Agribusiness Market and Support Activity (AMARTA)
Year One Work Plan:
October 1, 2006 – September 30, 2007

May 2007

This publication was produced for review by the United States Agency for International Development. It was prepared by Development Alternatives, Inc.

Agribusiness Market and Support Activity (AMARTA)

Year One Work Plan:

October 1, 2006 – September 30, 2007

"Helping Indonesia To Grow"

Gedung BRI II Suite 2806

Jl. Jend. Sudirman No. 44-46

Jakarta 10210 Indonesia

Telephone:

Main lines: 571-3548 & 571-3549

David Anderson Direct: 571-1988

Fax: 571-1388

For the

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

RAISE Plus IQC No. EDH-I-00-05-00004-00

CTO/USAID:	Rafael Jabba
CHIEF OF PARTY:	David Anderson
PROJECT MANAGER:	Rich Magnani

Table of Contents

Acronyms

ADB	Asian Development Bank
AEKI	Asosiasion Export Kopi Indonesia
AMARTA	Agribusiness Market and Support Activity
AVC	Agribusiness Value Chains
BAP	Best Aquaculture Practices
BDS	Business Development Suppliers
BP	British Petroleum
BRI	Bank Rakyat Indonesia
BSP	Business Service Providers
BWP	Broken, Wormy, Punky (nutmeg)
CAPAS	Center for Agriculture Policy and Agribusiness Studies
CBAIC	USAID Community Based Avian Influenza Control Project
CPB	Cocoa Pod Borer
CPH	Central Pack House
CTO	Cognizant Technical Officer
DG	Director General
ESP	USAID Environmental Services Program
FAQ	Fair, average quality (cocoa)
FATIH	Integrated Facilities for Horticulture Investment
FFV	Fresh Fruits and Vegetables
GAP	Good Agricultural Practices
GAPKINDO	Rubber Association of Indonesia
GDP	Gross Domestic Product
GOI	Government of Indonesia

HACCP	Hazard Analysis Critical Control Point
HA	Hectare
HPLC	High-Performance Liquid Chromatography
ICCRI	Indonesian Coffee and Cocoa Research Institute
ICASPES	Indonesian Center for Agro-Socio Economic & Policy Studies
IFOAM	International Federation of Organic Agriculture Movements
IFC	International Finance Corporation
ISO	International Standards Organization
MOA	Ministry of Agriculture
MOA/MOU	Memorandum of Agreement/Memorandum of Understanding
M&E	Monitoring and Evaluation
MMAF	Ministry of Marine Affairs and Fisheries
MPH	Mini Pack House
MRL	Maximum Residue Limits
MSME	Micro, Small, and Medium Enterprises
MSU	Michigan State University
NCBA	National Cooperative Business Association
NGO	Non Governmental Organization
NTB	Nusa Tengarra Barat
NTT	Nusa Tengarra Timur
PCR	Polymerase Chain Reaction
PD	Perusahaan Daerah (government farm)
PSP3	Center for Development Studies
QED	The QED Group
RACA	Regional Agribusiness Competitiveness Alliances

SENADA	USAID Indonesian Competitiveness Program
SME	Small and Medium Enterprise
SNI	Indonesia National Standard
SOP	Standard Operating Procedure
SPS	Sanitary and Phyto-Sanitary Standards
STTA	Short-term Technical Assistance
USAID	United States Agency for International Development
WB	World Bank

1. INTRODUCTION

Indonesian agribusiness is adapting to progressive supply chain models such as hypermarkets, with new products and business structures becoming increasingly common. Yet Indonesian agribusiness must become more dynamic to keep pace with the rapid transformation of agribusiness globally. At issue is not merely the ability of Indonesian products to compete in export markets, but the ability of Indonesian agribusinesses to hold their own against foreign competition in the domestic market. The United States Agency for International Development – Indonesia (USAID)'s Agribusiness Market and Support Activity (AMARTA) has the potential to demonstrate how Indonesian agribusiness can evolve to meet these global, regional, and domestic challenges, even increasing the sector's already significant contribution to employment, income levels, revenues, and investments.

The DAI technical approach focuses on improving productivity and quality, the keys to upgrading agribusiness value chains in Indonesia. High productivity and quality are essential in each link of the value chain, beginning with production: without high-quality primary food and fiber products at the start, no amount of downstream effort and expense will create a high-quality end product. To stimulate productivity throughout a value chain, AMARTA will seek out "demanding customers"—forward-looking retailers, suppliers, and other intermediaries willing to pay a premium for quality. But it is critical, then, that buyer price signals are transmitted to every firm and farm in the value chain as an incentive to upgrade production and improve quality. AMARTA will intervene to ensure that enterprises have the inputs, financing, technical know-how, information, and incentives they need to respond to market demand. AMARTA will customize assistance in each value chain in response to varied demand and other chain considerations.

AMARTA will also work closely with participants throughout the value chain to ensure that their businesses preserve and create higher quality for raw products. Other improvements will include reducing post-harvest losses through better storage and handling, advocating for removal of burdensome regulations and informal taxes, and improving coordination with end buyers. Our technical approach emphasizes that AMARTA's ten value chains are models for other agribusinesses of how productivity and quality can be improved and what the benefits to an enterprise will be. Public outreach, awareness, and education programs will be the tools used to leverage AMARTA's success stories through university curricula, national and regional conferences, alliances of agribusiness enterprises, training, and media campaigns.

2. Organizational Structure

The organizational structure of AMARTA includes a central headquarters office in Jakarta and a set of regional Agribusiness Value Chain (AVC) centers, as depicted in the Figure below. The regional AVC centers were opened during the first year of the project, following the evaluation of the value chain assessments and recommendations.

The central office is the base for the Chief of Party, two Senior Agribusiness Competitiveness Specialists, and the Grants Manager. The Senior Agricultural Economics Advisor is based in Jakarta. The Senior Industry Advisor is based in Denpasar, Bali. The project is also requesting approval for two additional expatriate positions: Senior Commodity Advisor based in Makassar and Senior Administrative Officer based in Jakarta. The Jakarta office is also the base for technical personnel to perform broadly applicable technical functions relating to 1) value chain productivity (such as trade promotion and logistics) or 2) crosscutting and macro issues (such as association development). These personnel will be organized into teams on a functional basis to perform general tasks. They will also form functional teams to support interventions into specific value chains. Technical personnel below the senior management level will be in the field a substantial portion of their time either working from regional offices or directly on-site with enterprises in a specific value chain.

The regional AVC centers will deliver technical assistance and on-the-job training and will provide bases for public awareness and education campaigns. The AVC centers are located in Makassar, Denpasar and Medan. Each regional AVC center may address more than one value chain, and will also coordinate the activities of the Regional Agribusiness Competitiveness Alliances (RACAs) which will be discussed in other portions of this work plan. The Medan AVC office officially opened on January 10, assuming the office premises and furniture of the USAID Indonesian Competitiveness Project (SENADA) which was closed for operational reasons. The Bali office in Denpasar was opened on February 1, occupying the former premises of the USDA Winrock Cold Chain Project. Plans for opening an AVC center in Makassar were confirmed on March 26 and this office was opened on April 1, 2007.

The regional AVC centers will be staffed by Competitiveness/Value Chain Specialists or Commodity Specialists. The personnel in the centers will assess technical assistance needs, match AMARTA expertise to the needs, and monitor outcomes. In consultation with central office personnel, they will determine when and where support is needed from a functional team comprising central office technical personnel and, if necessary, Indonesian and/or expatriate short-term technical advisors. Teams may be supplemented by a local Business Service Provider (BSP), a public or private company or organization that provides technical assistance, training, or other services to clients for a fee. The Senior Industry Advisor is responsible for assembling functional teams and (with the Chief of Party's approval) engaging short-term technical advisors to join the team. The work of any short term technical assistance (STTA) will be monitored during his or her assignment to correlate outcomes with expected results matched against baselines that will be determined or developed during the process of interventions planning and implementation. These baselines will measure the actual economic and social situation of the targeted beneficiary of an AMARTA assistance

program, and used to measure the impact of the project activities in accordance with the project results indicators.

The regional AVC centers will also be responsible for organizing the Regional Agribusiness Competitive Alliances (RACAs) and for ensuring that the RACAs effectively identify policy issues and business environment constraints from the "bottom up"—from the perspective of a specific value chain or individual enterprise. The RACAs will also be vehicles for advocacy at the local, regency, and provincial levels to promote regulatory reform and improve the business environment.

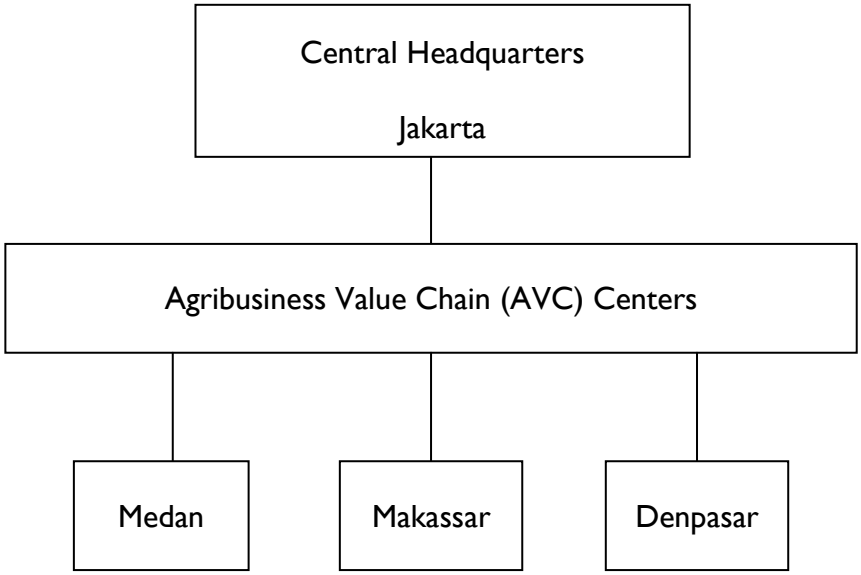

Figure 1 AMARTA Organizational Structure

3. Technical Approach

AMARTA identified value chain opportunities and pressure points during the assessments so that results from successful firm- and chain-level assistance go beyond short-term increases in quality, productivity, and sales volume[1]. Successful firms and dynamic value chains will serve as models or examples to catalyze upgrading by other firms in the same and related sectors. The examples then will form the basis for advocacy on policy and regulatory reform with local, regional, provincial, and national government to improve the business environment. (Actually, this work was conducted during the interventions, and not just subsequent to them). We will document how the interventions and policy reforms improve firm-level and value chain competitiveness and disseminate these model value chain techniques widely. Creating this "customized demonstration effect," which will enable AMARTA to reach a broad array of value chains throughout Indonesia, will be the key to the long-term, transformational impact.

AMARTA must address the distinctive characteristics of agriculturally based value chains and the special competitive challenges they face in Indonesia. Further, AMARTA will achieve transformational impact not by addressing a large number of enterprises throughout the country, but by using project-assisted value chains to demonstrate how other value chains (in other locales or with differing product lines) can replicate the productivity and quality improvements of the AMARTA value chains.

Value chains are collections of interlinked supplier/buyer relationships including input suppliers, producers, collectors, processors, distributors, retailers, service providers, and public sector institutions. Our value chain approach centers on understanding and acting upon a set of five elements that govern the relationship between supplier and buyer.

Table 1 Elements of Supplier-Buyer Relationship

Elements	Examples of Aspects to Consider
Volume	Amount and reliability of supply
Diversity	Different varieties and range of products
Quality	Physical characteristics, shelf life, packaging

[1] Initial value chains selected for study were based on preliminary (preproposal) discussions with MOA, other GOI Ministries, USAID, the private sector, NGOs, and the team's knowledge of Indonesia. Selections were based on several criteria including small holder income and employment generation and potential for replication of the activity to other locations and value chains.

Cost/Price	Competition, guarantees, transport, costs of corruption
Benefits Distribution	Farmer welfare, food safety, corporate and country reputation

The first step in the process is to understand the context in which suppliers and buyers are operating, for this provides a basis to evaluate their needs and capacity to respond to market demands. Task 1, the Agribusiness Competitiveness Assessments, were carried out from late November through February 2007 and provided the context for the ten AVCs, selected in partnership with USAID. The outcome of the assessment task was a set of reports and value chain case studies that include action plans. The value chain-specific action plans identify opportunities to increase productivity and quality throughout the value chain. The implementation of the action plans will include, where appropriate, technical assistance or training delivered by AMARTA teams or with collaborating agencies and organizations such as the Estate Crops Extension Service, Directorate General of Horticulture, and the Indonesian Agency for Agricultural Research and Development.

Although the organizing basis for value chain assistance is the relationship between buyers and suppliers, the implementation actions taken to improve productivity will involve the whole range of value chain participants, from input suppliers to banks to food safety specialists to importers, as well as institutional and policy and regulatory issues related to productivity enhancement. The proposed format for coordinating these required relationships will be the establishment of Regional Agribusiness Competitive Alliances (RACAs) – many of whose members/participants were identified during the value chain assessment consultancies and related discussions with stakeholders.

RACAs will be regionally based, and membership will come from existing agribusiness associations, chambers of commerce and industry, government agencies, public institutions, agribusiness firms, and supporting industry firms such as banks, airlines, maritime and trucking companies, etc. In the cases where an effective industry voice is lacking, action will be taken to form the necessary body to participate in RACA actions.

