2.3.1. Sub-Component A: Institutional Strengthening

The issues that may need more consideration for Institutional Strengthening:

- The issue is that the emphasis for strengthening capacity of AARD research institutions will focus more on the AIATs with only one infrastructural intervention for the NRIs, yet these national research institutes also need support and have the facilities and highly trained man-woman power to make a major contribution to FEATI.

- The issue is that the AIATs (BPTPs) are being upgraded in the FEATI program to carry out research and may compete with or displace the Research Institutes. The AIATs’ mandate is adaptive research, but can this be separated from basic research, especially with the apparent push for academic recognition as the FEATI provides support for graduate fellowships, libraries, journals for the AIATs.

- The issue is that the link between the AIATs (BPTPs) and the Research Centers may be weak. Some thought also should be given to the need for setting up a BPTP in each province, especially with a number of provinces being sub-divided into two or three provinces. It may be that an AIAT could cover several provinces and thus concentrate their resources.

Recommendations for Subcomponent A:

- The FEATI Project should provide assistance to the Research Centers (6) and Research Institutes (14) for these scientists to be actively assisting the AIATs in the provinces. Travel funds should be made available for this interaction both for the AARD scientists to travel to these provinces and for the AIATs’ researchers to travel to the Centers and Institutes.

- The AIATs (Assessment Institute for Agricultural Technology) are no longer under the Center for Agriculture Socio Economic and Policy Studies at AARD, but have been shifted to the Balai Besar Pengembangan dan Penkajian Teknologi Pertanian (Institute for Development and Assessment of Agricultural Technology), which has been specifically established for the AIATs. A Balai Besar is structurally in-between a Research Center and a Research Institute. The Balai Besar has eselon 2 status, is semi-autonomous, and reports directly to the Director General of AARD. FEATI should provide assistance to strengthening this new AIAT Research Institute.
2.3.2. **Subcomponent B: Improve Research/Extension/Agribusiness/Farmer Organization Linkages**

The issues that may need more consideration for Improvement of Linkages

- The issue is that the "AIAT system is maturing within the AARD parent organization and it is being asked to take on more responsibilities in technology assessment as well as engage in roles traditionally meant for extension services," yet may be displacing the roles of the national research institutes.

- The issue is that AARD has six Centers for Agricultural Research (Puslitbang) based on Food Crops, Horticultural and Other Crops, Animal Husbandry, Estate Crops, Soils and Agroclimate, and Socio Economic and Policy Studies that are located in Jakarta and Bogor. Under the first five of these Centers there are 14 Research Institutes (Balai Penelitian) based on specific crops and most are located in the provinces, including Bogor, West Java. Unfortunately, some of these specific crop research institutes are very distant from some of the AIATs. Perhaps there should be some consolidation of these centers, research institutes and assessment institutes.

- The issue is that the links between the research institutes and the assessment institutes will have to be very strong to ensure that basic research results can reach the assessment institutes. FEATI concentrated on the AIATs links with extension services but did not discuss the links between the research institutes and the assessment institutes.

- The issue is that FEATI has suggested AIAT should contract with local universities for assistance, yet they should first rely on AARD’s research institutes for assistance. One would assume that the main problem is the travel costs but arrangements should be possible for FEATI to provide some funds for the research institutes to be assisting the AIATs. Also, the internet revolution should allow substantial interaction.

- The issue is that these linkages should be Research Centers (AARD) - Research Institutes (NRC at AARD) - AIATs - Provincial Agricultural Services (Dinas Pertanian) - Kabupaten Agricultural Services - PPLs - Rural Villages.

**Recommendations for Sub-Component B:**

- Although the mandate for the Institutes is basic research and the mandate for the AIATs is adaptive research, the distinction between the two is not very clear. If the links between these institutions are weak, then there will be an overlap of research activities. If the links between provincial AIATs are weak, then it may result in the same research being carried out by researchers in provinces with similar agro-ecosystems. FEATI

- If the links between the AIATs and the district extension services (Dinas Pertanian Kabupaten) are weak, then the demand driven needs may not reach up to the AIATs and the Institutes. If the links between the farmer groups in the villages and the extension services is weak, then this system will not function properly. The FEATI Project should make a major push to strengthen these links between research-extension-farmers.
2.3.3. Sub-Component C: Sustainable Research Funding

The issue that may need more consideration for research funding:

- The issue is that the national research institutes may also need funding in order to provide scientific support to the AIATs. The FEATI Project should include these scientists in the upgrading programs designed to support the AIAT.

Recommendations for Sub-Component C:

- Once the farmer-driven research has identified specific production, processing and marketing problems confronting the farmers, the FEATI Project should provide research funds to the scientists at the Centers and Institutes to examine and develop approaches to solve the problems.

- Since one of FEATI’s objectives is to assist women and the disadvantaged in the villages, FEATI should fund research into technologies for processing agricultural products that would provide employment in the villages for these groups. Technologies for the Rural Producer Organizations that provide employment opportunities for the unemployed and disadvantaged.

