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**Australian Centre for  
International Agricultural Research**

# Final report

Small research and development activity

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*project* **Strategic plan for ACIAR engagement in developing  
Indonesia's capture fisheries research and management  
capacity**

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# 1 Acknowledgments

The project benefited from input from Indonesia colleagues within the Agency for Marine and Fisheries Research and Development, in particular within the Research Centre for Fisheries Management and Conservation (RCFMC), the Research Centre for Marine and Fisheries Socio-Economics and the Cooperation and Information Division. Input was also provided by the Directorate of Fish Resources within the Directorate General of Capture Fisheries and the Directorate General of Marine, Coasts and Small Islands Affairs.

The project also benefited from input from researchers at CSIRO Oceans and Atmosphere, Murdoch University, the University of Wollongong and Charles Darwin University.

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In addition to ACIAR, the project was supported by RCFMC, ABARES and CSIRO.

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## 2 Executive summary

Indonesia is ACIAR's largest partner-country program, due to its proximity and the imperative of reducing the large proportion of its population living in poverty. Indonesia is the fourth most populous country in the world, home to nearly 254 million people, and an estimated 49 per cent live on less than US\$2 per day. Extreme poverty tends to be most pervasive among communities dependent on agriculture, livestock, fisheries and forests for their livelihoods.

As an archipelagic country, Indonesia has a vast coastline, more than 17,500 islands and extensive marine waters, comprising one of the largest exclusive economic zone in the world. Most of the population, 65 per cent, live in coastal areas. Seafood and fisheries are important contributors to food security, livelihoods and potential economic and social benefits. Currently, Indonesia is the second largest producer from wild-capture fisheries worldwide, generating 6.1 million tonnes in 2013. Most capture fisheries production is consumed domestically. Seafood contributes more than 54 per cent of animal protein consumed. In terms of livelihoods, capture fisheries directly employ an estimated 2.7 million people. While the fishing sector is often perceived as a male domain, there is increasing recognition of the participation of women, particularly in small-scale fisheries and post-harvest activities.

Given the contribution of capture fisheries in Indonesia, there is concern over the state of fisheries resources and the need for effective governance to ensure fisheries remain a source of benefit for communities and provide pathways out of poverty. Recognising this, the ACIAR Fisheries Program has developed research partnerships and undertaken capacity building activities in Indonesia since 1995. The Program has aimed to strengthen Indonesia's fisheries research capacity to underpin improved fisheries management and governance.

This small research and development activity was undertaken in response to a request from the Indonesian Agency for Marine and Fisheries Research and Development (AMAFRAD), within the Ministry of Marine Affairs and Fisheries. The project has developed a draft *Strategic plan for ACIAR engagement in capture fisheries research and capacity development in Indonesia, 2015-25*. The priorities were developed through workshops in Indonesia and build on areas of previous success, as well as identifying new areas for focus.

The draft strategic plan identifies key areas for collaboration with ACIAR and Australian research partners across six priority areas:

- Productive and sustainable tuna fisheries
- Productive, sustainable and coordinated management of inland waters
- Evidence-based policy and management of marine protected areas
- Ecologically sustainable and healthy aquatic environments (marine and inland)
- Highly capable research institutions and research that contribute to evidence-based fisheries management and policy
- Effective engagement with women in stakeholder discussions, management and policy development.

The draft plan is aspirational, in that the priorities and strategies are potentially broader than ACIAR investment in the timeframe considered. However, the agreed approach was to maintain a broad view so that there was a range of opportunities for future engagement. Along with guiding ACIAR engagement, the draft plan can be used within AMAFRAD to assist their planning processes. The draft priorities informed ACIAR's focus for new Indonesian fisheries proposals in 2014.

It is anticipated that the draft plan will be launched in late 2015. The priorities should be regularly reviewed to ensure they continue to reflect Indonesia's needs and the best use of Australian-Indonesian partnerships through ACIAR.

### 3 Introduction

Seafood and fisheries play an important role in Indonesia, in terms of contributing to food security, providing livelihoods and potential economic and social benefits, particularly in coastal communities. In 2013, Indonesia produced an estimated 19.3 million tonnes of fisheries products, from both aquaculture and capture fisheries (FAO 2015). Indonesian exports of fisheries products were valued at US\$2.9 billion (2013; FAO 2015). Capture fisheries contributed an estimated 6.1 million tonnes of total production (2013; FAO 2015), making Indonesia the second highest producer from capture fisheries globally. Most of this production comes from marine fisheries, however, inland water fisheries can be locally important.

While Indonesia's capture fisheries production is substantial, this is in the context of high demand. Indonesia is the fourth most populous country in the world and 65 per cent of the population lives in coastal areas (Dahuri 2007; CIA 2013). Indonesia has one of the highest rates of seafood consumption in the world, estimated at 28.9 kg per person annually and contributing over 54 per cent of animal protein (FAO 2012). Most of Indonesia's marine capture fisheries production is consumed domestically.