AMARTA involvement will be as a coordinating body for the RACAs, organizing meetings, providing technical support and advice, and when necessary providing grant support to assist committed RACA members in performance of their policy and regulatory reform lobbying needs.

3.1. ADMINISTRATIVE START-UP ACTIVITIES

The AMARTA start-up team began to arrive in country around the middle of October, 2006. Ms. Bethany Bluett was the first to arrive on October 19. Mr. David Anderson arrived on October 22 and Mr. Rich Magnani arrived on October 24. The start-up team established temporary office facilities in the DAI (Community Based Avian Influenza Control) CBAIC office while they were investigating possible AMARTA project office space. This collaboration with another DAI project was of considerable importance in enabling AMARTA to begin a rapid start-up.

Hiring Of Key Personnel

Mr. Pantjar Simatupang and Mr. Sjaiful Bahri (Asep) were interviewed on October 25 and hired on November 1, 2006 to serve as the Senior Agriculture Economics Advisor and the Sr. Competitiveness/Value Chain Specialist respectively. Henry Harmon was hired as Key Industry Advisor, and it was decided that he would be based at the Denpasar AMARTA regional office.

Selection of Project Office Site

After comparing different options for office space, the team selected office space in Gedung Bank Rakyat Indonesia (BRI) II, the building where DAI's SENADA and CBAIC projects are located. Mr. Anderson signed the lease on November 13 and the office build-out was completed on December 15. The AMARTA team moved into their office space on December 18, 2006 and held a very successful office launching ceremony on December 21 attended by over 60 dignitaries from the private and public sector, with a special address by Mr. William Frej, USAID/Indonesia Mission Director.

Hiring Of Administrative Staff

Winrock hired Mr. Yadi Suriadinata to serve as a Competitiveness/Value Chain Specialist. The team hired Mr. Arman Ginting as an Investment/Trade Specialist beginning on December 1. The team has advertised in local newspapers for the Grants Management Specialist, the Training/Communications Advisor, and additional Competitiveness/Value Chain Specialists, and is currently reviewing applications and planning interviews of selected candidates. It was decided during the start-up period that the position of Training/Communications will not be filled, and the work will be delegated to various staff members who have demonstrated capacity and willingness to perform these duties along with other responsibilities.

Ms. Bluett and Mr. Anderson began interviewing candidates for the Office Manager, Administrative Assistant, IT Manager, and Senior Project Accountant positions on October 30. Ms. Margareta Endah Setyorini (Rinie) was offered the Office Manager position on Friday, November 3. She accepted the offer and began working on Monday, November 6. Mr. Anderson and Ms. Bluett hired a Senior Project Accountant, Betty Sulistina and an Administrative Assistant, Jocevine Faralita who began work in early to mid December. In

addition, AMARTA decided to share the position of IT Manager with the CBAIC project to maximize efficiency and cost-savings in this position.

Banking and Related Matters

The AMARTA team opened two bank accounts at Citibank, using the master account of the other four DAI projects in Indonesia. Ms. Bluett submitted all the paperwork on November 1 and the bank accounts were officially opened on November 13. AMARTA now has one bank account for US dollars and another bank account for Indonesian Rupiah. The DAI home office began wiring money into the new bank accounts in mid-November.

Ms. Bluett and Ms. Setyorini worked on numerous other administrative start-up tasks including procuring computer equipment (in accordance with federal regulations regarding source and origin) and project cell phones locally, obtaining a Work Permit and multiple entry/exit visa for Mr. Anderson, and assembling the AMARTA Personnel Policies Manual and Operations Manual. A project logo was designed and submitted to USAID for consideration and approval on November 15. Approval was granted on November 16, enabling the project to proceed with the design of project stationery and business cards for USAID approval, later granted.

Introduction to USAID Indonesia

On October 26 the start-up team had a meeting at USAID with the project Cognizant Technical Officer (CTO), Mr. Rafael Jabba, and Director of Economic Growth, Mr. John Pennell. During the meeting the team discussed potential candidates for the value chain assessments and the need for travel approval for STTA consultants. They received comments and suggestions from the CTO on project start-up activities and direction, including contact with Indonesian government agencies and officials. During this meeting, it was decided that there would be an official Kick-Off Meeting shortly thereafter. The official Kick-Off meeting took place on Tuesday, November 7. The AMARTA team made a formal Power Point presentation to USAID on the project structure and potential value chain candidates.

Official Opening of the AMARTA office

A ceremony was held in the AMARTA Jakarta office on December 21 to officially inaugurate the AMARTA project office and launch its activities in Indonesia.

The event was attended by 60 participants from USAID, US Embassy, Government of Indonesia officials, members of the Indonesian parliaments, members of agribusiness associations, other government development program officials, and the private/public sector.

Mr. William J. Frej, Mission Director of USAID/Indonesia delivered the keynote address to congratulate the AMARTA project start-up. A press conference following the event was also held.

3.2. TECHNICAL ASSESSMENT AND PLANNING

In this First Year Work Plan, AMARTA's technical approach is broken down by the following tasks:

1. Assessment and Strategy
2. Agribusiness Industry Assistance Planning
3. Advocacy for Improved Enabling Environment and Removal of Constraints
4. Public Awareness, Public Affairs, and Communications
5. Value Chain Support – Grants
6. Training, Consultancy, and Participant Training

Tasks 1 and 2: Value Chain Assessments and Industry Assistance Planning

Eleven value chain case studies and two macro-level assessments were assessed during the first six months of the project. They were:

- Macroeconomic, Infrastructure, and Regulatory Environment
- Fresh Foods Supply Chain to Supermarkets
- Aquaculture
- Natural Rubber
- Cocoa
- Coffee
- Beef Livestock
- Agroforestry
- Spices
- Vegetables
- Tropical Fruits and Flowers
- Biofuel (Jatropha)
- Seaweed

The goal in selecting the AVCs was to maximize AMARTA's potential net impact while using the program's limited resources in the most effective way. The value chain assessments provided information on the overall competitiveness of Indonesia's agribusiness sector, according to criteria organized into three broad categories:

1. Economic potential – growth and competitiveness potential for each AVC

- Unmet market demand
- Potential for growth
- Potential for product differentiation

2. AMARTA development goals
   - Employment generation
   - Increased income
   - Contribution to national economy
   - Smallholder involvement in value chain
   - Participation of women
3. Feasibility - AVCs that have the required support to grow
   - Favorable business environment
   - Leadership, readiness, and commitment
   - Willingness to cost-share
   - Accessible as a model to be seen and adapted by the industry

The assessment and selection process was highly participatory, drawing on the expertise of value chain participants and, in so doing, contributing to the development of a shared vision for the particular AVC under consideration. Final selection was made by measuring each candidate AVC against these criteria. The assessment had two components: macro level analysis and value chain case studies.

To this end, AMARTA technical assistance, including expatriate and Indonesian short-term technical experts, conducted the 11 value chain case studies and two macro-level assessments during the period from early December 2006 through early March 2007. An initial assessment on seaweed was conducted in April 2007 following a meeting held with Governor Fadel Muhammad of Gorontalo on April 4. A visit was made to the Kuandang area of north Gorontalo and discussions held with government officials as well as seaweed farmers. Additional information on this assessment is discussed in the Seaweed section of this report. Additional assessments for tropical nuts and orchids, are planned for the period of May to September, 2007.

The assessment teams for the completed studies were as follows:

Macro-Level Assessments:

Macroeconomic, Infrastructure and Regulatory Environment: Mr. Jim Gingerich, assisted by local consultants/project team members Dr. Pantjar Simatupang and Sjaiful Bahri. December 1-22, 2007.

Fresh Food Supply Chains to Supermarkets: Dr. David Neven, assisted by Ahmad Sulaeman, local Winrock consultant. November 27 – December 21, 2007.

Value Chain Case Studies:

Aquaculture: Ms. Ingrid Ardjosoediro, assisted by Franz Goetz, local Winrock consultant. December 1 – 22, 2007.

Fresh Vegetable Horticulture: Mr. Merle Menegay, assisted by Mr. Wahyu Aris Darmono, local Winrock consultant. January 3-31, 2007.

Coffee: Ms. Anne Ottaway, assisted by Dr. Surip Mawardi, local Winrock consultant. January 12 – 30, 2007.

Rubber: Ms. Merrilene Peramune, assisted by Dr. S. Budiman, local Winrock consultant. January 4 – 20, 2007.

Cocoa: Mr. Brian K. Matlick and Simon Badcock, assisted by Dr. John Bako Baon, local Winrock consultant. January 12 – 31, 2007.

Beef Livestock: Mr. Greg Sullivan, assisted by Dr. Kusuma Diwyanto, local Winrock consultant. January 13 – February 5, 2007.

Fresh Fruit Horticulture and Cut Flowers: Mr. Henry Winogrond, assisted by Dr. Made Utama, local Winrock consultant. February 11 – March 3, 2007.

Biofuels: Mr. Robert Capstick. February 5 – March 13, 2007.

The key findings and planned activities of the Assessment Teams are discussed below.

Macroeconomic Assessment: Macroeconomic, Infrastructure and Regulatory Environment

Assessment Findings:

The newly launched Government of Indonesia (GOI) Agricultural Revitalization Program, based on the recently completed Making the New Indonesia Work for the Poor economic theme of the World Bank as adopted by the GOI, focuses on higher growth, pro-poor, and pro-employment policies and programs and provides a comprehensive strategy for the role of agribusiness in accelerating economic growth. Fundamental to this approach is the "triple-track strategy" -- pro-poor, pro-employment, and high income growth, or "high quality growth". The AMARTA project, which focuses on increasing value added through improving agribusiness productivity and competitiveness, directly supports this national development policy direction.

Agribusiness, a major contributor to the Indonesian economy, is underperforming. On-farm agriculture, when combined with the broad agribusiness manufacturing and service sectors, represents more than 50% of current Indonesian Gross Domestic Product (GDP). The more quickly agribusiness grows, the more rapidly Indonesia's economic structural transformation will take place, where future employment and growth will be proportionately greater in the modern, industrial, and service sectors. Primary agriculture still represents 45% of total employment, but agricultural productivity has been stagnant for more than a decade. Studies have shown that in the period 1984-2002, one percent growth in the agricultural sector induced an average of 1.2% growth in the non-agricultural sector in rural areas. Current rates of agricultural productivity growth do not represent such dynamics.

The status of macroeconomic indicators by late 2006 - a consistently stable exchange rate, lowering interesting rates and single digit inflation - are broadly recognized as major achievements of the current government. The central government has pledged to improve the business and investment climate through major increases in infrastructure development, improvements in the regulatory environment and improved governance in a serious manner. Slow implementation of these latter factors largely explains the slow return to high levels of investment in Indonesia. Nonetheless, the overall environment for growth is improving. This is reflected in such positive indicators as significant improvement of the country's Global Competitive Index and Business Competitive Index which indicate increasing positive perception related to business opportunities in Indonesia. However, a favorable macro environment is necessary but not sufficient to drive rapid growth of agribusiness in the regions. Other critical factors include the following:

- National agricultural policy focuses tremendous resources on strategic food commodities, particularly rice price protection and fertilizer subsidies. While the key economic ministries are increasingly supportive of the "Quality Growth" framework noted above, some efforts need to be made to modernize the Ministry of Agriculture (MOA) policies towards private sector investment. The Directorate Generals of Horticulture, Estate Crops, and Processing and Marketing in the MOA are supportive of AMARTA-type programs.

- Limited or poorly maintained infrastructure continues to create high costs through all levels of marketing chains. Road infrastructure, ports, and limited reach of modern telecommunications all represent areas requiring considerably increased investment and more innovative approaches for attracting private investment.

- Extending the reach of financial services for upgrading production, processing, and distribution of high-value commodities is required. Numerous studies confirm the potential to double microfinance lending to farmer associations and Small and Medium Enterprises (SMEs), who both want to borrow and qualify for loans. Larger, commercial finance is needed for production credit as well as longer-term capital investments.

- Local (district, province) regulatory and taxation systems have exploded since decentralization was rapidly implemented from 2001. A University of Indonesia study identifies 6,456 new regulations (Perdas) enacted by local governments. One-third of these have been reviewed and most contravene central government policy, but sanctions and penalties are not enforced. The Rural Investment Climate Assessment, supported by the World Bank, identified such Perdas as serious impediments to agribusiness investment.

- Underdeveloped business service providers, particularly in the area of quality assessment and certification, are a constraint. The process for improving both domestic market and international acceptance of Indonesian standards and certification requires serious improvements. Domestically, the hypermarket revolution has led the way in imposing private quality standards. There remain opportunities for improvements in traditional and wholesale markets for fresh produce, which still dominate domestic markets. AMARTA can collaborate with industry leaders and with appropriate GOI partners to develop a working policy and regulatory agenda.

- Producer, business, and exporter associations are weak or non-existent. There are important exceptions to this general rule from which lessons learned in the "new Indonesia" can be applied. An important outcome of the commodity chain analyses as well as the process for establishing the regional RACAs should incorporate best practices learned from successful examples of farmer and business associations in developing new models for competitive commodity chains.

Interventions for Policy and Regulatory Agenda

The most relevant policy and regulatory issues for specific commodity chains which AMARTA resources will address will be in the regions which are selected for project focus. Direct interactions with key industry stakeholders during the commodity chain analyses have provided the basis for policy issues to be addressed. Such an evolving, but well-focused agenda should facilitate the development of relevant Rural Agribusiness Competitiveness Alliances (RACAs) or commodity-specific associations in the regions. Key analyses and findings, which have industry-wide or national implications, are in demand by the 4-5 Directorate Generals in Jakarta-based ministries who are the major architects of Indonesia's new, "Agriculture Revitalization" strategy.