2.4. Component 4: Provision of Knowledge and Information Services

“The component aims to address the problem of absence and/or inaccessibility to knowledge on agricultural technologies and the lack of linkages among service providers themselves and between service providers and the user community (farmers, traders, and entrepreneurs). Based on the analysis of contributory factors, this problem cuts across all agricultural sectors and contribute to low/deteriorating agricultural productivity and low farmers’ income.”

2.4.1. Sub-Component A: Design of System Architecture

The issues that may need more consideration for the design are the following:

- The issue is the very little mention of the great benefit that this system will provide for sustained communications between the researchers in the Research Centers, the Research Institutes and the AIATs. One assumes that this is already a major function of this ICT system.

- The issue is the opportunity to include researchers in universities throughout Indonesia and abroad. The major international agricultural research institutes should also be linked into this system.

- The issue is the major use of hand phones and the SMS messaging system in Indonesia and the lack of computers and e-mail at the village and sub-district level.

Recommendations for Sub-Component A:

- Although this may be obvious, in order for the website for FEATI to be useful and have many persons downloading information, it must have information of interest for the users. This could be very useful, but it is more than setting up a website.
Useful information must be routinely put on the website and it must be updated at least weekly.

- Several discussion groups should be included in the website to encourage an exchange of ideas among researchers.

- There are some innovative information technology packages which could be integrated into the agricultural technology and information package, for example the e-petani portal, warung informasi provider, sms-pesan petani (short messages by providers to give information on some agriculture commodities’ daily market price, improved seeds, pest and disease control etc.). These information sources could be broadened by using the mobile phone and TV/radio broadcasts.

2.5. Component 5: Development of Public-Private Partnerships

“The overall objectives of the public-private partnerships component are to develop sustainable commercial linkages and mutually beneficial demand-driven agribusiness partnerships between small farmers, public services and private sector, and to increase agricultural production, primarily of high value commodities, and ultimately to raise the income of farmers.

Primary target participants are drawn from existing farmer and women’s group members, who have taken part in the P4K and similar participatory extension programs based on a total family approach.

Secondary target participants are drawn from local governments, traders, and intermediaries, commercial banks and private companies.”

2.5.1. Sub-Component A: Facilitating Partnership between Research, Extension and Private Sector particularly in the Cocoa Industry

The issues that may need more consideration facilitating partnerships are the following:

- The issue is that the information on this component is not yet available in the Main Report that states “the detailed activities will be prepared by the WB. Yet, there are several issues of importance.

- The issue is that pesticides will be used but in reduced amounts and following IPM guidelines. However, depending on how one looks at the program, it may require an Environmental Impact Assessment (ANDAL, RKL and RPL) or a much simpler Standard Operating Procedures (UKL and UPL). The decision would be made at either the National AMDAL Commission (if it covers more than one province) or the Provincial AMDAL Commission.

- The issue is that environmental management at the Ministry of Agriculture has a very low priority and only one Sub-dit has the task of environmental management, and this is not in the Directorate General that would be responsible for cocoa cultivation.
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- The issue is that apparently Integrated Pest Management is not functioning in accordance with the guidelines, at least in the PRA villages and perhaps in South Sulawesi also.

- The issues are will the additional land be brought into production, will small farmers be encouraged to join the program, and will the program encroach onto hillsides and forested areas? Two of the PRA villages are cultivating and expanding production of cocoa on hillsides and in degraded forest areas.

- The issue is the lack of information on the situation in the areas in Sulawesi that are proposed to be in the program.

Recommendations for Sub-Component A:

- In order to respond to the potential environmental impact of the pesticides, adequate environmental screening procedures need to be built into the FMA grant activities at all levels and in the Cocoa Private-Public-Partnership. Local BAPEDALDA should have a role in the screening and the District Dinas Pertanian will be responsible and will therefore need training. The FEATI project should develop a special assistance program for the areas where cocoa is cultivated, not only in central Sulawesi but other areas where cocoa is grown and will benefit from the improved technology.

- The FEATI Project should provide assistance to the Ministry of Agriculture for environmental management and integrated pest management. Both programs apparently are not being emphasized at the Ministry. This assistance should be at the national, provincial, kabupaten and kecamatan levels.

- A baseline survey by independent researchers should be carried out before the program is initiated to identify the potential positive and negative impacts.

- The issue is that there should be substantial training of the extension workers and the farmers in IPM and in environmental management.

- Since the decentralization era, agricultural activities are the responsibility of the Provincial and Kabupaten/Kota. Therefore, the potential of agricultural programs impacting the environment should be handled by provincial level environmental office coordinated by the Ministry of Environment. The Ministry of Agriculture is responsible to provide guidance and training/socialization for Good Agricultural Practices (on-farm activities for IPM Integrated Pest Management, LISA and LEISA (Low external Input Sustainable Agriculture) and Good Manufacturing Processes (in off-farm/processing activities i.e. HACCP (International Standard for Fresh and Processed Food Product Handling), SOP (Standard Operating Procedures). The Ministry is socializing these procedures to the regional agricultural services to meet quality standards and achieving sustainable agribusiness.

