

INDICATIVE PRIORITIES FOR ACIAR PROJECTS: INDONESIA

Priorities for collaborative agricultural research between Australia and Indonesia were discussed on 19-23 February 2007 in Jakarta at a series of meetings between ACIAR and representatives of relevant Government Agencies (within the Departments of Agriculture, Forestry, Marine Affairs and Fisheries and Foreign Affairs), Indonesian Institute of Science (LIPI), universities, the private sector, non-government organisations and farmers' associations. ACIAR will use them as a framework for collaborative research for development activities over the next four year period, subject to further advice and information from Indonesia and alignment with the Australia-Indonesia (Whole-of-Government) development cooperation strategy. These priorities are expressed by participants at the consultation at a particular point in time and are not to be considered as officially-sanctioned priorities of the Government of Indonesia. Proponents of collaborative research projects should initially approach the relevant ACIAR Research Program Manager.

It was agreed to strengthen the emphasis on technical and policy research to support economic growth from agriculture, forestry and fisheries, with focus for the program in Java and parts of Sumatra and Eastern Indonesia. The program will assist in increasing farmers' incomes through shifting emphasis from factor-driven production agriculture to the development of integrated agribusinesses. ACIAR's program will maintain an emphasis on high-value commodities for which there is strong market demand, that are identified as priorities by the Indonesian Government and for which major constraints require attention through research. In addition to supporting research on production and productivity enhancement, ACIAR will also address related pest and disease management (including shared biosecurity concerns), postharvest processing and market development issues. Protection of the resource base for agriculture will be assisted by research collaboration on aspects of crop, forest and livestock bio-security and sustainable forestry and fisheries management and through policy research on more effective engagement in markets.

ACIAR and Indonesian partners will involve end-users such as extension groups, the private sector and non-government organisations during the development and implementation of projects. ACIAR will encourage linkages between research agencies in agriculture, forestry and fisheries and policy/ implementation directorate-generals, and will support cooperation between central institutes and provincially-based adaptive research agencies and planning authorities. The emphasis of capacity building activities will be to support the Indonesian Government's efforts in development of a demand-driven agricultural research system, through training on research management (including research prioritisation, project evaluation and impact assessment); experimental design and analysis; economics/ social science for biophysical scientists; participatory agricultural research and extension skills training and agribusiness, including supply chain management.

The collaborative program will emphasise animal health and production, crop protection (especially integrated with horticultural crop production), forestry, fisheries and agricultural policy research.

Agreed thematic areas for cooperation are:

Subprogram 1: Improved policies to underpin agribusiness development

- Policy requirements for improved access for smallholders into developing markets (including trading relationships and financial services for farmers and fishermen)
- Local and national structural adjustment (rural transformation) policy requirements to support agricultural diversification, including the assessment of policy requirements to achieve production change and meet market requirements
- Policies and institutional structures to foster new and competitive trading relationships, benefiting smallholder farmers, fishermen and forest product trade
- Analysis of policy requirements to support fisheries production, postharvest management, processing and marketing of fisheries products
- Understanding the basis and effects of farmer population movement, including impacts of land tenure, farm size and food pricing policies
- Risk identification, policy and supply chain interventions to underpin improved systems for food safety of poultry, cultured seafood and vegetable products

Subprogram 2: Biosecurity cooperation and pest and disease management in agriculture and plantation forests

2.1 Livestock biosecurity

- Defining the economic and social cost of livestock diseases and establishment of effective disease surveillance and control policies and systems, particularly in low-input systems
- Detection and management of risks of disease transfer with movement of livestock
- Improved understanding of avian influenza virus behaviour in ducks, village and commercial poultry, with and without vaccination
- Establishment of the importance of zoonotic diseases, including rabies, anthrax, Japanese encephalitis and cysticercosis

2.2 Crop and forestry biosecurity

- Technical and policy requirements for the establishment of pest-free areas or areas of low pest prevalence
- Capacity development in quarantine and disinfestation of plant products
- Improved management of major pests and diseases of bananas
- Pest and disease management for plantation forests

Subprogram 3: Research to underpin development of competitive horticultural agribusinesses

- Quality improvement and value addition in mangoes, including through management of fruit flies and fungal diseases
- Improving value addition and marketability for mangosteen, including through management of physiological disorders, pest control and better shelf life
- Development of clonal rootstocks and postharvest management and packaging systems for avocado

- Better production and pest management systems for shallot
- More efficient seed and production systems for mushroom
- Development of postharvest handling systems for tropical ornamental horticultural crops
- Postharvest handling and value addition to selected tropical spices and indigenous vegetables

