

Agreed priority market chains: Eastern Indonesian workshops (11/06)

Proposed actions by ACIAR:

A = proceed to project design

B = commission a scoping study/ small market chain study

C = explore spillovers of existing ACIAR project work to the nominated provinces

D = await further information, including from the studies commissioned by IFC-SADI.

Field and horticultural crops

<p>Maize (all four provinces)</p> <p>Development of the maize industry for animal feed (B)</p>	<p>S and SE Sulawesi and NTB</p> <p>Before technical research should be considered, determine whether it is feasible to develop better links between the market (animal feed industry) and production, which would need the industry to be developed to a larger scale. Also postharvest / mycotoxin issues because some farmers are keen to store maize for several months to chase higher prices in the off-season.</p>	<p>NTT</p> <p>Some constraints differ in NTT – mainly access to seed, low input production systems and postharvest storage. The system is more geared to local food and feed consumption and less to shipping to East Java for feed use.</p>
<p>Rice (S and SE Sulawesi)</p>	<p>S Sulawesi</p> <p>Securing production and marketing of rainfed rice in rotation systems. (A)</p> <p>Application of technologies from central institutes for 1. rice-legume (especially mungbean) crop management to improve yield, 2. availability of better quality rice seed; analysis of farmer incentives for investment in crop inputs in an environment of low farmer confidence in markets.</p>	<p>SE Sulawesi</p> <p>Production systems for high-quality paddy rice for inter-island trade (A)</p> <p>Project development to alleviate production constraints related to poor soils.</p>
<p>Cassava (SE Sulawesi only)</p>	<p>Cassava for industry applications and human consumption (B,D)</p> <p>Industry study to determine whether the scale of production can be linked to an industrial market in Indonesia (B,D). If we confirm that there are major increases in demand for human consumption of cassava in SE Sulawesi, foster linkages with existing ACIAR/CIAT project (C).</p>	

<p>Mungbean and peanut (NTB and NTT)</p>	<p>Transformation of the NTB peanut industry to address market requirements (B)</p> <p>Commission an analysis of the market chain.</p>	<p>Development of seed supply systems and application of better storage systems for mungbean and peanut in NTT (B)</p> <p>Scoping study to identify seed supply system issues (availability and supply) that need to be developed; work with seed supply people; look at as an example from Gol of encouraging farmers to become specialist seed producers; the short storage life of legume (mungbean and peanut) seeds compared with cereals need addressing.</p>
<p>Citrus</p> <p>Orange industry development is a priority for several provinces. Need to better understand the market potential within Indonesia, given there are multiple competing sources of oranges</p>	<p>S and SE Sulawesi</p> <p>Market development for citrus from Eastern Indonesia (B)</p> <p>Introduction, dissemination and maintenance of low-disease oranges (B)</p> <p>If anecdotal evidence of good market demand is confirmed, in S Sulawesi there is a need for a technical intervention on disease management.</p>	<p>NTT</p> <p>Resolving production and supply chain constraints for Kerprok Soe Mandarins in West Timor (A)</p> <p>Take forward as a medium-large project involving a multidisciplinary team, after reviewing previous work.</p>
<p>Potato (S Sulawesi, NTB)</p>	<p>Improved seed systems for quality potato in S Sulawesi (C)</p> <p>Get Australian and Indonesian teams over to S Sulawesi and NTB to determine whether a scale-out of the existing Java project is feasible.</p>	<p>Meeting market specifications for high-value potato production in NTB (C)</p>
<p>Chilli (SE Sulawesi only)</p>	<p>Establishing competitive advantage for Chilli in SE Sulawesi (B, C)</p> <p>Establish whether there is a competitive advantage for SULTRA in chilli – and whether there is there potential for (further) market development, including opportunities for processing.</p>	

Banana (NTB only)	Improved utilisation and marketing of local Lombok banana varieties (C, D) Investigate potential for scale out of existing ACIAR Indonesia work on banana disease and propagation; possibly support simple postharvest handling work.
Tropical tree fruits (NTB only)	Pre-and post harvest quality management and marketing of tropical tree fruits (mango, mangosteen, rambutan, durian) from NTB (A,B) 1. Collate information on the value chain for the tropical fruit commodities in NTB to clarify constraints (B) 2. Explore opportunities for inclusion of mangosteen work in proposed new Java ACIAR project (A).
Passionfruit (S Sulawesi only)	Integrated passionfruit production systems for processing (A) Determine how the industry can be intensified to ensure scale and continuity of supply (possibly including new higher juice-yield varieties) and resolve crop protection constraints (nematodes, fungal diseases).
Water management for vegetable development (NTB only)	Vegetable agribusiness development based on production with improved water harvesting and soil management (B) Analyse impacts thus far and potential of system for scale-out to other farmers before considering further research or an extension investment.