2.5.2. Sub-Component B: Facilitating Partnership between Public Agencies, Private Agribusinesses and Beef Cattle Farmers for Beef Cattle Improvement

Although this Sub-Component was in the Main FEATI Proposal, the World Bank will not be including this in the project.
2.5.3. **Sub-Component C: Promoting and Developing Sustainable Partnerships between Private Sector and Farmer Organizations**

The issues that may need more consideration for these partnerships are the following:

- The issue is the proposal on agribusiness development does not seem to have examined the successes and failures of USAID’s Agribusiness Project (3 years) carried out by DAI and INTERSYS at the Ministry of Agriculture. They carried out some of the same programs as the proposed FEATI Project for agribusiness but it was apparently not sustainable and perhaps not very successful.

- The issue is the list of essentials of the enabling environment for agribusinesses will be very difficult to achieve or make inroads into the topics in the list. An example of the land tenure system which in most rural villages is only the existing traditional systems that do not qualify as acceptable for loans from banks.

- The issue is the main activities of this component are substantial and important, yet the main reason stated by the PRA villagers in Bolmong Kabupaten for the pineapple and potato producers was that they understood the activities of the DAFEP program but did not have the financial resources to implement the recommendations. The most important assistance will be financial support for expanding, improving, developing, marketing these agricultural products by these businesses. One assumes that the partners may be providing financial assistance, but most of these farmers are already indebted to private financiers that end up taking a substantial share of their profits.

- The issue is the implementation plan states that "...will ensure local government participation and co-financing project supported agribusiness partnerships, ownership of the process for scaling-up transfer of technologies and responding to demand-driven assistance from farmers/farmer organizations and private sector entities. The question is can a district government help finance a private agribusiness and has this been done in the DAFEP program or other programs. Does the P4K, P4MI, PKP have experience with co-financing? This may be the case for the PRIMA TANI project but it was just initiated in 2005.

**Recommendations for Sub-Component C:**

- The most active institutions for possibly qualifying for either the ATC (Agribusiness Training Center) and/or the PSP (Private Service Provider) are the Agribusiness Pesantren, some of which have thousands of students (santri) and hundreds of teachers (guru). These institutions should also be given an opportunity to participate in both of these programs.

- The FEATI Project should also examine the USAID’s Agribusiness Project to learn from this experience, both the successes and the failures.

- The FEATI Project should collaborate with the Ministry of Agriculture’s Center for Agriculture Funds which is a new institution assigned to provide a guarantee-fund for rural micro finance institutions that provide credit to the farmers. The funding of the agribusinesses and rural producer organizations would be able to get credit from institutions participating in this loan guarantee program.
2.6. Component 6: Project Management

2.6.1. Sub-Component A: Project Organization and Coordination

The issues that may need more consideration for the organization and coordination are the following:

- The issue is the Project Organization does not include the Ministry of the Environment at the national level nor at the provincial and district levels, not in the Steering Committees nor in the Project Management Units. Since there are environmental concerns related to the FEATI, there should be representation of environmental management institutions within the project organization.

- The issue is that the FEATI Project has not mentioned environmental management in any of the programs being proposed for the Project. The issues of pesticide pollution, encroachment into forested areas, water availability, etc were not addressed in Volume I and Volume II in the Main Report.

- The issue is the under-representation of the Research Centers and Research Institutes at AARD in the national and provincial level Steering Committees and Working Groups. These institutes have the facilities and experienced researchers to be able to provide a valuable input into the FEATI which has the mandate to link research, extension and the farmers. The AIATs are represented at the province level but not the Dinas Pertanian; only the Dinas Penyuluhan.

- The issue is the under-representation of some of the Directorate Generals at the Ministry of Agriculture, with only the Directorate General of Processing and Marketing and the Directorate General of Livestock Services.

- The issue is the large number of Steering Committees and Project Management Units at the national, provincial and district levels; and the institutions setup in the villages. One would assume that coordination will be a substantial job for the FEATI Project.

Recommendations for Sub-Component A:

- The National Steering Committee and the National Working Group should have representatives from the Ministry of Environment and the Provincial Steering Committees and Provincial Working Groups should have representatives from the provincial environmental management agencies.

- The National Working Group should have representatives from AARD’s Research Centers and Research Institutes. In the provinces where there are Research Institutes, they should be represented on the provincial steering committees and working groups.

2.6.2. Sub-Component B: Project Performance Monitoring and Evaluation

The issue that may need more consideration for Monitoring and Evaluation is the following:
The issue is the requirements for the Monitoring and Evaluation Mechanisms and Structures at the village, district, provincial and national levels. One would assume that this will require substantial inputs of man-woman power and training at these levels. The amount of information that will eventually be submitted to the national level may be somewhat overwhelming. It may be useful to consider some form of streamlining.