The following is the suggested agenda for AMARTA for deepening the ongoing policy and regulatory assessment.

- Complete a specific commodity and product competitiveness analysis with current AMARTA staff. This can be done using Revealed Comparative Advantage and Constant Market Share methodologies, methods developed by the World Bank that use statistical data from governments to compare country by country competitiveness in selected economic sectors, as well as using global-wide direction statistics available on the web from organizations such as the United Nations and other sources.
- Conduct local agribusiness investment climate assessments. These assessments will be conducted in AMARTA-targeted locations. The results of these assessments will form the beginning agendas for the RACAs or other forums for dialogue.
- Complete the identification of agribusiness and industry stakeholders who are interested, already involved, and effective in selected value chains. These will include other donor-funded project technical staff that is willing to collaborate.
- Conduct diagnostic/policy related analysis on emerging issues, the results of which feed into the agendas of both regional RACAs and potentially, the national discussions on revitalizing agriculture. The new national tax legislation, scheduled for approval in early 2007, will hopefully remove onerous VAT and export taxes on important agricultural commodities.

Macroeconomic Assessment: Supermarket Fresh Food Supply Chains (Retail Produce Distribution)

Fresh food supply chains to supermarkets play a significant role in three AMARTA value chains – High Value Horticulture, Fisheries, and Livestock (fresh meat). In 2006, there were some 30 modern retail banners, 6,500 mini-markets, 1,200 supermarkets, and 100 large format stores in Indonesia. The groupings include Carrefour and Giant among the hypermarkets, Makro, a cash and carry store, Hero and Matahari as supermarkets, and mini-markets such as Alfa and Indomarket.

Supermarkets have grown faster than traditional grocery outlets with food retail market shares that have increased from less than 5% in 1995, to 20% in 2000 and to 30% in 2007. Supermarkets are growing at nearly three times the rate of traditional retail outlets (15% vs. 5%) and the share of supermarkets in food retailing is expected to pass 50% by 2010. However, the supermarket sector is far from saturated as shown by expansions plans of several of the key players including Hero and Carrefour.

Fresh foods are a profitable yet difficult product category for supermarkets due primarily to product perishability, food safety issues and a lack of reliable suppliers. Nonetheless, fresh foods represent around 30% of supermarket sales, which translates to an estimated share of all fresh food sales of about 10%. Fresh fruits and vegetables represent about 1/3 of fresh food sales, with fresh meats, fresh fish, dairy products and bakery products making up the other 2/3.

Urbanization and increasing disposable household incomes have been the key drivers behind supermarket growth. Related to these drivers are household lifestyle changes, i.e., how and where consumers shop, what products they buy and what product characteristics they value (price vs. quality, packaging, food safety guarantees). As incomes increase consumers shift from purchasing fewer food staples, like rice, to purchasing more fresh foods like fruits and vegetables, fish, and meats. This bodes well for the growth for agri-food firms in Indonesia oriented to high-value and value added foods, particularly fresh foods for supermarkets.

Supermarkets first target the A income group (monthly household expenditures of more than Rp. 2.25 million) but are increasingly targeting B (monthly household expenditures of more than Rp. 1.25 million) and C consumers (monthly household expenditures of more than Rp. 800,000). About 15% of Indonesia's population of 245 million belongs to the A and B groups. Some supermarkets like Hero are targeting these consumers by developing various store formats; e.g., smaller stores that can be located closer to lower income households. Other supermarkets like Ranch Market are targeting high income households only. Supermarkets are also increasingly moving to secondary and tertiary cities such as Surabaya.

Supermarkets are under heavy competitive pressure to lower costs and prices and to increase variety, quality and year-round availability. Supermarkets need an efficient and reliable supply of fresh foods. They want daily orders satisfied for quality, packaging format and volume. They want year-round consistency in price and adherence to food safety standards. Traditional supply chains are unable to offer these terms. The very poor condition of wholesale markets (congested, unhygienic, with fluctuations in the availability of

products and fluctuations in electricity supply) makes them the least desirable option for supermarkets. Supermarkets will tend to order from large producers or importers who have the capacity to supply with consistent quality. Where such suppliers are not available, supermarkets induce four pillars of change: (1) contracts, standards and preferred suppliers; (2) centralization; (3) global/regional sourcing; (4) technological change.

While there are opportunities in fresh fruits, vegetables and fresh fish, the opportunities for development interventions in the supermarket's fresh meat supply chain are limited, as supermarkets do not report significant supply chain problems at this point.

The opportunities in fresh fruits and vegetables and fresh fish exist for farmers and/or suppliers who can demonstrate an ability to provide high quality, low cost, and reliable supply of products as an additional market niche. The inability of many current farmers and suppliers to meet these opportunities indicates a need for AMARTA assistance. Interventions will be undertaken within value chains, mainly horticulture and fish, as described in the following sections.

Commodity Value Chain: Cocoa

Assessment Findings:

The assessment of the cocoa value chain in Indonesia was based on previous assessments conducted by other donor agencies or organizations. Information and recommendations from these assessments were verified with field trips and ground truthing conducted in January and February 2007 with different interested stakeholders. Based on these results, the interventions described below were designed.

Indonesia is the third largest producer of cocoa in the world after Ghana and the Ivory Coast, and is the most significant cocoa bean supplier in East Asia. The main production areas of cocoa are in Sulawesi, Sumatera, Papua, and to a lesser extent in Bali and NTT/NTB.

Indonesia's competitive advantages include low cost, high production capacity, efficient infrastructure and an open trading/marketing system. In recent years this competitive advantage has been threatened by poor and inconsistent quality of cocoa. The primary cause is the infestation from the cocoa pod borer (CPB). In order to address this problem, various public and private initiatives have been undertaken to research, train and transfer improved production practices to smallholder cocoa farmers in Indonesia. Despite these efforts the CPB infestation has spread to all of Sulawesi cocoa. The adoption of improved production practices by cocoa farmers has been limited.

As a result, the quality of exported cocoa from Indonesia has deteriorated and the value reduced in the international marketplace. This has resulted in large discounts and lower prices to the farmer. This has also reduced the demand for Indonesian Fair Average Quality (FAQ) cocoa as buyers found other origins to substitute for Sulawesi cocoa. Previous efforts to train farmers in the improved production practices to control the CPB have been limited primarily by the lack of price incentives to encourage the farmers to adopt the new technology package.

This lack of price incentive exists due to the common practice of 'mixing' and 'un-mixing' cocoa beans. The practice has been for the first buyer (local collector) to pay the same price per kilogram for both good and poor quality cocoa, 'mixing' the beans and forwarding these mixed beans to the next buyer, the village collector. When the cocoa beans arrive at the warehouse of the international exporter they are cleaned or 'unmixed' to meet the international buyer's specifications. Premiums paid by the international buyers justify the 'un-mixing' or separating good from poor quality beans. Typically, little or none of this premium reaches the farmer, resulting in a market signal to farmers that poor quality beans are acceptable. Under these buying arrangements, the market has failed to reward the farmer for the production of good quality cocoa.

Previous Cocoa Value Chain Assessments have identified key constraints limiting the efficiency of the cocoa value chain in Indonesia. These findings were updated and validated with stakeholders in the value chain during the analysis phase of this assessment. The two key constraints identified are poor yields (decreasing from 1,500 kg/ha in 1999 to 800 kg/ha in 2004) and poor product quality. These have resulted from the following:

- Cocoa pod borer (CPB)
- Poor farming practices
- Age and variety of tree stocks
- Poor soil nutrition
- Lack of quality-based product differentiation, including grading with appropriate price incentives
- Post-harvest losses caused by contamination and poor sorting and packaging
- Failure to meet Sanitary and Phyto-Sanitary (SPS) standards
- Dearth of cocoa producer associations in Sulawesi
- Lack of access to finance for inputs and capital investment
- Lack of coordination among buyers, sellers, collectors, and producers as to the requirements to meet worldwide recognized FAQ standards
- Automatic detention of Indonesian cocoa at US ports resulting from past shipments affected by live insects and foreign matter

Value Chain Interventions

Activity 1: Smallholder Cocoa Farmer Training in Sulawesi

Objective: Partner with international exporter and US importer to train cocoa farmers in best practices for cocoa production to reduce pests, increase productivity and provide export quality beans. Pass price premium on to farmers, providing the market incentives for farmers to adopt AMARTA interventions and produce export quality cocoa that has been lacking for much of Indonesia's cocoa production, improving the smallholders' profitability.

Activity Description: AMARTA has identified Olam, an international exporter and Blommer Chocolate, a US-based cocoa bean processor, for an innovative market-driven agribusiness partnership. Blommer is the largest cocoa processor in the US and one of the largest in the world. Blommer will pay a quality premium for cocoa that meets their export specifications. Blommer has indicated a desire and willingness to purchase export quality cocoa in significant quantities supplied by Olam. Olam has already established a number of up-country buying stations and has provided limited training to farmers in Sulawesi.

In order to help farmers meet this demand for higher quality beans, AMARTA will:

- Train farmers in best practices cocoa farming, CPB mitigation techniques, post-harvest handling and the requirements to provide export quality beans. Follow-up training sessions will be provided to participating farmer groups to ensure that they are able to maximize techniques taught in the early training sessions.
- Develop and distribute communication and multimedia outputs for use in the training. The package includes VCDs, posters, calendars, and radio messages. The content of

these communication packages includes information on best practices cocoa cultivation, aid in the identification of pests and disease, the specification for export quality cocoa, and the post-harvest skills and understanding necessary to obtain maximum prices.

- Organize producers to form producer groups for marketing in bulk, reducing costs of inputs, and reducing transaction costs in accessing services.
- Link producers with technical assistance offered through the Department of Estate Crops to improve quality and boost yields through CPB control, post-harvest management, improved production practices, embedded private sector extension services, and the Cocoa Productivity and Quality Workshop.
- Link buyers and producers with technical assistance to develop a differentiated grading and pricing system, and explore the potential of an auctioning system to increase the transparency of cocoa marketing.
- Identify and engage companies specializing in Hazard Analysis Critical Control Points (HACCP) and International Standards Organization (ISO) certification and in food safety laboratory analysis to provide training.
- Facilitate access to finance for smallholders to purchase inputs including fertilizer and improved planting materials.
- Establish a RACA for the cocoa sector to build social capital in the sector, facilitate sector coordination, and foster competitiveness beyond the life of the AMARTA program.

It should be noted that the mentioned interventions are a follow-up to the previous USAID financed Success Alliance, and many materials and personnel will be from this previous project. Furthermore, coordination and collaboration will be done with the IFC-Pensa and AusAid project SADI (Small Agribusiness Development Initiative) in Sulawesi to ensure that no repetition of services or conflict of technical information occurs.

Location: Sulawesi, primarily in districts across South Sulawesi Kabupaten areas of Palopo, Masamba, Padang Sappa, Pinrang, Mangkutana; Southeast Sulawesi Kabupaten aeras of Kolaka, Wolo, Samaturu, Lambai, Bue Pinang, Ladongi; and West Sulawesi Province.

Outcomes Year One (Indicator – Results Expected):

Indicator 1 (# ha under improved technologies/management): Approximately 3,750 hectares are cultivated by the targeted 5,000 farmers to be trained in Year One.

Indicator 2 (# orgs/assn receiving assistance): 120 formal/informal farmer groups

Indicator 3 (# ag firms benefited directly): Blommer Chocolate, PT Olam Indonesia

Indicator 4 (# individuals trained in improved production): 5,000 farmers trained in improved production technology focusing on harvesting, post harvest handling and improved understanding of international export requirements for quality;

Indicator 5 (% change in value of international exports): TBD

Indicator 6 (% change in purchases from smallholders): TBD

Average gains of 25% to smallholder cocoa producers directly as a result of the AMARTA training and Blommer/Olam price premium. This represents a volume gain of 8,750 tons which is the productivity and quality gain of the intervention, compared to what they would grow and sell if unassisted. At today's farm-gate price for export grade quality cocoa this represents a return of about US$12 million.[2]

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	$1,150,000

Activity 2: Improving Production of Fermented Cocoa in Bali

Objective: Partner with a private enterprise cocoa buyer, Big Tree Farms, to establish a processing facility to ferment beans and provide training to improve the productivity of 2,000 farmers who currently are capable of producing 1,000 tons of fermented beans.

Description: AMARTA has identified Big Tree Farms as a private enterprise interested in developing a relationship with smallholder cocoa farmers in Bali to buy fine flavor fermented cocoa beans. Currently, Big Tree Farms cannot rely on the supply of fermented beans from these groups. Quality is poor as the farmers have not received training in proper use of the equipment.

AMARTA will:

- Provide a grant to Big Tree Farms to establish a processing facility to ferment beans
- Conduct Training of Trainers to prepare trainers to conduct training in proper fermentation techniques for the larger farmer groups.
- Provide training in proper production techniques for farmers who will supply wet beans to Big Tree Farms.

[2] Based on industry data the price paid to smallholder cocoa producers for export grade cocoa was IDR12,000 per kg. This price will of course fluctuate over time.