Estate crops

Cocoa (S and SE Sulawesi and possibly NTT)	Elevating the productivity and quality of S Sulawesi cocoa (A, B) Initiate new project on resistant germplasm, side grafting and IPM/hygiene for disease management. Investigate whether options for value addition close to the farmer such as small-scale processing, by product utilisation is being considered.	Improving cocoa productivity and profitability in SE Sulawesi (A) Rollout activity (side grafting, nursery work, pest and disease cultural management) with farmer groups established under SUCCESS. Involve CABI and Cocoa Sustainability Partnership
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<p>Cashew (S and SE Sulawesi and possibly NTT)</p>	<p>Improving the productivity of the cashew industry in S Sulawesi (B)</p> <p>Issues of low yields (germplasm and management) could be addressed through research and extension.</p>	<p>Improving Cashew productivity and assessment of potential for local processing in SE Sulawesi (B)</p> <p>Assess 1. why the existing production system provides yields that are well below Asian benchmarks, and to identify the appropriate interventions; 2. identify options for development of a locally-identified (organic ?) product, compared with shipping to India for processing.</p>
<p>Coconut (S Sulawesi)</p>	<p>Rehabilitation of the S Sulawesi coconut industry (B)</p> <p>Need to look at socio economic aspects/ demand for replanting and on markets for products such as virgin coconut oil. Possibly spillover ACIAR work on coconut wood products from Pacific countries.</p>	
<p>Coffee (S Sulawesi)</p>	<p>Securing the profitability of Toraja coffee (D)</p> <p>Compile more information on relative importance of industry constraints, which may include rehabilitation of plantings, pest and disease control, drying technologies, market differentiation and farmer extension.</p>	
<p>Jatropha (NTB only)</p>	<p>Development of a biodiesel industry based on Jatropha (D)</p> <p>Discuss prospects, economics and on-going work more widely in Australia, Indonesia and internationally. Possibly commission an economic study.</p>	
<p>Plantation crop competitive advantage (NTT only)</p>	<p>Optimization of production and marketing from Coconut, Cashew nut, Candle nut, Cocoa and Coffee plantations (D)</p> <p>Establish comparative / competitive advantage prospects of NTT versus other provinces.</p>	

Livestock

Bali cattle (all four provinces)	S Sulawesi Improving nutrition and reproduction rates of Bali cattle in crop-livestock systems (A) Decrease inter-calving intervals and improve growth rates low through better management of cattle in cropping systems. Assess feed supply (including through utilisation of by-products of estate crops and from rice and maize systems), considering limitations on labour availability.	SE Sulawesi Improving Beef production from SE Sulawesi to meet market demand (A,B) 1. Better integration with estate crops through utilisation of waste products. 2. Obtain better understanding of beef marketing channels (across Eastern Indonesia). Value chain study to identify numbers, value changes, marketing strategies, as a precursor to intervention. 3. Exposure of SE Sulawesi researchers and extensionists to work being done elsewhere in Eastern Indonesia.
	NTB Improving farmer returns from Bali beef cattle production (A,B) 1. Scaling out work in Lombok on herd management, with research on methodologies, M&E. 2. Conduct a scoping study in Sumbawa Besar to describe the cattle management and marketing system	NTT Improving Bali beef cattle production systems in NTT (A) 1. Integration of maize-legume forage systems with livestock production 2. Management of early weaning 3. Assess whether the benefits of better feeding and watering during shipping outweighs the costs.
Goats (S Sulawesi, NTT)	S Sulawesi Improving goat production in integrated estate cropping systems in South Sulawesi (A) Project development on analysis of market constraints and incentives for increasing housing in kandangs, improving feeding (particularly in estate crop systems), and management of diseases (especially to reduce losses while transporting to markets).	NTT Analysis of market opportunities for goats in NTT (D) The first step could be an analysis of the goat sector to determine whether there is an emerging commercial sub-sector or whether goats are a low value commodity. This could follow the proposed study on the pig sector in NTT.