The Recommendation for Sub-Component B:

- FEATI Project should provide assistance to the Center for Agriculture Socio Economic and Policy Studies to be the central focus of the monitoring and evaluation. They could form teams in each of the provinces, develop the methodology, carry out the training of the teams, monitor and supervise the data collection, prepare the reports and carryout sophisticated analyses of the data.
3.0. Environmental Assessment

Based on the initial recommendation of the Social and Environmental Assessment team, refinements have been introduced to the design of the initial FEATI components that have greatly reduced the risk of potential adverse environmental effects. The two areas where there remains a modest risk of adverse environmental effects associated with the Cocoa PPP and the Small Grants facility to stimulate PPPs. The potential risk can be avoided or reduced to a level commensurate with the positive economic, social and environmental benefits the project could achieve.

The assessment of any remaining risks to the environment, or to individuals and communities and corresponding measures to assist avoiding and/or mitigating any remaining risks are set out in the following paragraphs.

3.1. Potential Triggering of Safeguard Policies

Based on the PRA and the available FEATI project documents, the following World Bank Safeguard Policies that could be triggered by the Project include:

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP/BP/GP 4.01)</td>
<td></td>
<td>[x]</td>
</tr>
<tr>
<td>Natural Habitats (OP/BP 4.04)</td>
<td></td>
<td>[x]</td>
</tr>
<tr>
<td>Pest Management (OP 4.09)</td>
<td>[x]</td>
<td></td>
</tr>
<tr>
<td>Involuntary Resettlement (OP/BP 4.12)</td>
<td></td>
<td>[x]</td>
</tr>
<tr>
<td>Indigenous Peoples (OD 4.20)</td>
<td></td>
<td>[x]</td>
</tr>
<tr>
<td>Cultural Property (OP 4.11)</td>
<td></td>
<td>[x]</td>
</tr>
</tbody>
</table>

Objectives

The social and environmental management framework provides general policies and guidelines to serve the following objectives:

- Protect human health;
- Prevent or compensate any loss of livelihood;
- Prevent environmental degradation as a result of either individual investments or their cumulative effects;
- Enhance positive environmental outcomes;
- Avoid or minimize adverse environmental, economic and social impacts.

Implementation of these guidelines is built in to the project oversight and terms of reference for the Project Management Unity and counterpart staff and the project provides external audits of their implementation.

3.2. Assessment of the Risk of Potential Environmental Impacts

It is understood that the FEATI component dealing with Public Private Partnerships will not take forward the Beef Cattle Activities proposed in the Draft FEATI documentation.
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However, the PPP for enhanced Cocoa production will proceed and new documentation has been produced that sets out the proposed Cocoa activities.

Existing Cocoa production is characterized by poor cultivation practices, old tree stocks, pest and disease problems and poor management of agricultural chemicals such as pesticides. In existing commercial plantation areas in Sulawesi which may be associated with the Cocoa PPP a spraying regime using some 24 different chemical formulations is commonly applied, and in adjacent small-holder cocoa growing areas about 12 of these sprays might be applied on an annual basis. It is estimated that such spraying regimes are applied to some 20,000 ha.

The FEATI proposals include measures to improve cocoa production in approximately 120,000 ha of existing commercial and small-holder cocoa producing units in Sulawesi over five years using a sophisticated mix of improvements in cultivation practices, materials, extension support and pest management. It should be noted that the PRA in two villages, one in Banten Province and one in North Sumatera are producing cocoa, though their yields are low, substantial areas are not productive, farmers are encroaching on forested areas because of these problems to cultivate cocoa. A major intensification program to help these farmers would reduce the pressures on these farmers to open forested areas for cultivation.

It is understood from the proposed PPP activities that the existing spraying practices using up to 24 sprays of unknown chemical formulation will be replaced with six agricultural sprays of low toxicity on the estimated 20,000 ha subjected to sprays at the present time. An additional 100,000 hectares where spraying in not currently utilized will be subject to the use of six agricultural sprays of low toxicity. Under World Bank safeguards, the 6 spray materials utilized will be selected from those approved under the FAO and World Bank OP4.09 guidelines.

The proposed Cocoa PPP is designed to improve Cocoa production while minimizing the potential adverse environmental effects of existing and proposed production practices. Although detailed information on the chemical constituents of the existing 24 sprays commonly used to control weeds, diseases and pests is not available, the potential environmental impact of the proposed Cocoa PPP can be assessed.

3.2.1. Assessment of the Potential Environmental Effects of the Cocoa Partnership

Potential encroachment of Cocoa Production into Forested or other forms of protected areas.

The project is not engaged in the extension of agriculture into forested areas, protected areas or natural habitats.

The Cocoa proposals will only apply to up to 120,000 ha of existing Cocoa producing areas. No extension of the area under Cocoa production is planned and the World Bank Environmental Safeguards prohibit the use of loan funds to support extensification of the Cocoa PPP into forested areas or protected areas.