Outcomes Year One

Indicator 1 (# ha under improved technologies/management): 510 ha

Indicator 2 (# orgs/assn receiving assistance): 20 farmer groups

Indicator 3 (# ag firms benefited directly): 7 (Big Tree Farm, Hershey/Artisan Confections, ICCRI, Blommer Chocolate, PT. Olam, Scharffenberger, Dagoba)

Indicator 4 (# individuals trained in improved production): 510 individual cocoa producers trained in proper production, post harvest handling, quality and fermentation processes

Indicator 5 (% change in value of international exports): This will result in a 43% increase in the value of international cocoa exports [cocoa price of 255 tons in 2006 = USD$349,898 projected cocoa price through Big Tree AMARTA Program through Sept 2007 = USD$ 503,902 this will result in an increase of USD$ 154,004 or 43%.

Indicator 6 (% change in purchases from smallholders): This will equate to a 45% increase in revenue to smallholders or USD$ 302 per household. Last year (2006) smallholders generated USD$ 686/household with projected incomes USD$ 989/household

Estimated cost:

Grant Cost	$76,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Coffee

Assessment Findings

Indonesia is recognized as the source of several of the world's finest Arabica coffees. The internationally recognized premium Indonesian Arabica coffees are Mandheling and Lintong (Aceh/N. Sumatera), Java Estate (Eastern Java), Celebes Kalossi and Tana Toraja (Sulawesi), to a lesser extent Bali Kintamani, and, recently some Flores coffee. Arabica is used by the specialty coffee industry for sale as "single origin" coffees and as flavor components in both specialty and commercial grade blends. Most specialty coffee roasters use Sumateran coffees as a component of their blends to add body, and to balance the high citrus or acidic notes of South and Central American coffees, or the fruity notes of fine African coffees.

Coffee is produced by about 2.3 million Indonesian smallholders cultivating an average of 1.0 to 1.5 ha. Total green coffee production is about 600,000 tons, of which 85 to 90% is Robusta, and about 10 to 13% is Arabica. Export demand for Indonesian specialty coffee is high, but could be higher if suppliers were able to expand production to meet the demand for the higher quality coffees. It is estimated that between 60% and 80% of Indonesian exports of Arabica coffee are sold to Starbucks Coffee. Exporters supplying coffee to Starbucks adhere to their Coffee and Farmer Equity (CAFÉ) Practices, and are promoting training at the farm level to demonstrate the correlation between good agronomic practices and quality coffee. However, current supply chains for specialty coffee are extended and there is little evidence that farmers have direct relationships with end users/buyers. Market linkages exist between those in the middle of the supply chain (exporters and importers, exporters and international trading companies).

As with all food products, coffee traceability is a concern at all levels of the supply chain for food safety reasons. In the case of coffee beans, since each geographic origin is generally associated with a unique regional flavor profile, there is an additional element of importance of traceability, since the blending of the unique geographic profiles is what creates the "signature" flavor for a particular brand. Specialty roasters guard their blending formulae ("recipes") jealously and do not substitute a Jampit grown coffee for a Mandheling one, for instance. (Java Jampit is a premium estate grown coffee from East Java, while Mandheling is a North Sumatera grown specialty coffee. The two have different organoleptic profiles). Thus within the trade there is a need to ensure that what is ordered is what is delivered and that substitutions are not made. The importance of defining the origin of coffee using geographic boundaries and establishing taste profiles for these "*terroir*" is well understood at institutional levels but only starting to be implemented through pilot projects at the farm level.

Cupping is a method of systematically evaluating the aroma and taste of coffee beans which demonstrates the direct relationship between what is produced and the price paid. Cupping requires adherence to an exacting set of brewing standards and a formal evaluation process. Many exporters are skilled in cupping techniques, but many other actors in the value chain lack cupping expertise and so are unable to evaluate coffee quality from the perspective of the buyer.

AMARTA staff and consultants have had discussions with major Indonesian coffee purchasers or their local representatives, such as Peet's, Intelligentsia, and Green Mountain Coffee Roasters, as reported in the consultants' final reports. They note that recently more than 20 containers of Sumateran beans were rejected at the US port for failure to match the samples sent for evaluation. This may have been the result of an inability to meet demand and an apparent attempt to substitute beans of an inferior quality or beans from a different origin. These companies have planned, or have indicated a willingness to participate in, the further development of specialty coffee in Indonesia.

AMARTA considered the existing coffee sector assistance projects of the United Nations Development Program, the National Cooperative Business Association, International Finance Corporation (Pensa) and other donors in order to differentiate the activities listed below.

Proposed Value Chain Interventions

Activity 1: Coffee Production and Marketing Improvement Program in Flores

Objective: Expand production, improve quality image and productivity of specialty coffees, and enhance buyer linkages.

Description: AMARTA will:

- Establish a center to provide Good Agricultural Practices (GAP) training, including training and demonstrations in post harvest handling and drying in Flores. This activity will be carried out in conjunction with CV Lion Lestari, the Indonesian Coffee and Cocoa Research Institute (ICCRI), and PD Komodo Jaya, an Indonesian trading house (PT Komodo Jaya acts as a field agent for CV Lion Lestari). In order to define the roles and expectations of each partner mentioned above, a Memorandum of Understanding (MOU) will be prepared between them and USAID-AMARTA. The activity would provide drying facilities, elevated drying racks, and pulpers and training for up to 6 farmer groups in Manggerai Regency, Flores. Field supervision would come from Bali. CV Lion Lestari currently works with some 3,000 farmers in Manggerai, and the proposed activities would add several hundred jobs in one of the poorest regions of Indonesia
- Establish a processing facility;
- Establish buying stations,
- Establish a certification system for Fair Trade and organic coffees, and promote Flores coffees as a unique origin. There is some evidence that Flores will be accepted internationally as a new "origin" coffee which could lead to large scale development. Flores coffee, for instance, was recently listed on the Royal Coffee web site, indicating that company's recognition that Flores has a unique profile.

Location: Flores

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 2,500 ha (through 2008)

Indicator 2 (# orgs/assn receiving assistance): 4

Indicator 3 (# ag firms benefited directly): 20

Indicator 4 (# individuals trained in improved production): 2,500

Indicator 5 (% change in value of international exports): 600-750,000 dollars

Indicator 6 (% change in purchases from smallholders): 3-4 billion Rp

Estimated Cost:

Grant Cost	$90,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 2: Coffee Production and Marketing Improvement Program in Sumatera

Objective: Expand production, improve quality image and productivity of specialty coffees, and enhance buyer linkages.

Description: AMARTA will work with the Gayo Mountain Cooperative, which has a membership of 2,000 members and is supported by PT. Gajah Mt. Coffee, a processor and exporting company, to implement the following program activities to improve production and marketing of coffee:

- Establish a center to provide training to farmers in Good Agricultural Practices (GAP). Additional training might be leveraged through alliance with the ADEP program which has a 2007 budget of $100,000 for the production and distribution of training materials for GAP for Aceh, and for varietal assessments to select future planting materials. This intervention should be conducted in conjunction with ECOM, a leading supplier to Starbuck's and Peet's, National Cooperative Business Association (NCBA), who is active in farmer training programs in Aceh and whose commercial subsidiary supplies Starbucks, and Minacom. ECOM, NCBA and Minacom would provide the field level training and monitoring with oversight from AMARTA's Medan office. The activity will reach 2,000 farmers.
- Establish a producer's cooperative;
- Establish a processing facility;
- Establish a cupping laboratory and program; and
- Establish a certification system for Fair Trade and organic coffees.

Location: Aceh

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$84,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 3: Introduce Pest Control Technology - Broca Trap Testing

Objective: Reduce production losses from coffee borer, which causes roughly 10-20% losses, depending on location and type.

Description: A practical low cost trapping system for coffee borer has been designed and is being tested by Indo CafCo. AMARTA recommends that the traps be tested on a larger scale, especially in North Sumatera and Aceh.

Provide broca traps and GAP training in conjunction with PT Indo CafCo (ECOM Coffee Group) and others. Farmers currently do not utilize broca traps due to lack of experience/knowledge, and unproven economics of their use, there having been no large scale testing previously other than in Central/South America. Since this is new technology, it is important to demonstrate the value of this to small holder coffee farmers before they will be convinced to buy them.

Location: North Sumatera and Aceh

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 200

Indicator 2 (# orgs/assn receiving assistance): 12

Indicator 3 (# ag firms benefited directly): 3

Indicator 4 (# individuals trained in improved production): 200

Indicator 5 (% change in value of international exports): 0

Indicator 6 (% change in purchases from smallholders): 0

Estimated Cost:

Grant Cost	$15,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 4: Assistance to Specialty Coffee Association of Indonesia

Objective: Support the Specialty Coffee Association of Indonesia to promote coffee quality and product reliability.

Description: AMARTA will provide technical assistance to the Specialty Coffee Association of Indonesia to promote coffee quality and product reliability. (Note: AMARTA Key Industry Advisor, Henry Harmon, is not a member of this association). The Association (in formation) consists of 15-20 of the top specialty coffee processors, traders, and retailers in the country, and has held several exploratory meetings, established a mission statement, and is preparing to formalize its structure. Organizations that have attended preliminary meetings include Starbucks, the Aceh Coffee Forum and UNDP (now absorbed into the ADEP program), and the Aceh Coffee Cooperative. The newly established Gayo Mountain Specialty Coffee Association in Aceh believes that the needs of the Specialty Coffee producer and trade are not being served by AEKI (Asosiacion Exportir Kopi Indonesia) whose primary interest is volume, not quality. Preliminary discussions are being held with the Specialty Coffee Association of America and the Coffee Quality Institute in the US to see if either or both would support the development of the Specialty Coffee Association of Indonesia.

Location: Nationwide (coffee growing regions)

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 0

Indicator 2 (# orgs/assn receiving assistance): 2

Indicator 3 (# ag firms benefited directly): 20

Indicator 4 (# individuals trained in improved production): 0

Indicator 5 (% change in value of international exports): 0

Indicator 6 (% change in purchases from smallholders): 0

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 5: Providing Coffee Samples to Specialty Roasters

Objective: Improve linkage between coffee producers and international specialty roasters to raise profile of Indonesian coffees in the international market and increase international sales.

Description: Provide samples of unknown or under-recognized/appreciated beans to selected specialty roasters. AMARTA will initially be working with farmers associations and cooperatives that have no direct market linkages, and no funds to export samples to the US. This intervention is designed to facilitate the specialty roaster's desire to source directly at origin.

Location: Nationwide (coffee growing regions), including Papua.

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 0

Indicator 2 (# orgs/assn receiving assistance): 10

Indicator 3 (# ag firms benefited directly): 10

Indicator 4 (# individuals trained in improved production): 0

Indicator 5 (% change in value of international exports): 5

Indicator 6 (% change in purchases from smallholders): 5

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 6: Quality Round Table in North Sumatera

Objective: Achieve dialogue between trade factors to develop a common understanding of quality requirements between supply and demand sides of the market.

Description: In North Sumatera, sponsor a quality round table to encourage and facilitate communication between trade factors including major exporters and major European and USA buyers and importers. This roundtable would be designed to ensure that a common understanding is developed that matches the quality requirements of the demand side of the market with the abilities of the supply side of the market to deliver product with Quality, Consistency and Reliability.

Location: North Sumatera

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 7: Application of Appellation and Terroir

Objective: Achieve recognized appellation and terroir for Indonesian coffees through application to the WTO.

Description: In conjunction with the GOI and other interested parties pursue application of *appellation and terroir* with WTO.

Location: To Be Determined

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 0

Indicator 2 (# orgs/assn receiving assistance): 6

Indicator 3 (# ag firms benefited directly): 100

Indicator 4 (# individuals trained in improved production): 0

Indicator 5 (% change in value of international exports): 5

Indicator 6 (% change in purchases from smallholders): 0

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 8: Assist in the development of a W. Papua Coffee Processing and Export Enterprise

Objective: Create added employment and incomes to Papua coffee farmers

Description: In conjunction with Freeport McMoRan Indonesia assist in development of a coffee production, processing, and export firm to create employment and income opportunities in mining villages. Additional details for this activity will be determined after a scoping visit in mid-June 2007.

Location: To Be Determined

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	TBD
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: High Value Horticulture

Assessment Findings

Among the AMARTA value chains, horticulture is the most geographically diverse, employing thousands of producers, traders, transporters, processors, and a range of agribusinesses that supply seeds, fertilizers, pesticides, irrigation equipment and other inputs. Growth of the sub-sector has been limited by weak infrastructure in many areas particularly in most of Kalimantan, Sulawesi, and much of eastern Indonesia. Infrastructure is generally better from Bali to eastern Sumatera, and the area around Medan in northern Sumatera. There are many independent farmers formed in loose village groups, in associations, or societies, as well as many not associated with any grouping. They are too numerous to mention, but are identified and listed in the full assessment documentation.

Markets for high value produce have changed dramatically in Indonesia over the past seven years. Rapid urbanization and increased incomes have resulted in more demanding consumers that desire a wider range of choices and quality. These factors have driven the structural change that has resulted in the expansion of supermarkets, which have grown at a rate of over 20% per year for the past ten years. Consumers in larger urban areas have shifted from buying produce only at small wet markets to buying at supermarkets, or a combination of the two.