Subprogram 4: Profitable smallholder aquaculture and agroforestry systems

4.1 Smallholder aquaculture

- Policy and planning options to guide the expansion and intensification of the aquaculture industry, including the development and application of decision support tools and planning frameworks to assist farmers, planners and policy makers, particularly at local levels
- The delivery of more reliable diagnostic services to farmers for viral disease of shrimp through improved application of PCR technology
- Control and management of new or emerging viral threats, including taura syndrome, koi herpes virus, viral nervous necrosis and other marine finfish diseases
- Development of cost-effective formulated feeds for high value species, with reduced reliance on fish-based protein
- Extension of “Better Management Practices” production packages through development of farmer groups, enhanced to include market issues such as product quality, food safety and supply chains to increase market performance

4.2 Agroforestry systems

- Understanding incentives for small-scale community plantings, including
 - policies and institutions (effectiveness of regulations, impact of land tenure, models for conflict resolution, effective size of the management units for profitable agroforestry and community forestry) and
 - analysis of systems and markets that produce intermediate returns
 - best practice models for outgrower schemes to secure market access for smallholders
- Matching community forestry sites to species in variable environments such as West Timor, including
 - site classification (soil and climate), selection of species combinations and improved planting materials taking markets and cultural preferences into account,
 - silvicultural systems adapted for small-scale plantings, including agro-silvopastoral systems
 - development of replicable extension models for small-scale plantations

Subprogram 5: Sustainable utilisation and management of fisheries and forestry resources

5.1 Fisheries resources

- Assessment of alternate, innovative assessment and management frameworks which address the problem of resource data limitations and pilot these in selected shared and common-interest fisheries

- The establishment of effective co-management arrangements between fishers and the cage aquaculture industry in inland reservoirs and open water bodies
- Better management of Illegal Unregulated Unreported (IUU) fishing in seas managed by Indonesia alone, with attention to improving existing reporting and regulation shortcomings, and the analysis of institutional and regulatory frameworks and linkages between different levels of government
- Regional cooperation in the monitoring of shark and rays landed from the Indian ocean and shark fin export-import data to obtain a better understanding of regional trade flows
- Supply chain economic assessment and policy analysis on optimal utilisation of fisheries industrial processing facilities in Indonesia
- Quality and safety assessment and improvement of fishery products starting from catching, handling, processing and marketing in order to reduce losses and to improve product competitiveness

5.2 Forestry resources

- Policy options and economic assessment of smallholder forestry options for addressing climate change mitigation
- Improved post-decentralisation forest governance and administration through action research at the provincial and district level
- Application of improved silvicultural strategies and governance arrangements to appropriately sited plantation species (acacia, teak and mahogany, and potentially other valuable, fast growing species)
- Capturing more value from forestry plantation species through improved processing technologies and development of new products matched to appropriate markets

Subprogram 6: Profitable agribusiness systems for Eastern Indonesia

Integrates key thematic areas for cooperation, including livestock, horticultural crop production, community forestry and aquaculture with a geographical focus on Eastern Indonesia. On-farm water management for the development of competitive agricultural industries and improvement of the capacity of Eastern Indonesian R&D providers to support market-driven adaptive research are cross-cutting themes. Some specific areas of emphasis within Eastern Indonesia are:

6.1 Crop-ruminant livestock systems

- Understanding policies to increase Indonesian sufficiency in beef production, including factors affecting adoption of improved forages, off-take of productive cows, improving reproduction rates and market linkages
- Development of sustainable systems that integrate livestock with crops for the dry tropics of Eastern Indonesia and smallholder plantation areas
- Enhancement of Bali cattle and goat productivity and meeting market specifications through improved management of feed and reproduction

6.2 Productive and profitable smallholder estate crops

- Market analysis and development for cashew nut, cocoa, coffee and coconut
- Production systems integrating field crops and livestock into plantation crops
- Management of pests and diseases for cashew nut, cocoa, coconut, coffee and sugarcane

- Market analysis of biofuel production systems, especially of on-farm and small-scale processing of biofuel as an alternative energy source for household needs.

6.3 Improving productivity and profitability of field crop systems in seasonally dry areas

- Locally adapted post harvest technology for field crops
- Improving uptake of existing technologies (nutrient management, varieties, integrated pest management, soil conservation) in rainfed rice systems and development of other components of the rotation
- Market development and fostering technology uptake in irrigated rice systems
- Development of maize cropping systems that are more water-efficient maize cropping systems and better linked to input and output markets

Subprogram 7: Technical cooperation to underpin post-tsunami rehabilitation of agriculture and fisheries

- Redevelopment of human capacity and infrastructure for brackishwater aquaculture of shrimp and finfish in Aceh
- Restoration of tsunami-affected soils, farming systems and seed supply systems to improve field crop and vegetable production