It is therefore anticipated that there will be no extensification of Cocoa cultivation into protected areas as a direct result of Cocoa PPP. However, there may be indirect adverse effects resulting from farmers witnessing benefits from improvements in production and post harvest income resulting from the Cocoa PPP, and attempting to increase their production by adopting the PPP management measures and expanding their land holdings.
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Such activities lie outside the control of the Cocoa PPP and will need to be addressed by the relevant governmental agencies such as the District office (Dinas) of the Ministry of Agriculture, the Ministry of Forestry and the Ministry of Environment. Steps can be taken by the Cocoa PPP staff to engage in discussions with these agencies to alert them to the possibility of the extension of cocoa production in various areas and how to prevent potential environmental impacts.

It must be recognized that with the introduction of improved technologies in central Sulawesi there will be a spread to other areas with cocoa cultivation and those areas where it is a potential crop. Although the Cocoa PPP plans only for intensification yet with the success of this new technology, there will be extensification in other regions of Indonesia. Safeguards will be necessary for this extensification in other areas of Indonesia, especially those areas not involved in the FEATI Project.

Potential Risks associated with the increased area subjected to sprays:

Existing Environmental Risks:

The area currently subjected to agricultural sprays is estimated at 20,000 ha. The dosage and intensity of spraying currently used in applying the estimated 24 chemical formulations is not known. The current level of residues and the residual toxicity from these sprays in water, soils, and crops has also not been studied.

Based on the PRAs conducted as part of the Social and Environmental Assessment, there is currently limited use of Integrated Pest Management techniques and a heavy reliance on spraying to control pests, weeds and diseases amongst farmers and commercial growers in all the main agro-ecosystems. These studies and materials provided in the FEATI documentation indicate that poor management practices associated with the storage and application of agricultural chemicals is common and pose a risk of contamination of soils, surface and groundwater and a risk to human health. It is therefore assumed that the areas subjected to the existing spraying regimes under commercial and small-holder management will have been contaminated by potentially toxic chemicals.

Potential Risks associated with the reduced emphasis on environmental management and Integrated Pest Management at the Ministry of Agriculture:

With the shift in responsibility for environmental management of agricultural projects from the Ministry of Agriculture to the districts (kabupaten) there has been a decline in the Ministry’s emphasis on environmental issues, including pest management.

The FEATI should provide assistance on environmental management and IPM to the provinces for policy formulation and to the districts for implementation of programs strengthening environmental management and IPM.

As an example, the PRA found that in Brebes Kabupaten there are massive spraying of pesticides for red onions (bawang merah) cultivation, even though the farmers were aware of Integrated Pest Management. They only carried out the last component of IPM which was spraying pesticides.

Potential Risk associated with the weak structure of village administration:

Recent studies have shown the weak capacity of the village administration structure in overcoming problems. “Village officials are more focused on the administrative work (due
to changes initiated by Law No. 22 of 1999 and revised by Law No. 32 of 2004). Village heads are given the authority to establish their own village administration structure according to their needs. The consequence of such a situation is that the village officials are more focused on the administrative works rather than getting involved with the efforts to overcome village problems including poverty.”

The FEATI will have to work with the districts to strengthen the village administrations in order that they can carry out the required integrated pest management programs under the Cocoa Partnership. Otherwise, the plans for reduced spraying and the use of specific pesticides will not be implemented.

Reduction in Risks Resulting from the Proposed Improvements in Cocoa Production:

The proposed reduction in the number of sprays, combined with the proposed improvements in culture techniques, biological controls, improved plant stocks, etc., and the low toxicity of the approved chemicals that will be used has the potential to create a major reduction in the adverse environmental effects of the current spraying regime in the 20,000 ha utilized by both commercial and small holder Cocoa operations.

The proposals to introduce improved culture techniques, biological controls, improved crop hygiene, and other management measures in the remaining estimated 100,000 hectares should reduce the need for chemical sprays. The planned use of the 6 approved, low toxicity sprays in the 100,000 ha in combination with the planned improvements in cultivars and their management will increase the area subject to sprays. Due to the use of approved chemical formulations that have low environmental impacts, the potential impact of the extension of the area subject to sprays is considered to be of low intensity and of short duration. The potential negative environmental effect of these sprays will be offset by the reduction in the 24 sprays used on the part of the 20,000 ha under commercial plantation and the effects of the 12 sprays used on the remaining area under small-holder production units. As long as the farmers are convinced of the benefits of improved methods of pest management,

Net Environmental Benefits:

Considering the positive environmental effects resulting from the reduction in the intensive spraying regime in the 20,000 ha and the low intensity and short duration of potential impacts from the 6 sprays on the 100,000 ha, the overall impact of the proposed Cocoa PPP management measures is considered to pose a small overall risk to the environment in the planned project areas.

3.3. Assessment of the Potential Adverse Environmental Impacts from the Small Grants Initiative to Stimulate PPPs

The risks of adverse environmental impacts being created through the Small Grants Initiative is difficult to assess in the absence of specific proposals to support PPPs and details of the nature of controls that will be applied to the Grants Initiative. There is potential for grantees to use grant funds to extend their land holdings into protected areas, to purchase ad misuse hazardous agricultural chemicals, and to practice farming methods that degrade soil fertility and water resources. At the same time, some grantees may achieve substantive improvements in the production of their farming systems and the environmental performance of their management efforts. It is therefore difficult to identify and assess the net benefit of a small grants initiative.
The most logical means of reducing the potential for misuse of grants and the creation of adverse environmental, social or economic impacts is to provide a framework for assessing grant requests that guides potential grantees towards approved forms of use of grant funds. An indicative list of projects that would not be approved under a small grants initiative is provided in the following section to help the FEATI Design Team avoid adverse effects from this component.