Local producers have benefited from increased supermarket demand, but higher quality, low cost, and reliable supply requirements have led supermarkets to depend heavily on imports. For example, imports make up approximately 80% percent of all fruit sold in supermarkets, including a wider array of temperate climate fruits such as apples, pears, oranges, grapes, etc. Supermarket demand for domestic production has lagged because most of the high value horticulture industry in Indonesia is operating as it did ten years ago and has yet to overcome the critical constraints that will allow it to successfully compete with imports. The critical constraints are:

- Limited access to seeds and planting materials (particularly for vegetables) and other inputs
- Disaggregated fruit production of old varieties
- Excessive pesticide residue in vegetables
- Wet markets remain important but have not adopted improved technologies
- Limited working relationship between farmers and buyers
- Lack of market information and marketing options at the farm gate
- Shrinking highland production areas for vegetables
- Absence of basic post harvest and marketing technology
- Rough handling of produce throughout the value chain resulting in high product losses
- Insufficient or unavailable cold storage

- Limited access to credit

Proposed Value Chain Interventions

Activity 1: Examine Potential to Establish a Local Vegetable Seed Industry

Objective: Improve productivity through development of a vegetable seed industry.

Description:

- Stimulate emergence of a vibrant vegetable seed industry. AMARTA will coordinate with the DG of Horticulture to develop the enabling environment for this action.
- Examine the vegetable seed industry for hybrid and open pollinated seed production potential.
- Propose a national strategy and action plan which addresses the key issues of high cost, yet irregular/uncertain quality of seed material, and emergence of seed packers rather than authentic seed companies.

Location: National/ To be Determined

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 2: Decrease/Substitute Pesticide use through Extension

Objective: Improve productivity and food safety through use of alternate pesticide use.

Description: AMARTA will provide extension materials to promote substitutes for commercial pesticides being overused**.** AMARTA will coordinate with the DG of Horticulture to:

- Provide technical assistance for 3-6 months in close collaboration with the DG of Horticulture to test new methods of pest control on three test plots in the Berastagi area.
- Based on IPM test results, produce extension material to promote alternative control measures.

Location: Berastagi, Sumatera

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 3: Improve Packhouse and Cold Storage Facilities

Objective: Improve post-harvesting handling with technical assistance and grants for packing and shipping facilities as a demonstration on the commercial operation of GOI constructed Sub Terminal Agribusiness (STA) facilities.

Description: AMARTA will:

- Facilitate market access for citrus, pineapple and other fruit and vegetable growers to revive operations at the Merek JTA packing facility.
- Provide technical assistance for pack house design in various provinces.
- Provide a grant for packing and grading equipment to various organizations in Berastagi, Java, and Bali.
- Provide a grant for cold storage construction in Berastagi and possibly Bali. The Berastagi cold storage would be installed at the government built Sub Terminal Agribusiness facility handed to the Indonesia Citrus Society for operation. This pilot project would demonstrate how a Sub Terminal Agribusiness facility with cold storage could aid farmer groups in improving quality and extending the market season.
- Provide technical assistance for citrus and pineapple production, packing, processing and marketing in Sumatera.

Location: Sumatera (Berastagi), Java, and Bali

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$50,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 4: Improve Production of Citrus in Bali and Sumatera

Objective: Improve production of citrus by increasing access to new commercial citrus varieties and training in best agricultural practices.

Details: AMARTA will:

- Provide technical assistance and financial and leadership training to establish a cooperative
- Facilitate access to bank credit, in coordination with a bank to be determined.
- Provide technical assistance in pruning, fertilization, pesticide use, thinning, population control to improve productivity and quality
- Introduce new production techniques to the Karo Highlands, North Sumatera
- Introduce new commercial citrus varieties

Location: Gobleg village in Bali and Karo Highlands, North Sumatera

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$25,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 5: Improve Mango Production and Marketing in Bali

Objective: Improve production and marketing of mango through training in best agricultural practices and post-harvest handling, and increased market linkages.

Details: AMARTA will work with mango farmers groups to provide technical assistance to strengthen the existing cooperative. Assistance will include:

- Improve productivity and quality through better production techniques, and pest control of aphids and fruit flies
- Develop Standard Operating Procedures for production, and post-harvest handling in Bali and Makassar areas of production.
- Develop market linkages with exporters Ud. Supraja in Bali, and other to be determined exporters as pilot projects.

Location: Depeha, Bali

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 6: Improve Production and Marketing of Vegetables and Herbs in Bali and Berastagi

Objective: Improve production and marketing of vegetables through increased access to better planting materials, training in best agricultural practices, improved post-harvest handling facilities, and market linkages.

Details: AMARTA will:

- Facilitate access to high quality seeds and/or planting materials
- Provide a grant to construct a model greenhouse and pack-house for high value vegetables, herbs and cut flowers
- Provide extension materials about Maximum Residue Limits of pesticides and introduce substitutes for pesticides being overused
- Facilitate linkages to markets via known exporters such as Horti Jaya and others identified in the assessment findings.
- Provide technical assistance to packing house operators, supermarket produce buyers, produce import/export firms, local consultants, and government post harvest technicians to improve post harvest handling practices
- Work with donors and/or Winrock Cold Chain Project to construct cold storage facilities

Location: Bali and North Sumatera (Berastagi).

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$87,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 7: Improve Production and Marketing of Bananas in East and West Java

Objective: Improve production and marketing of bananas through increased access to better planting materials and new varieties, and training in best agricultural practices and post-harvest handling.

Details: AMARTA will:

- Provide technical assistance to growers for improved cultivation practices to increase productivity and improve quality
- Conduct training on improved post-harvest handling and packing procedures to access the hypermarket business
- Introduce at least one new variety for cooking to diversify market products
- Assist in the purchase of improved, disease resistant banana planting material

Location: East and West Java

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 8: Introduction of Improved Planting Material for Tropical Fruits and Flowers

Objective: Improve production of tropical fruits and flowers by increasing access to improved planting material.

Details: AMARTA will:

- Select, procure, and provide planting material for the MD-2 pineapple hybrid for meristem and vegetative propagation and distribution to commercial growers
- Assist to purchase Dutch origin cut flower plant material for reproduction and distribution in North Sumatera.

Outcomes Year One: To Be Determined

Location: North Sumatera (Berastagi)

Estimated Cost:

Grant Cost	$13,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 9: Improving Horticulture Value Chain in West Java

Objective: Increase supply of high value horticultural products from smallholders to distributors, exporters, and consumers.

Details: AMARTA will cooperate with the Directorate General of Horticulture Directorate of Fruits and the private firm Bimandiri, a dedicated supermarket supplier and lead firm to "bridge the gap" in the supply of high value horticultural products from smallholders to distributors, exporters, and consumers with the following activities:

- Develop AMARTA's horticulture value chain pilot project in West Java in three kabupatens (districts): Garut for vegetables, Tasikmalaya for mangosteens, and Subang for pineapples to demonstrate better packing house practices, post harvest handling, and production practices for each.
- Support the creation of a Central Packing House (CPH) in Garut, West Java owned by Bimandiri through technical assistance (including designing packing houses and pre-harvest and post-harvest handling training and managerial training) and grants of equipment. It will cover many horticulture commodities from its surrounding kabupaten (Bandung, Tasikmalaya, Subang, Sumedang and Pemalang and Cilacap of Central Java).
- Support creation of Mini Packing Houses (MPH), satellites of the Central Packing House, for vegetables and mangosteen. MPH to be run by Rural Producers Organization under supervision of Bimandiri. The leader of the RPO that runs the mangosteen MPH will be trained as a mangosteen expert and the MPH is expected to be a mangosteen service provider**.** A Memorandum of Understanding will be prepared between USAID-AMARTA, PT Bimandiri, and the RPO to define their roles and responsibilities.

Location: West Java

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$62,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Aquaculture

Assessment Findings

Indonesia is the ninth largest fish producer in the world. The country has tremendous potential to be a larger international seafood player, given the country's extensive coastline and abundant marine resources, and climate that lends itself to year-round aquaculture production. Indonesia earned an estimated US$2.1 billion from the export of aquaculture products in 2006 to 126 countries. The US was the leading importer, followed by China, Japan, and the EU. Aquaculture is an important source of employment, providing livelihoods to an estimated 2.4 million households in marine areas, brackish water ponds, freshwater ponds, freshwater cages and paddy fields. The coastal areas offer potential for mariculture development with species such as coral fish, oyster and seaweed and the coastal, inter-tidal and marginal areas still provide opportunities for further development in shrimp culture and other species.

The assessment identified three promising areas for development: grouper species marine aquaculture for export, shrimp aquaculture for export, and freshwater/inland production (Tilapia, Catfish, and Gouramie Species) for Indonesian markets. The following production constraints currently exist:

Group Species Marine Aquaculture

- Supply and Handling of Seed Stock: Lack of hatchery and farm management practices to control disease and reduce mortality.
- Lack of Access to Credit: Lack of microfinance to help the poor to engage in aquaculture. The initial investment capital for tambaks and production costs, including seed and feed, requires access to credit or other sources of financial capital. Small farmers face weak cash flow position, due to long grow out production period for live groupers.
- Uninformative Marketing Systems: Grouper, hatchery, nursery and grow out farmers lack integration with and knowledge about linking to the export market. Lack of communication and links to main exports is limited in remote areas.

Shrimp Aquaculture

- Traceability and Food Safety Concerns from Consumers: Increasing international requirements for food safety standards, traceability and environmental concerns require changes in traditional production and processing methods.
- Lack of Access to Credit: There is usually little information flower to the farmers regarding existing micro-credit sources.
- Insufficient knowledge, technology and investment: For shrimp processing, packaging, storage, transport and value added processing.

Freshwater/Inland Aquaculture

- Insufficient Development of Fish Processing: Underutilization of seafood processing capacity. Insufficient knowledge, technology and investment for aquaculture products for storage and transport by local producers results in poor quality and unnecessary waste.
- Insufficient Food Safety and Traceability Standards: Unsustainable food safety practices along the value chain hinders entering into higher value markets, such as the supermarkets and restaurant market.
- Lack of Access to Credit: There is usually little information flowing to the farmers regarding existing micro- credit sources
- Insufficient investment and lack of information: Lack of price transparency for chemicals, fish feed, improved fish varieties and sources of capital to boost quality and quantity of production.

Value Chain Interventions

Activity 1: Grouper Nursery and Grow-out Development

Objective: Support grouper nursery and grow-out development in Flores near the Komodo National Park protection area. Establish new livelihoods to protect marine environment from illegal fishing methods. Meet demand of up to 1 million fingerlings per month (current supply is less than 20,000).

Description: AMARTA will provide grant support for a hatchery and nursery with capacity of 20,000 fingerlings per month. Requirements include the following:

- Transport and working vessel for distribution of fingerlings, feed and collection of marketable fish
- Plankton and rotifer production tanks
- Tanks for small fingerlings to 3-5 cm
- Tanks for advanced fingerlings to 8-9 cm
- Upgrading of water supply system and filter unit
- Upgrading of air supply system
- Upgrading of power generation and electrical network

Location: Flores

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$35,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 2: Village-Based Net Cage Pilot Project

Objective: Increase production of grouper to achieve access to international markets, which requires minimum production of 8-10 tons per month.

Description: AMARTA will provide operational support and upgrading of one village-based net cage pilot project. Target is to produce approximately 5-10 tons of grouper per month to achieve international market access, which requires shipments of a minimum of 8-10 tons at one time. Requirements include a floating frame structure, 36 cages, fingerlings, feed, fuel, and management support.

AMARTA grant funds will support one village project in conjunction with existing Aquaculture loan facilities. The production capacity for one village unit is planned to be 250 kg per month. This model should lead to other villages joining the scheme in order to reach the minimum of 8 tons required for export shipment.

Location: Labuan Bajo and west Flores

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$64,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 3: Improving Sustainable Hatchery and Farming Methods for Black Tiger Prawn in Aceh

Objective: Assist in reestablishing the prawn farming sub-sector in Aceh by developing and increasing availability of disease-free or resistant parent stock and post larvae, developing and demonstrating a sustainable model for pond production of high quality prawns, and establishing an Aceh-based processing and trading chain for prawns.

Description: Reconstruction efforts are underway by several donor agencies to reestablish the prawn farming sub-sector. A critical factor for healthy larvae production is the availability of virus free parent stock and virus free post larvae. AMARTA will provide

facilities and training support to small and medium sized farmers focused on best aquacultural practices to overcome viral disease threats.

AMARTA will

- Identify existing prawn hatcheries in Aceh in the Sigli and Bireuen areas that are willing to cooperate with each other to reach an agreement on common operational and production standards for the production of disease-free, certified post larvae. AMARTA will provide organizational support to assist the hatcheries in working together to develop these standards for production and quarantine procedures, and provide assistance in making the necessary rehabilitations to the prawn hatcheries to meet these standards. AMARTA will also help the hatcheries establish a common laboratory where all post larvae sold out of the hatcheries will be tested for viral disease, and then certified and sold under a common brand name. AMARTA will grant Polymerase Chain Reaction (PCR) testing equipment used to test DNA of shrimp for viruses.
- Develop a sustainable model for pond production of high quality prawns to be demonstrated and promoted in Aceh, including technical assistance and training in best aquacultural practices to improve production.

Location: Aceh

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$100,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 4: Fresh Water Fish Processing and Marketing in West Java

Objective: Develop a value added processing and marketing system in west Java through establishment of a cooperatively managed processing plant with refrigeration and vacuum packing equipment, and transportation capacity

Description: The production of fresh water fish – chilled or live - in West Java for sale to the Jakarta area market through middlemen is well established. The development of value added processing and a marketing system in addition to the existing marketing channel are desired by the farming community. AMARTA will support the establishment of a cooperatively managed processing plant with refrigeration and vacuum packing equipment, and transportation capacity.