<p>Village Chickens (SE Sulawesi, NTB)</p>	<p>SE Sulawesi</p> <p>Potential for SME development based upon native chicken (B)</p> <p>Perform an economic and social assessment of more intensive management of these native chickens (given that there is a good niche market for the product), including issues related to lack of sustainability of previous interventions.</p>	<p>NTB</p> <p>Role of village chicken in biosecurity management of avian influenza (A)</p> <p>Will be covered under an existing pipeline ACIAR animal health project.</p>
<p>Pigs (NTT only)</p>	<p>Smallholder commercial pig production in NTT - opportunities for better market integration (B)</p> <p>Commission a scoping study on supply chain for pigs and possible entry points for improving productivity, distribution of pigs. Then it would be possible to apply information on housing, nutrition etc.</p>	

Aquaculture and Mariculture

<p>Seaweed (all four provinces)</p> <p>Project to be developed across several provinces but need to establish current and proposed IFC-PENSA activities; firm up the researchable activities and identify potential research providers.</p>	<p>S Sulawesi</p> <p>Underpinning technical and market development of the seaweed industry (B,C).</p> <ul style="list-style-type: none"> - Improvement of seed quality through identification of better performing strains and development of nursery and distribution systems. - Management packages to improve culture and drying techniques to improve quality. - Better farmer communication of quality criteria, future demand and price patterns. 	<p>SE Sulawesi</p> <p>Addressing constraints to seaweed industry development (D)</p> <p>NTB</p> <p>Targeting seaweed production to better meet market demand (D)</p> <p>NTT</p> <p>Improving seaweed market chains in NTT (B, D)</p>
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<p>Abalone (SE Sulawesi and NTT)</p>	<p>Development of a model nursery for Abalone in SE Sulawesi (A)</p> <p>Small project intervention to develop a model system for nursery in SE Sulawesi using seed from Gondol or Lombok, and evaluate grower acceptance, before determining whether hatchery work is socially or economically feasible, with possible follow up in other provinces.</p>	<p>Improved culture systems for tropical abalone in NTT (D)</p> <p>Seek more information. Determine the characteristics of the market and assess whether there is scope for culture production. Assess whether issues of the need for community management of common property will hinder practical impacts.</p>
<p>Assessing mariculture market constraints and potential (SE Sulawesi)</p>	<p>Development of mariculture potential for crabs, grouper and sea cucumber in SE Sulawesi (B)</p> <p>Detailed study to assess market constraints, potential and opportunities to expand current industries, with attention to viable options to improve the routine availability of quality seed of priority species.</p>	<p>Sea cucumber mariculture industry development in NTT (C)</p> <p>ACIAR and WorldFish have a pipeline project on pond culture planned for Sulawesi. Investigate involvement of / information exchange with NTT.</p>
<p>Shrimp (S Sulawesi, potentially also for SE Sulawesi)</p>	<p>Implementing better management practices for shrimp production and marketing (A,B)</p> <p>Application of BMPs for quality seed access, disease control and management of inputs developed under existing DGA and ACIAR projects. Development of disease-free SPF stock (longer term but vital objective)</p> <p>Investigation of contract farming options for shrimp production</p>	
<p>Mudcrab (S Sulawesi, potentially also for SE Sulawesi)</p>	<p>Polyculture systems for profitable mudcrab production (A)</p> <p>Development of pond co-culture (with shrimp or milkfish), incorporating improved broodstock and nutrition.</p>	
<p>Lobster (NTB)</p>	<p>Improving lobster growout and nutrition in NTB (C)</p> <p>Investigate options for spillover of ACIAR work in Vietnam.</p>	

Grouper (NTT and possibly S Sulawesi)	Grouper aquaculture (D) Further investigate nature of industry. Opportunity to scale out earlier ACIAR work on hatchery, growout and feeds if there is the ability for NTT-based entrepreneurs to invest in small infrastructure.
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Natural Resource management and forestry

Social and economic constraints to utilisation of water from communal dams (embungs) for production of horticulture and other crops (B) (NTT)	Social/ economic studies are first needed on potential use of irrigation and technology adoption. This could build upon successful NGO pilots. Access to markets is important as it is likely that vegetables will be the highest value use for embung water, although limited late dry season use for forages and early wet season irrigation to reduce risk for field crops will be economic in some circumstances.
Utilisation and conservation of fertile soil resources for agribusiness production in West Timor (D) (NTT)	There is a need to determine what is known and documented about land tenure in different parts of NTT, and implications for livelihoods
Teak industry development (C) (SE Sulawesi)	Explore potential for linkage to ACIAR-CIFOR project on teak, addressing community constraints to investment in teak and improvements to propagation and processing.
Value addition to mahogany wood for furniture and handicraft (B) (NTB)	Further investigate demand for processing options for mahogany and if positive incorporate it into potential new Java project on value addition/ processing of other plantation timbers (teak and acacia).
Development of integrated agroforestry systems for production of high value forest products (A, C) (NTT)	ACIAR is currently developing a project on production and marketing of non-timber forest products in NTT. A second project could potentially be developed on integration of cattle production (for early income) with forestry systems. First a scoping study needs to be done on the feasibility of the approach from the standpoint of land tenure and government support.