3.3.1. Proposed Environmental Management Measures

Environmental Management Recommendations for the Cocoa PPP:

The potential environmental benefits that could be achieved by the FEATI Cocoa PPP could be reduced if the planned chemical formulations are not available in Indonesia, the costs are beyond the means of the small-holders, and their storage and use does not conform to approved practices. The weak administrative structure of the villages may limit the enforcement of IPM. The project has in place measures, such as farmer training and improved extension advice, to address such constraints. However, the effectiveness of these planned measures needs to be monitored during the life of the project to ensure that they are effective. It would also be a wise practice to monitor the effectiveness of the planned education and training measures to help to ensure the improved Cocoa management measures will be adopted by the participants and can be sustained beyond the life of the project.

Supervision and Monitoring:

The very large area to be addressed in the proposed Cocoa component and overcoming the existing low levels of farmer adoption of Integrated Pest Management and poor management of agricultural chemicals poses a major challenge to the project management team. Therefore, careful supervision and monitoring of the effectiveness of planned activities will be required to ensure that planned standards of environmental protection are achieved. Monitoring of key variables, such as the timing and dose response rate of herbicides, disease treatments and pesticides will allow corrective action to be taken to ensure the efficient and effective use of such materials, and avoid unacceptable contamination of soils, ground water and surface waters, and consequent adverse impacts on non-target organisms, including human beings. Periodic monitoring could be undertaken by the staff of the planned Outreach Centers based on standards and protocols set out in the following paragraphs. The staff would report their findings to the Central Research Station and the FEATI project management staff. Yet, it is not clear if these institutions will have any enforcement powers.

Establish a Baseline of Existing Environmental Conditions:

For monitoring to be fully effective and to allow corrective environmental management action if and when required, an environmental baseline will be required against which to measure improvements in environmental conditions. This would apply to monitoring the hoped for improvements 20,000 ha previously affected by the use of the recommended spray formulations, and to ensure that the extension of spraying to the 100,000 additional ha does not create unacceptable impacts. This could be carried out by the Central Research Station in association with the Bapedalda / environmental management institution at the district level.

Establish Environmental Standards against which to measure the environmental performance of the FEATI project activities. These standards should reflect the World Bank
Operating Guidelines for Integrated Pest Management as well as Indonesian Environmental Standards. Examples would include concentrations of pesticides in soils, ground and surface water, crops, and crop residues. The setting of standards could be carried out by the Central Research Station in association with the Bapedalda and the research staff at Mars Inc. to help ensure that the least environmentally hazardous chemical formulation are utilised. These standards should be developed and approved by the Ministry of Agriculture which has the authority for issuing ministerial decrees.

**Establish Protocols** (standards and procedures) for monitoring key variables on a systematic basis, assessing changes in those variables over time, analysing the effectiveness of existing management measures, and informing the project management team of progress towards meeting stated environmental standards. Where standards for environmental performance are not being met, the protocols will need to trigger corrective management action to avoid irreversible, adverse environmental effects. The development of the Protocols should be undertaken as part of the initial phase of the FEATI Cocoa PPP in cooperation with the Central Research Station, the Bapedalda, and the research staff at Mars Inc.

**Establish Adaptive Environmental Management** procedures for utilising the results of the monitoring and evaluation protocols to take effective management actions to improve the performance of projects activities where and when necessary to meet stated environmental objectives. The development of the Adaptive Environmental Management system is anticipated in the Draft FEAT documentation and should be undertaken as part of the initial phase of the FEATI Cocoa PPP.

The proposed environmental management measures and suitable codes and practices will need to be included in the Project Operational Manual, including Ministry of Agriculture and Ministry of Environment standards as well as World Bank Guidelines. Effective application of such standards will require provision of training for the Project Staff, Extension Workers and NGO facilitators, Farmer Organizations as well as farmer groups and other key members in each project site. A monitoring system to track the implementation of the five key components of the FEATI project will also need to be built into the project. Agricultural development plans will need to incorporate agreed environmental principles such as commitments to use environmentally sound management practices such as Integrated Pest Management.

Although strenuous efforts will have to be made to avoid indirect impacts, these cannot be addressed at the level of a single project and will require a coordinated approach involving all key parties involved in the FEATI Project and other initiatives aimed at enhancing agricultural development and other forms of natural resources development. Examples would include increased problems of soil erosion, mud slides and increased surface water run-off related to mining in the hilly and mountainous areas, and infrastructure development designed to enhance access at a regional level in all project areas.