Location: West Java

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$17,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Livestock

Assessment Findings

Indonesia is a beef deficit country and imports about 30% of its supply. Imports of live cattle from Australia and frozen boneless beef make up the shortfall. By the period 2020 to 2025, Indonesia may import 70% of its meat supply consumption in live animals unless changes are made to improve productivity. Australia also is the source of about 70% of the bulls used for breeding, with Simmental and Limousin the most popular breeds.

Productivity of the beef breeding herd is low compared to meat export countries in the region. Reproductive rates of native cattle are below levels necessary to expand the herd. Herd expansion is also constrained by low calving rates, and high calf mortality. Also, the economics of cow/calf operations are not as favorable to investors compared to short-term feeding. The performance of the sub-sector results in large part because smallholders tend not invest in productivity improvements because of lack of technical knowledge and cost to access better genetics. Cattle are mainly used as a source of savings which are sold when households need cash.

Bali cattle may provide an area of opportunity. There are approximately 3 million Bali cattle in Indonesia with the largest concentration in Sulawesi, followed by Bali and Nusa Tengarra Timur (NTT). This unique breed is resistant to tropical diseases, has a good conversion from live to carcass weight, and adapts well throughout the country. However, inter-regional transport costs are high, and proper ships for transporting cattle efficiently are not available.

Proposed Value Chain Intervention

AMARTA proposes to focus on improving and expanding the Bali cattle value chain, which offers the most promising competitive advantage in the livestock sub-sector. Improvements to the Bali cattle value chain will spillover to the larger beef livestock value chain through improved genetics and feeding systems. The focus of the value chain assistance is on improving the supply and quality of Bali cattle to capitalize on the competitive advantage of the indigenous Bali breed through better genetics, breeding stocks, and management.

Activity 1: Bali Cattle Breeding Pilot Program

Objective: Provide breeding units (female Bali cattle) to farmer groups and introduce a business model of calf breeding to increase the number and quality of Bali cattle calves and ultimately feeder calves in West Timor.

Description:

AMARTA will work with the cooperative Puskud NTT to supply pregnant Bali cows to farmer groups. AMARTA will grant to Puskud NTT 300 cows, with the requirement that the cows be distributed to farmer groups with memberships of 20-50 farmers each. The farmer groups will be selected based on previous performance or achievement in cattle fattening activities.

Each farmer will receive one pregnant or ready-to-breed cow (breeding or insemination provided by Puskud NTT, with guarantee to farmer that cow will be pregnant in two months, or replaced with a new cow), with the requirement that the farmer agree to keep the female perpetually, for breeding, until dead or replaced. Each farmer must agree to supply a barn and feed, and also to maintain the cattle according to good practices. Puskud NTT will provide evaluations and workshops in implementation of innovative technology in breeding, reproduction, nutrition, management and animal health.

The calves produced by the bred females will be sold to the Puskud NTT as fattening cattle. The farmer will keep 80% of the profits of the sale of the calf, and the remainder will be paid to Puskud NTT as 10% for management fee and 10% to put into a cattle breeding fund to procure more females for additional farmer groups. This cattle breeding fund will be administered by Puskud NTT with oversight from the National Cooperative Business Association (NCBA). If a farmer decides to sell the cow provided by Puskud NTT, the proceeds will also go to this cattle breeding fund.

AMARTA will provide Puskud NTT with funds for management support for the first three years of the program. Thereafter, Puskud NTT will use proceeds from the sale of calves to compensate for their management costs.

Location: West Timor, East Nusa Tengarra (NTT), Kupang

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 100

Indicator 2 (# orgs/assn receiving assistance): 6

Indicator 3 (# ag firms benefited directly): 2

Indicator 4 (# individuals trained in improved production): 100

Indicator 5 (% change in value of international exports): N/A

Indicator 6 (% change in purchases from smallholders): TBD

Estimated Cost:

Grant Cost	$100,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Spices

Assessment Findings

The primary spices grown in Indonesia are nutmeg, cloves, pepper, and vanilla. Nutmeg and cloves are grown primarily in North Sulawesi and the Maluku Islands. Pepper is grown mainly in Java, while vanilla is grown in Flores. AMARTA will conduct a spice value chain assessment during the later part of the first year for cloves, pepper, and vanilla. An intervention in Nutmeg, discussed below, is planned based on industry feedback received during the initial series of industry meetings held in November and December, 2006.

AMARTA is initially concentrating on nutmeg given Indonesia's dominant position in world production and export. Indonesia supplies about 76% of the world market, or about 8,000 tons per year.

Nutmeg is a good income producer for smallholders. Almost all is grown in the Malukus between Bandas and Halmahera with the bulk of production on Halmahera and Ternate. About 25,000 farmers grow nutmeg. The crop is produced and harvested throughout the year, which provides a continuous cash stream to the farmer. Farmers pluck the fruits whenever they require money regardless of the maturity level of the fruit. Farmers do face some marketing constraints. Geographic spread makes it difficult for farmers to reach exporters on other islands, and farmers often prefer to sell in the local market because they can simultaneously purchase their day-to-day requirements.

The most critical constraint is aflatoxin which renders the fruit unsuitable for human consumption. 60% of Indonesian nutmeg has greater than 20 parts per billion (ppb) of aflatoxin which has all but completely eliminated exports of grade 3 product (Broken, Wormy, Pitted, or BWP) to Europe where the aflatoxin tolerance level is 10ppb. The US imports some BWP as the tolerance level is higher at 20ppb. Farm level prices are low due to inconsistency in quality and aflatoxin contamination.

Aflatoxin forms due to high moisture, high temperature, and humidity. In the pre-harvest stage pest attacks makes it more prone to mold. In the harvest stage, timing affects mold formation as immature nuts are less resistant to mold formation, while harvest delays result in greater amounts of fallen fruit where it is more prone to insect attack or mold formation. In the post-harvest stage, improper drying or rain leads to mold formation if nuts are stacked close together.

In the value chain the farmer has virtually no awareness of aflatoxin. Similarly the small trader has little knowledge about other than being aware of the lower prices for moldy product. The commission agent is aware, but typically these are speculative buyers and have little incentive to encourage sellers to supply aflatoxin free product. The major collectors that deal directly with exporters have a better sense of the aflatoxin problem, but also have little incentive to reduce the problem. The exporter does understand that aflatoxin-free nutmeg carries a premium in the export market, and will remove contaminated product before processing. However, the exporter pays no premium for better quality nuts.

Proposed Value Chain Interventions

Activity 1: AMARTA Nutmeg Agribusiness Competitiveness Alliance

Objective: Provide technical assistance, training and market support to Ternate smallholder nutmeg growers to improve agricultural practices, and access higher market opportunities through improved quality and post-harvest handling practices.

Description: AMARTA will establish a pilot project in North Maluku, Ternate Island with 40 smallholder nutmeg farmers in the first year, to September 2007. The project elements include:

- Demonstration of good cultural practices including pest and disease control, pruning and plant nutrition to increase nutmeg yields, and demonstration of improved post-harvest handling practice to add value to the nutmeg sale price by better sorting, drying and nutmeg to reduce the incidence and severity of aflatoxin. A planned assessment by a nutmeg expert will identify and develop farmer training topics and materials with AMARTA personnel. Training will include farmer field days, workshops, and study tours to the OLAM buying and testing station in Manado to provide farmers with a better understanding of the aflatoxin testing and quality needs that are practiced in Manado. These trainings will be carried out by a combination of AMARTA and/or OLAM staff. OLAM will establish a buying station that will house the AMARTA training program coordinator and farmer training facilitators.
- Facilitation of better provision of locally provided extension technical assistance and training with local institutions supported by the AMARTA intervention. Farmer training will be conducted in coordination with the Provincial Agricultural Office Estate Crops North Maluku extension services, which will provide two extension staff and facilities for the training. Additional training, including training in use of ELISA kits, may be provided by Khairun University.
- Provide an enhanced and transparent marketing system for smallholder nutmeg wherein a higher percentage of the final nutmeg FOB price is captured by smallholder farmers resulting in increased incomes
- Enter new markets of higher value for premium nutmeg through aflatoxin free nutmeg produced as a result of AMARTA interventions.

AMARTA will:

- Provide grants to farmer groups to construct village drying and storage facilities for 200 farmers.
- Provide grants to farmer groups of Enzyme-Linked Immunosorbent Assay (ELISA) Kits (hand held kits with formulated chemical and measuring strips), which can detect aflatoxin levels at 20 ppb, to enable farmers to measure aflatoxin at the farm level. This will enable preliminary testing and demonstration of presence of aflatoxin in nutmeg.
- Establish a high technology lab in Manado for final, precision aflatoxin measure using high-performance liquid chromatography (HPLC) equipment which can detect aflatoxin

levels at 1 ppb, necessary for export certification to enter markets in N. America, Japan, and Europe.

Location: North Maluku, Ternate Island

Outcomes Year One:

- Formation of farmer groups in Ternate to receive post harvest handling practices training

- Introduction of use of ELISA (Enzyme Linked Immuno Sorbent Assays) kits to identify aflatoxin at farmer level.

- Establishment of an Olam buying station to demonstrate added value returns to farmers practicing better post harvest handling practices

Indicator 1 (# ha under improved technologies/management): 20 ha

Indicator 2 (# orgs/assn receiving assistance): 1

Indicator 3 (# ag firms benefited directly): 2

Indicator 4 (# individuals trained in improved production): 40

Indicator 5 (% change in value of international exports): TBD

Indicator 6 (% change in purchases from smallholders): TBD

Estimated Cost:

Grant Cost	$70,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Natural Rubber

Assessment Findings

Indonesia has over 3.3 million ha planted with rubber and is the second biggest producer in the world after Thailand. Large estates account for 16% of production with smallholders producing 84%. 91% of the output is exported and 9% is for domestic use.

Rubber production is a mainstay for smallholders as 1.4 million families in Sumatera and Kalimantan depend on rubber for their livelihoods**.** It is a non-perishable cash crop which is sold easily at the farm-gate. Rubber provides multiple environmental benefits as a carbon sink (captures and stores carbon from the air and stores in leaves, roots, and soil), soil organic matter replenishment, and improves water catchment. It provides a valuable and renewable source of furniture wood at the end of tapping cycle.

Indonesian productivity is lowest among the major producers with average yields of 862 kg per ha compared to 1,875 kg in Thailand, 1,727 kg in India, 1,483 kg in Vietnam and 1,330 kg in Malaysia.

The factors contributing to low productivity are as follows:

- 70% of the cultivated area is agroforest, a result of slash and burn agriculture, with low usage (only 40%) of clonal planting material.
- Poor cultivation practices which decrease output by 50% to 70% in both jungle rubber and in intensive smallholdings.
- Proliferation of poor tapping and collection which reduce tapping lifespan by around 10 years from the standard of 25 years.
- Weak road-infrastructure in smallholder areas results in high transportation cost to processing factories.
- Poor coagulum (raw rubber) quality, and water and debris have increased processing costs.
- Sales of coagulum are done on wet-weight basis resulting in low efficiency and price manipulation.
- Absence of village level financing mechanisms for smallholders limits the ability of smallholders to obtain higher prices. Processors pay an average of 80% - 85% of the FOB price for coagulum. Farmers receive between 30% and 50% of the FOB price, with the village traders collecting the remainder.

Proposed Value Chain Interventions

Activity 1: Establish Certified Budwood Nursery

Objective: Improve productivity of rubber producers by increasing access to improved planting materials.

Description: AMARTA will provide improved rubber clones to the Rubber Association-operated budwood nurseries in several target villages to be confirmed in Sumatera and Kalimantan. The planting materials, which will come from clonal materials, will be supplied and certified by the Indonesian Rubber Research Institute. AMARTA will also provide technical assistance in the form of training farmers on improved planting practices.

Location: South Kalimantan

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$26,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 2: Rubber Tapping Training and Provision of Better Planting Materials

Objective: Increase productivity of rubber producers by increasing access to improved cultivation and processing techniques through establishment and training of six farmer groups in three provinces.

Description: AMARTA will facilitate a Farmer Training Program for six farmer groups in three provinces for

- Trading and processing of appropriate coagulum focusing on quality of the raw rubber to improve price return to the grower, who currently adulterate their raw rubber with tree bark trimmings, water, and soil. Benefit to the rubber processors is reducing cleaning costs at the factory.
- Planting, upkeep and intercropping, with IRRI.
- Proper tapping and collection practice, with Designated Private Plantations (Bridgestone Sumatera & Kalimantan) as a Corporate Social Responsibility program to smallholder farmers to improve productivity, quality, and income.

Location:

- South Sumatera – Sibolga

- North Sumatera – Bangka
- South Kalimantan – Imban

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	$60,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 3: Technical Assistance for Village Extension Services

Objective: Provide technical assistance for Village Extension Services to improve services to farmers, eventually improving farmers' production and processing.

Description: Provide technical assistance for Village Extension Services in cooperation with Dinas Perkebunan Kabupaten (District Estate Crop Extension Service) and Field offices of Gapkindo in Banka and Sanggau (South Kalimantan).

Location: Sumatra and South Kalimantan

Outcomes Year One: To Be Determined

Estimated Cost:

Grant Cost	None
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Biofuels

Assessment Findings

Biofuels are of two types: ethanol which is processed from molasses, cassava, maize and biomass), and biodiesel which is processed from oil palm and jatropha. Indonesian production of biofuels is small. There are two plants in North Sumatera with combined capacity of 700 tons per day. Neither use jatropha as a raw material source. Production is projected to increase to 400,000 tons/day by mid-2008, but little of the increase will be jatropha based. Jatropha oil has the following uses as a fuel:

- Crude jatropha oil as a complete or partial replacement for kerosene in stoves and lamps, and crude bunker oil.
- Jatropha oil (esterified oil) produced from crude oil as a replacement for diesel fuel in low performance engines, e.g., generators, inboard engines, water pumps, hulling machines.
- Biodiesel (transesterified oil) as replacement for diesel in high performance engines for cars, trucks, and busses.