At the Ministry of Agriculture there is only a sub-directorate for environmental management in the Directorate General for Processing and Marketing of Agricultural Products. Thus, the responsibility for environmental management for crop cultivation is not clear and depends on officials in the Directorate Generals who have had training in environmental management. Deptan should setup a Directorate or Center for Environmental Management in the Secretary General’s Office that would have authority throughout the Ministry of Agriculture for environmental management.
3.4. Specific Recommendations

3.4.1. Minimising the Potential for Adverse Impacts from Misuse of Agricultural Chemicals

Overcoming Constraints imposed by Limited Institutional Capacity:

The institutional capacity in Indonesia to manage the procurement, handling, application, and disposal of pest control products and other potentially hazardous agricultural chemicals; to monitor the precision of pest control and the impact of pesticide and other agricultural chemical use; and to develop and implement ecologically based pest management programs is limited. To ensure the FEATI project meets World Bank operational guidelines on Pest Management (OP 4.09) a comprehensive Pest Management Plan will need to be developed and incorporated into the Project Design and corresponding implementation arrangements.

Project Design and Pest Management:

It is understood that the Integrated Pest Management Measures that will be designed in conjunction with the Integrated Framing systems arrangements during the first phase of project implementation will incorporate a Pest Management Plan. The available FEATI project documents indicate that the first part of such a plan had been undertaken and constitutes on-site evaluations of local conditions by technical specialists with experience in participatory IPM. The initial reconnaissance has identified the main pest problem as Cocoa Pod Borer. However the ecological, agricultural, public health, economic, and institutional context surrounding opportunities and constraints that would influence the design of an IPM approach to improving cocoa production has not been completed. While specific elements of an IPM approach have been outlined, no specific operational plans to address the pest problems have been formulated. Also, it is not clear what institution would be responsible for this formulation.

It is therefore recommended that a specialist in the planning and management of IPM programs be brought in as an initial component of the project to formulate a detailed IPM program to support the proposed extension and intensification of cocoa production under the component designed to support sustainable public-private partnerships (PPP).

The pest management arrangements will need to specify procedures for screening pest control products before any project disbursements are made to allow the purchase of agricultural chemicals. Screening of proposed pest control products will be required to establish an authorized list of pest control products approved for financing, along with a mechanism to ensure that only the specified products will be procured with Bank funds. Criteria for Pesticide Selection and Use based on the appropriate World Bank and FAO guidelines are set out in BP 4.01 Annex C: Application of Environmental Assessment to Projects Involving Pest Management; OP 4.09 Pest Management; BP 4.01 Environmental Assessment (Revised August 2004); and OP 4.01 Environmental Assessment (Revised August 2004).

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3.4.2. Monitoring: and Evaluation

The project implementation arrangements will have to include appropriate technical specialists who will support and monitor the implementation of the Pest Management Plan. For example, the integrated pest management specialist(s) would contribute to the training initiatives designed to strengthen human resources and institutional capacities to implement IPM.

The Pest Management Plan should also incorporate specific factors, standards, and monitoring procedures to ensure the IPM arrangements are meeting expected pest control performance and environmental standards. For example, a baseline of environmental parameters, such as existing concentrations of biocides in groundwater and soils would be established against which results of the monitoring program would be assessed. The monitoring and reporting would initially be the responsibility of the IPM specialists. When sufficient qualified and competent people are trained through the project, the monitoring and reporting could be transferred to local government bodies such as the Bappedalda (regional environmental control agency).

Given the potential for adverse environmental and public health impacts from the extension of the use of sprays an initial assessment of the performance would be conducted at the end of the first year of the IPM implementation program. This would be to provide assurance to the World Bank and DEPTAN that the planned improved pest management practices are performing according to the criteria that define the IPM approach. This early review would allow remedial action to be taken in a timely manner to avoid irreversible damage to the environment, public health and biodiversity, and to promote action to rectify any problems in the implementation of IPM and cocoa initiative.

3.4.3. Environmental Management of the Small Grants Initiative to Stimulate PPPs

This risk of potential adverse effects can be effectively reduced by (1) the adoption of a process of Screening proposals for funding using a list of projects that would not be approved (A proposed negative List is set out in Table No. 1 below); and (2) for those projects that could be approved, a basic environmental management scheme would be developed with support of the District Agricultural Service (Dinas Pertanian Kabupaten) staff based on appropriate World Bank and/or Ministry of Agriculture and Ministry of Environment guidelines. The progress of approved grants and effectiveness of the implementation of the attendant management plans would be monitored by the District Agriculture Service staff. The monitoring results would be reviewed on a semi-annual basis by staff from the PMU. The Technical Review Team (TRT) would be responsible for screening all FMAs to ensure that no proposed modalities for strengthening a FMA would lead to encroachment onto or into forested and protected areas.

List of Non-Approved Projects

In order to provide assistance to the small grants program, the list of non-approved projects in Table No. EA 2 provides guidance to the local communities on the type of projects that should not be proposed and to the officials making the decision for the selection of the competitive grants.

Table No. 1. Non-Approved Projects List
## Executive Summary

<table>
<thead>
<tr>
<th>List of Non-Approved Projects</th>
<th>Reasons</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects on slopes of more than 20%</td>
<td>Problems of excessive erosion impacting agricultural systems lower down in the watershed</td>
<td>Considerations would be given for terraced crops.</td>
</tr>
<tr>
<td>Proposed projects without a proper IPM plan</td>
<td>Most vegetable crops presently use excessive amounts of pesticides without proper management.</td>
<td>There is not sufficient application of IPM for vegetable crops.</td>
</tr>
<tr>
<td>Proposed projects that will have an impact on watersheds and water sources.</td>
<td>Water for households and agriculture is becoming a major concern in Indonesia and any project that affects the quality or volume should be avoided.</td>
<td>Every effort should be made by the project to protect water systems.</td>
</tr>
<tr>
<td>Proposed projects that will need to acquire more land for profitable operation</td>
<td>Acquiring more land may cause loss of land by poor farmers and pressures to rent out land to outsiders.</td>
<td>The trend in agriculture is for the poorer farmers to lose control over their land resources which increases poverty in the rural villages.</td>
</tr>
<tr>
<td>Proposed projects that are located near to / or enter into forest conservation areas</td>
<td>If a project is located near, on the border, or in a conservation area, then there is a strong possibility it will impact the conservation area.</td>
<td>Every effort should be made to preserve these conservation areas because of the destruction of Indonesia’s forests.</td>
</tr>
<tr>
<td>Proposed projects that will require using laborers from outside the village.</td>
<td>Most villages, especially in Java, have many unemployed ag laborers and any projects in their villages should use local laborer.</td>
<td>Rural unemployment is a major problem in Indonesia and projects that do not employ local laborers should be discouraged.</td>
</tr>
<tr>
<td>Proposed projects that do not have a plan for involving women, the poor, unemployed, and the disadvantaged</td>
<td>Projects must be designed that provide assistance to the disadvantaged and have gender mainstreaming.</td>
<td>FEATI is a major project and should be a model for other projects in agricultural development that provides assistance to these groups.</td>
</tr>
<tr>
<td>Proposed projects that do not have a plan or understanding of how to empower farmers.</td>
<td>Projects should be designed to promote empowerment.</td>
<td>FEATI is promoting empowerment and this should be included in plans for small grants and for partnerships.</td>
</tr>
</tbody>
</table>

Other initiatives that would not be funded would include:

- Purchase of non-approved Pesticides, ozone-depleting substances, tobacco or tobacco products;
- Projects or sub-projects that would create inequalities among farmer groups;
- Projects or sub-projects that would led to over-exploitation of water resources and/or contamination of domestic water supplies;
- Sub-projects producing liquid or gaseous effluents and emissions, with the exception of normal sanitation needs for individual households Hazardous agricultural by-products and other materials and wastes, including use, production, storage or generation of hazardous wastes;
- Sub-projects or activities with the potential for significant conversion or degradation of critical forest areas or related critical natural habitats (as defined in OP 4.36 on Forests);

The progress of the small-grants initiative would be reviewed on an annual basis by the PMU.

The institutional capacity to manage such a program is low and will need to be strengthened. For the Screening process to be effective, the Project will need to strengthen its training components to enable the Extension Services and District
Agriculture Service staff to make full use of the Negative List of Projects, and in working together with the Extension Services in assessing proposed PPP initiatives and in helping the proponents develop appropriate environmental and business management plans. The role of the Extension Services is also very important in communicating the objectives and criteria for approval of the proposal under the Small-Grants program to Agri-Business and Farmer Organizations.

Training and Awareness Development

The small-grants scheme designed to strengthen PPPs will require rigorous supervision. For that supervision to be effective the FEATI project will need to strengthen training initiatives designed to support extension services and project implementation staff in the local project areas as well as the PMU to apply the proposed Negative List of Initiatives that would not be funded by the World Bank.

Training to enhance the human resources should be available to support the effective implementation of the Small-Grants program and be available to DEPTAN, Provincial and District level officials associated with the project, and Farmer Organizations and Agri-Business representatives. Training in Monitoring and taking management actions to avoid and or mitigate potential adverse effects will also be required for the project implementation staff in the local project areas.

The local project staff as well as the PMU will be responsible for screening and monitoring the program. The Technical Review Team (TRT) would be responsible for checking that screening all FMAs and monitoring the use of the project funds is being handled in an appropriate manner to ensure that no proposed modalities for strengthening a FMA would lead to encroachment onto into forested land and protected areas or other environmentally damaging activities, such as the purchase and distribution of non-approved agricultural chemicals.

The screening process will ensure that negative impacts are, as far as possible, avoided through appropriate siting and design measures, and that adequate mitigation measures are put in place for residual impacts. Standard clauses will be introduced into relevant project documentation describing required mitigation measures, simple indicators of success and a monitoring plan. Each participating Public Private Partnership, Farmer Producer Organisation, each Farmer Group will base its plans on a set of agreed environmental principles, including the use of legally sourced timber. The IBRD will review a sample of these documents and may require corrective actions to be taken.