The GOI is promoting jatropha as a biofuel that will contribute to alleviating poverty and the energy crisis, and which can be grown on degraded and marginal lands. The GOI has allocated 1.5 million ha of land for production of oil palm and 1.5 million ha for jatropha for processing into biofuels. The maximum production of biofuels from this production area would be 6 million kilolitres from oil palm and 2.25 kiloliters from jatropha. There are, however, several constraints that may limit these goals:

- Insufficient research and development of potentially productive varieties.
- Inadequate planting material for national distribution.
- Lack of farmer education and training.
- Potentially divisive land issues.

AMARTA recommends that efforts to produce biofuel products from jatropha be limited to crude oil and jatropha oil on a small-scale village level basis where fuel self-sufficiency is possible. Biodiesel is not appropriate for small scale production and should be done by large scale palm oil and commercial jatropha producers.

Proposed Value Chain Interventions

Activity 1: Biofuel Production Pilot Program

Objective: Enhance energy self-sufficiency at the village level by promoting the production of two basic fuel types (crude oil and jatropha oil), along with the production of glycerin (from which soap may be made) and a highly nutritious organic fertilizer (from the waste seedcake) which may be applied to their coffee bushes the produce of which is being grown under an organic (non-chemical) program.

Description: AMARTA will demonstrate to the people of Desa Ulu Vae, (and the governments of both Kabupaten Mangarrai and the province of Nusa Tenggara Timur) the potential for becoming self-sufficient in organically produced kerosene, low grade diesel fuel (for use in static, low r.p.m., engines such as generators and water pumps), soap, and organic fertilizers.

The program will be carried out in three phases:

Phase 1: To supply, install, and commission, the crushing and pressing equipment required to turn existing Jatropha curcas seed into Crude Jatropha Oil as an alternative to kerosene. AMARTA will provide grants for the purchase of fertilizers, processing equipment, and storage facilities;

Phase 2: To construct (with villagers) a nursery in which some 140,000 seedlings will be produced. Which seedlings will be inter-planted amongst existing and future coffee bushes at a rate of 1,100 seedlings per hectare (or 130 hectares in total). Provide technical assistance to farmers in seedling production, land clearing and preparation, planting, fertilization, maintenance, pruning, harvesting, post-harvest handling and storage, and processing.

Phase 3: Once self-sufficiency in kerosene has been achieved, to supply, install and the esterification equipment required to produce Jatropha Oil low grade diesel fuel, and glycerine for the making of soap.

Location: Nusa Tengarra Timur, Flores

Outcomes Year One:

Indicator 1 (# ha under improved technologies/management): 0 (130 by September 2008)

Indicator 2 (# orgs/assn receiving assistance): 1

Indicator 3 (# ag firms benefited directly): 1

Indicator 4 (# individuals trained in improved production): 150

Indicator 5 (% change in value of international exports): N/A

Indicator 6 (% change in purchases from smallholders): N/A

Estimated Cost:

Grant Cost	$20,500
Other Cost: Training, Workshops, Technical Assistance	TBD

Activity 2: Improved Biofuels Planting Material

Objective: Provide improved, toxin-free planting material to establish model Jatropha nursery.

Description: Provide a grant of toxin-free planting material from Central America (Mexico) to a farmer group to establish a model Jatropha nursery of 30 to 50 ha.

Location: Ruteng, Flores

Outcomes Year 1: To Be Determined

Estimated Cost:

Grant Cost	$12,000
Other Cost: Training, Workshops, Technical Assistance	TBD

Commodity Value Chain: Seaweed

Assessment Findings

Indonesia is a major producer and exporter of *Kappaphycus alvarezii* (also called "cottonii") and *Eucheuma denticulatum* ("spinosum"). These seaweed species are used for production of carrageenan that is used as an ingredient in food and cosmetics. Indonesia is the top producer of spinosum which, depending on market fluctuation, is price competitive with cottonii.

Almost all of the processing of seaweed is concentrated in three processing plants located in Denmark, France, and the US. Seaweed in Indonesia is usually grown on plastic rope tied between steel posts cut out of 12mm reinforcing bar and driven into the coral or sand base of a tidal ocean pool on the inland side of coral barrier reef. Seaweed usually grows best where there is a significant exchange of sea water providing the nutrients necessary for fast, sustained growth. Both cottonii and spinosum need to be in water shallower than 120 cm for optimum exposure to sunlight. In some areas seaweed is farmed on floating cages. However, this may be an inferior cultural practice because of the expense of the floating system, the exposure to small fish that eat the seaweed, and exposure to mechanical damage from excessive wave action.

Interviews with collectors, exporters, and growers resulted in the identification of the following as the major issues most seriously affecting demand, as well as returns for sale of the product by the growers (in order of importance):

- Contamination of foreign materials in the seaweed bales and the subsequent expense to the factory for cleaning the product.
- High moisture content and increased weight of the material caused by excessive salt in the bale.
- Indirect marketing channels between the growers and the importer.

As a result of a visit to the province of Gorontalo during April 2007 and meetings held with the provincial government, seaweed was suggested as another agribusiness commodity requiring increased production and improved quality in order to establish an added value component to seaweed farming.

A cooperative of seaweed growers was visited in the Kuandang area, consisting of 300 growers with approximately 5,200 hectares of seaweed under cultivation. This group requires up to 1,000 growers with 15,000 hectares to increase production to an economy of scale to support a seaweed processing facility for export.

AMARTA will conduct a rapid assessment of the seaweed value chain in Flores, NTB, and Gorontalo to determine the proper interventions beyond an initial pilot program (see below).

Proposed Interventions

Activity 1: Improving Seaweed Production Pilot Program, Gorontalo

Objective: Facilitate provision of materials to seaweed farmers to enable expansion of seaweed production.

Description: AMARTA will conduct this pilot project in coordination with an association to provide seaweed production materials to new seaweed growers. AMARTA will provide the association a grant of materials, which the association will make available to 16 new growers to enable them to begin production of seaweed. The new growers will agree to receive the materials on the condition that at the end of the growing season, they will return to the association from their profits an amount of money equal to the cost of the materials. The association will put this income in a fund to purchase more materials for a new group of seaweed farmers, who will receive the materials under the same condition that they will repay the cost of the materials at the end of the growing season. The fund will be maintained in this manner until at least 500 new growers have been added. At that time an assessment of the pilot project will be conducted, and depending on results and the market situation, further assistance will be planned, such as additional grants for production and/or entry into added value processing of the farmed seaweed, such as washing, cutting, and baling of seaweed for export as step one.

Location: Kuandang, Gorontalo

Outcomes Year One:

- One seaweed farmers association assisted to increase production of export quality seaweed
- 325 additional hectares of seaweed under production
- New export buying firms introduced to enhance marketing opportunities

Estimated Cost:

Grant Cost	$25,000
Other Cost: Training, Workshops, Technical Assistance	TBD

AMARTA - INTERVENTION PROGRAM

Area	Commodity								
	Cocoa	Coffee	Spices	Rubber	Biofuel	Cattle	Aquaculture	Seaweed	Horticulture
Aceh									
North Sumatra									
South Sumatra									
Lampung									
North Sulawesi									
South Sulawesi									
West Sulawesi									
Southeast Sulawesi									
Kalimantan									
Java									
Bali									
Flores									
West Timor									
Maluku									
Papua									
NTB									

RACA - Medan:	
Coverage Area:	**Aceh, North Sumatra & South Sumatra**
Commodities:	**Cocoa, Coffee, Rubber, Aquaculture & Horticulture**

RACA - Makassar:	
Coverage Area:	**North Sulawesi, South Sulawesi, Maluku, Kalimantan, Papua**
Commodities:	**Cocoa, Spices, Rubber, Seaweed**

RACA - Denpasar:	
Coverage Area:	**Bali, East Java, Flores, NTT**
Commodities:	**Cocoa, Coffee, Biofuel, Cattle, Aquacultura, Seaweed & Horticulture**

3.3. Task 3. Advocacy for Improved Enabling Environment and Removal of Constraints

Advocacy will be a fundamental element to AMARTA activities to assist the Government of Indonesia to promote a robust and competitive agribusiness system. Removing constraints to growth and prosperity and advocating innovation will be the focus. This will be facilitated through the establishment of regional forums and/or regional agribusiness competitiveness alliances, and will be coordinated through regional agribusiness competitiveness centers and facilities located in Jakarta, Medan, Denpasar, and Makassar.

These alliances, supported by AMARTA staff and international experts and comprised of smallholder farmer representatives, agribusiness lead firms, and government leaders, will work in tandem with existing associations and coalitions, members of regional and national government, and community leaders to foster positive changes in the agribusiness environment.

AMARTA includes a significant communications component (public awareness and public affairs) which will support heightened public and private perceptions of the benefits of improved competitiveness, stimulate demand for AMARTA services, build credibility necessary for effective public-private partnership, and promote a common message. The public awareness component will support association and alliance-driven advocacy campaigns focusing on removing business constraints and improving the enabling environment. The advocacy campaigns will address the importance of improving Indonesia's agribusiness value-chain competitiveness (i.e., what is agribusiness competitiveness, where Indonesia stands on this issue, what are success stories, what are the constraints to growth, and what are ways to enhance country competitiveness such as value-chain interventions and the benefits for small and medium enterprises in Indonesia. At the core of the AMARTA public awareness and advocacy program are stakeholder involvement activities, including highly interactive workshops.

Specific tasks in year one may include the following:

- Provide support for establishment of the Regional Agribusiness Competitiveness Alliances (RACAs) at regional (kabupaten and province) and national levels. RACAs will provide a forum in which private value chain participants collaborate with policy maker agencies to review existing policies and regulations and formulate new policies and regulations with a vision of providing supportive, balanced, and equitable policy environment for progressive and competitive agribusiness development. RACAs can be seen as a political marketplace for agribusiness policy and regulation. RACAs are considered most critical at the kabupaten level where many regulations presumably create obstacles for enterprise establishment, distort merchandise mobility and increase the cost of doing business. RACA participants include the following:
    - Producer organizations at each value addition points (farming, trading, processing, exporting)
    - Business Service Providers
    - Regulatory/policy making agencies

- Professional/academic associations and institutions
- Consumer protection institutions
- Other relevant stakeholder institutions

To ensure sustainability, at least at its early stage of development, RACA establishment will be conducted in collaboration with the government agencies which are most responsible for development of such an institution as well as with private entities which are the major stakeholders in the business enabling environment. At regional levels (kabupaten and province), these could be economic Bureau of Planning Agencies, Office of Trade Service or Office of Agricultural Service. At the national level, the most appropriate partners might the Directorate General of Agricultural Marketing and Processing via their existing Commodity Boards or Commodity Commission forums and the Directorate General of Horticulture via their existing Integrated Facilities for Horticulture Investment (FATIH) activity. The Commodity Boards/Commissions and FATIH are public-private forums for creating a business and investment enabling environment in line with the mission of the RACAs.

- Conduct policy and regulation assessment in collaboration with AMARTA partner institutions; ICASEPS (Indonesian Center for Agro-Socio Economic and Policy Studies), AIAT (Assessment Institute of Agricultural Technology)/ BPTP (Balai Pengkajian Teknologi Pertanian), PSP3 (Center for Development Studies) and CAPAS (Center for Agriculture Policy and Agribusiness Studies). The objects for assessment are critical policy and public infrastructure issues which are identified from the AMARTA Assessment and Strategy Activity (Task-1), aspiration of value chain participants (including from the RACA forums) and AMARTA staff internal review. The assessment will be conducted with the following guiding principles:
    - Conducted by prominent and credible research institutions (ICASEPS, PSP3, CAPAS, AIAT)
    - Comprehensive coverage: benefit - cost impacts on business, competitiveness, production, income employment, prices and equity among broad stakeholders
    - Analytically rigorous
    - Clear and actionable recommendations on policy and regulatory reforms and policy formation
    - Clear and actionable recommendations on public infrastructure improvement
- Facilitate national networking of the RACAs. Raising public awareness on the existence of RACAs is important for drawing supports for their sustained existence. Horizontal coordination among RACAs will be useful to strengthen their voice in demanding policy/regulation environment improvement both at regional and national levels. This will be achieved by conducting an AMARTA sponsored annual national conference with representatives from all the RACAs.
- Provide support in conceptualizing and implementing education, advocacy and stakeholder activities outlined in the Public Awareness Component Work Plan. This will be achieved though a series of implementation planning sessions for AMARTA activities. These sessions will include AMARTA program staff, and appropriate public and private sector partners, and be designed to:

- Build a common understanding of the activities and how they fit into the broader AMARTA program and activities.
- Exchange current information about activities that is essential for implementation.
- Identify the key stakeholders involved in key activities, and, specifically, understand their relationships and interests, and develop a clear sense of how each activity area fits into this picture.
- Discuss and develop strategies for the most important issues that will affect the key activities.
- Clarify the Public Awareness team and individual scopes of work so there is agreement and understanding by the team members.
- Develop a realistic work plan and schedule for implementing the activity.
- Clearly define the end product(s) of each key activity.

- Provide design support to AMARTA public awareness stakeholder workshops and roundtables, and train AMARTA staff on how to design and facilitate effective stakeholder workshops. AMARTA stakeholder workshops and courses will include the following:
  - Clear objectives
  - Sets of strategy and/or technical messages that have been vetted and agreed to by the activity team.
  - Interactive methodology (interactive presentations, small group work, simulations, cases, strategy development and skill practice)
  - Application planning
  - Built-in approaches for application follow-up
  - Workshop evaluation
- The outlined generic tasks will be the guiding principles in 3 years implementation of the AMARTA Project. The specific activities for the first year – October 2006 through September 2007 - are planned as follows:

  Develop contacts and networks with stakeholders and partners:

  Time: October 2006 – September 2007

  Activities:

  - Market contacts and discussions with stakeholders
  - Establish agreement of partnership and collaboration with relevant agencies/ organizations.

Expected outputs:

- Partnership agreement with ICASEPS, PSP3, CAPAS, AIAT.
- Collaboration agreement with Karo Regency, Directors General of Horticulture and Agricultural Research and Development as well as with relevant Business Associations/organizations.

Initiate development of RACAs in two provinces and in Jakarta.

Time: March 2007 – September 2007

Activities:

- Establish collaboration with local government agencies and stakeholders organizations in North Sumatera (Karo), West Java (Bandung), and Jakarta.
- Development of new (or activation of existing) joint interest stakeholders organizations in North Sumatera, West Java, and Jakarta.
- Develop public-private fora in North Sumatera (Karo), West Java, and Jakarta.

Expected outputs:

- Collaboration agreements with relevant local government and agribusiness organizations as the RACA's champions in North Sumatera, West Java, and Jakarta.
- Established RACAs in North Sumatera, West Java, and Jakarta.

Conduct policy and regulation assessments

Time: December 2006 – September 2007.

Activities:

- Specific activities will be determined through the RACA forums and or in consultation with major collaborating partners.

Develop private – government dialogues/forums on improvement of agribusiness policy environment

Work started on March 8 in Jakarta during the first AMARTA workshop, and in Bali on March 23, wherein private sector stakeholders met with public officials and discussed policy and regulatory concerns. The first enabling environment RACA will be held on April 18 in Berastagi focused on the horticulture sector, and additional

workshops will be held on April 19 in Medan, where further discussion will be held on advocacy planning.

Time: February – September 2007.

Activities:

- National and regional seminars on policy and institutional issues (Result of Task-1)
- National and regional workshops on RACA establishment and advocacy planning in Jakarta, Berastagi, Medan, Makassar, and Bandung.
- National/regional workshops on policy issues, impacts and amendment in Jakarta, Berastagi, Medan, Makassar, and Bandung. (Results of Activity-3, if conducted)

Expected outputs:

- Public awareness on benefits – cost of the respected government policies and regulations.
- Pressure on policy reforms.

3.4. Task 4. Public Awareness, Public Affairs, and Communications

AMARTA's interventions will only reach a limited number of value chain participants, even when the value chain is highly localized. As such, the value chains on which AMARTA works will serve as models—demonstrating the kinds of productivity and quality improvements facilitated by AMARTA and the benefits of undertaking such improvements. AMARTA will leverage its direct interventions, achieving scale and sustainability by means of a public awareness and communications program. AMARTA will achieve significant results when successful interventions are replicated widely.

AMARTA will educate and inform a wide audience of AVC participants and public-sector stakeholders as to the "what, how, and why" of AVC interventions. Included in these messages—and intended as an advocacy device—are the policy reforms and business environment improvements that can be made to improve agribusiness performance.

AMARTA's communications methods will include the following:

Media Campaigns. AMARTA will work with the RACAs to help them craft messages about their goals, develop media campaigns about the issues for which they are urging change, and develop mechanisms for informing decision makers about the importance of specific changes in the business environment.

National and Regional Conferences. The first event will be a national conference following completion of the value chain assessments and was held in March. AMARTA will use this platform to spread the word on AVC selections and promote the interventions under consideration and their expected impacts.

University Outreach. AMARTA will establish an outreach program modeled on the university outreach program in the USAID/ Indonesia Food Policy Support Activity. Examples of AMARTA activities include: 1) conduct workshops for qualified instructors on the concepts and analytical tools important to AMARTA's AVC work; 2) place documents and other reference material on the AMARTA website; 3) address policy constraints, e.g., export taxes on cocoa from Sulawesi; and 4) cosponsor university and other forums where the AMARTA message can be heard. AMARTA will encourage qualified and interested university staff to participate in RACA activities, and we will also consider small grants to university staff to conduct research on AVC policy constraints.

AMARTA Website. AMARTA will develop and post a project website. This website will an electronic media reporting project activities, reports, studies, technical assistance recommendations, partner activities, meetings, press releases, and linkages to other partner institutions, organizations, associations, agencies and GOI offices. The website will be updated bi-monthly, and may consider the availability of commercial space as a cost-recovery program.

AMARTA Press Releases. AMARTA will prepare and submit press releases to the media to promote project success stories, with the intention of creating public and private sector awareness of competitiveness importance and model successes.

3.5. Task 5: Grants to Support Value Chain Activities

The AMARTA team will design a Value Chain Support Grants Program to augment the project's hands-on technical assistance and training. The grants program will foster improvements in productivity, quality, and public awareness by supporting the development of innovative solutions to AVC problems. Recipients may include agribusiness enterprises (firms and farms), BSPs, universities, research institutes, trade or producer associations, and industry leaders. Grants may support marketing, quality management training, advocacy, business plan implementation, or technology improvements.

Examples may include:

- Attendance at local, regional, or international trade shows to exhibit Indonesian products for sale, to view the offer of competing products, and/or to learn the proper traits of trade show participation.
- Financial assistance to construct an ice plant in an isolated area to facilitate the post-harvest handling/processing and distribution of fish products.
- Provision of improved planting material for coffee growers to introduce higher yielding or improved flavor varieties.
- Provision of funds to Business Service Providers or GOI institutions (Extension Service) to conduct farmer training on Cacao Pod Borer control.

Activities to be conducted:

- Development of the grants program criteria, i.e. level of assistance per size and type of enterprise or institution, grant limits, matching funds, reporting requirements, etc. for USAID approval. (March)
- Development of a Grants Manual for USAID approval. (May)
- Recruit and hire a Grants Manager (May)
- Formation of a Grants Committee (May)
- Establishment of a Grants Monitoring and Evaluation program (May - June)

3.6. Task 6: Training, Consultancy, and Participant Training

AMARTA will engage local BSPs the extension services, Non-Governmental Organizations (NGOs), and research institutes to provide training, in part through the Value Chain Support Grants Program. Additionally, we will identify and engage companies specializing in such areas as HAACP and ISO certification, food safety laboratory analysis, irrigation systems, and other production technologies to provide training. Business management skills are a key aspect of productivity, so we will provide raining in these skills.

Training for accessing production credit will be another integral component of this task. AMARTA will collaborate with IFC, Financial Services Volunteer Corps, and other yet to be identified entities. Another potential institutional collaborator is CAPAS. CAPAS is working with a financial service provider, Pembiayaan National Madani (PNM) to help Bimandiri, a Carrefour dedicated supplier in Bandung, to obtain credit.

Trade shows, study tours, and university training courses will make up AMARTA's overseas training portfolio. Trade shows, such as the Produce Marketing Association, Food Marketing Institute, Asia Foods, and Specialty Coffee Association, will show Indonesian firms how their competition is meeting market demand. They are also occasions for Indonesian associations and businesses to promote the quality and range of Indonesian products to a targeted audience of traders and buyers.

Study tours, which may be held in concert with trade show attendance, will focus on productivity and quality constraints in the value chains. We apply the same rigorous criteria for study tour participation as for trade shows. We will manage opportunities to attend training courses at universities such as the Post-Harvest Training Course at Univ. of California, Davis so that participants build skills and knowledge directly tied to improving the competitiveness of businesses and value chains. Michigan State University, for example, is a world leader in food safety courses for fresh and processed foods.

In the first year, October 2006 – September 2007, commodity related training activities will be focused on three commodities: cocoa, coffee and high value fruits and vegetables. AMARTA will conduct workshops on the concepts and analytical tools of value chains, inviting qualified lecturers and researcher from regional universities. AMARTA may give a small grant for selected workshop participants to conduct AVC case studies on particular leading commodities in their provinces. At the completion of AMARTA, subjects provided in the workshop and case studies reports will be documented, and may be used as a value chain reference for Indonesian agribusiness practitioners and researchers.

Specific activities for the first year are planned as follows.

- Develop contacts and network with stakeholders, October 2007 to April 2007
- Select an existing marketing chain to be developed as the value chain model
- Discussions with lead firms of the value chain
- Discussions with the DG of Horticulture, DG of Estate Crops, DG of Agricultural Product Processing and Marketing, DG of Agency for Agricultural Research and

Development. Under Ministry of Trade the discussions will be with DG of Trade Research and Development.

- Discussion with regional BSPs, local agribusiness-related government agencies, associations, and regional research institutes
- Training/workshops

  National workshop in Jakarta and regional workshop in Bali, Medan and Makassar to socialize the assessment results and discuss with stakeholders possible AMARTA interventions regarding value chain development and also Regional Agribusiness Competitiveness Alliance (RACA) Workshops were held in Jakarta on March 8, 2007; in Bali on March 23, 2007, and in Medan on March 18 and 19, 2007.

  Commodity-related training:

  - Cocoa
  - TOT training (April 2007)
  - Farmer Field School (FFS)
  - Smallholders 'best practice' cocoa production techniques (including CPB management)
  - Cocoa Fermentation Trials
  - Cocoa Garden Rehabilitation: Side-grafting
  - Coffee
  - Organic production (June 2007)
  - Flavor enhancement and cupping (October 2007)
  - High Value Vegetables
  - Farm training/workshop on Rural Producer Organization (RPO) development and management (May 2007)
  - Training/workshop on production mapping and planting schedule (June 2007)
  - Training on horticultural Good Agricultural Practice (GAP) (July 2007)
  - Product and seed certification (August 2007)
  - Fresh produce handling and marketing system (September 2007)
  - Post-harvest storage facilities for orderly marketing (November 2007)

  Business Management related training/workshops:

  - HAACP and ISO certification (June 2007)
  - Financial analysis techniques (August 2007)
  - University outreach workshop (Oct 2007)

Horticulture Technology and Market Conferences:

- Produce Marketing Association Annual Trade Fair in Houston, Texas in October 12 -15, 2007
- Asia Fruit Congress in Bangkok, Thailand on September 5-7, 2007

3.7. MONITORING AND EVALUATION PLAN—MONITORING FOR RESULTS ACHIEVEMENT

AMARTA monitoring and evaluation (M&E) plan for both impact and process indicators will be developed in April 2007 following completion of the Value Chain assessments. Proposed indicators are shown in the tables below with baselines, and targets for the first and second years of the project. Data collection for establishing the baseline indicators were done during the assessments, and will be established by AMARTA in conjunction with the QED M&E team in April.

Table 2 AMARTA Indicators

Commodity Value Chain	**Indicator 1**: Number of additional hectares under improved technologies or management practices as a result of USG assistance			**Indicator 2**: Number of producer organizations, water user associations, trade and business associations, and community based organizations receiving USG assistance			**Indicator 3**: Number of agriculture related firms benefiting directly from supported USG interventions			**Indicator 4**: Number of individuals receiving USG short-term agriculture sector productivity training			**Indicator 5**: Percent change in value of international exports of targeted agricultural commodities as a result of USG assistance			**Indicator 6**: Percent change in purchases from smallholders of targeted commodities as a result of USG assistance		
	Base-line Oct 2006	Target Sept 2007	Target Sept 2008	Base-line Oct 2006	Target Sept 2007	Target Sept 2008	Base-line Oct 2006	Target Sept 2007	Target Sept 2008	Base-line Oct 2006	Target Sept 2007	Target Sept 2008	Base-line Oct 2006	Target Sept 2007	Target Sept 2008	Base-line Oct 2006	Target Sept 2007	Target Sept 2008
Cocoa	0	5,300	9,750	0	148	244	0	4	6	0	7,400	13,000	0	10	20	0	25	50
Coffee	0	1,500	2,500	0	4	6	0	4	10	0	3,000	5,000	0	TBD	TBD	US$ 21,600,00	37.5	27.5
Horticulture	0	15,000	25,000	0	50	75	0	20	30	0	20,000	33,000	0	TBD	TBD	0	TBD	TBD
Aqua-culture	N/A	N/A	N/A	0	5	10	0	3	6	0	300	600	0	TBD	TBD	0	TBD	TBD
Spices- Nutmeg	0	50	200	0	2	4	0	1	2	0	100	400	0	TBD	TBD	0	TBD	TBD
Beef Livestock	N/A	N/A	N/A	0	2	4	0	2	4	0	100	200	N/A	N/A	N/A	0	TBD	TBD
Rubber	0	100	400	0	3	6	0	2	4	0	200	800	0	TBD	TBD	0	TBD	TBD
Bio-fuels	0	50	70	0	1	2	0	3	6	0	100	140	N/A	N/A	N/A	0	N/A	TBD
Seaweed	0	TBD	TBD	0	TBD		0	TBD		0	TBD	TBD	0	TBD	TBD	0	TBD	TBD

Note: Indicators are rough estimates. Indicators will be reassessed as activity design and implementation goes forward.