Capture fisheries provide an important source of livelihoods, particularly in coastal communities. An estimated 2.7 million fishers are directly employed in capture fisheries in Indonesia (FAO 2013), mostly in small-scale fisheries. The number of fishers has continued to grow (Williams 2007). While the Indonesian fishing sector is often perceived as a male domain, there is increasing recognition of the participation of women, particularly in small-scale fisheries and post-harvest activities (Fitriana & Stacey 2012; Klieber et al 2014).

Given the contribution of capture fisheries in Indonesia, there is concern over the state of fisheries resources with ongoing overfishing and overcapitalization (Purwanto 2003; Williams 2007). Given the social and economic context there is an urgent need for effective governance to ensure capture fisheries remain a source of economic benefit for poor communities and provide pathways out of poverty. Despite the importance of fisheries, capacity in capture fisheries governance and management in Indonesia is limited. This (admittedly among other confounding factors) constrains the ability of the Indonesian government to manage its fisheries for the benefit of the nation, to meet obligations under international conventions and agreements, and results in economic and environmental losses.

Strengthening Indonesia's management capacity for capture fisheries should be underpinned by strengthened fisheries research and advisory capacity. The Government of Indonesia, through the Agency for Marine Affairs and Fisheries Research and Development (AMAFRAD), has recognised the constrained fisheries research and management capacity within the country and has worked with ACIAR to address elements of the issue over the past two decades. Recently (2010–11), AMAFRAD requested that ACIAR develop a strategic, long-term plan for enhancing capture fisheries research and associated institutional capacity development. The strategic research plan will also assist AMAFRAD to prioritise their capture fisheries research and staff development.

The aim of this small research and development activity was to improve Indonesia's capture fisheries management by providing a strategic and planned approach to ACIAR's capture fisheries research and capacity building. This will contribute to maintaining and enhancing the role of capture fisheries in economic growth, food security and livelihoods. In line with this, the specific objective of the project was to develop a 10 year strategic plan for ACIAR's Fisheries Program engagement in capture fisheries research and associated institutional capacity development in Indonesia.

The strategic plan builds on previous ACIAR initiatives and partnerships with Indonesian agencies. It also extends the *Net Returns: a human capacity development framework for marine capture fisheries management in South East Asia* (DAFF 2011) in the Indonesian

context. This capacity development framework was developed under the *Regional Plan of Action to promote responsible fishing practices including combating illegal, unreported and unregulated (IUU) fishing in the region* (RPOA IUU). The RPOA IUU was a joint initiative of the Indonesian and Australian governments that 11 South East Asian countries signed in 2007.

The original intention of this small research activity was also to provide training on specific elements of the use of fisheries research in policy development and management. However, after the project commenced it was determined that this was no longer a priority and the project activities should focus on the development of the plan through workshops in Indonesia. Participation in the process of developing the strategic priorities, including the use of the capacity development framework, provided some capacity development for Indonesian research management staff in approaches to research planning and prioritization.

The project has produced a draft strategic plan (Appendix 1) through engagement with AMAFRAD and in particular senior officers in RCFMC. There was also input to the priorities from the Directorate of Fish Resources within the Directorate General of Capture Fisheries and the Directorate General of Marine, Coasts and Small Islands Affairs. The draft strategic plan identifies the key areas for collaboration with ACIAR and the aspirational outcomes in the medium and long term (5 and 10 years respectively). It is anticipated that the current plan will be launched in late 2015 and updated through regular review with Indonesian agencies.

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## 4 Approach

The development of the draft strategic plan involved the use of a structured capacity development framework for identifying priorities, preparation of background contextual documents to inform discussions and workshops to agree the priorities. Input was also sought from Australian researchers who had worked on Indonesian ACIAR projects.

### Capacity development framework

The project used the *Net Returns: a human capacity development framework for marine capture fisheries management in South East Asia* (DAFF 2011) as the framework for identifying priorities. The preparation of the capacity development framework was a priority of the countries that participated in the RPOA (DAFF 2011). It was developed through a participatory, bottom-up approach that identified the capacity development needs for fisheries management agencies. Indonesian agencies were part of the participatory approach. The framework provides structured guidance for developing action plans within the individual country context.

This project used the relevant outcomes and activities from the framework, specifically:

- Outcome 3: Information systems strengthened
- Outcome 4: Regional and national scientific capacity strengthened to support fisheries management planning
- Outcome 7: Regional and international cooperation strengthened.

Appendix 6 provides the relevant components from the capacity development framework that were used to structure the workshop discussions. While the framework was developed in the context of marine fisheries, it was regarded as applicable to inland fisheries.

### Background contextual documents

ABARES provided background contextual documents to assist the identification of strategic priorities. Drafts of these documents were provided to the priority setting workshop.

### **Priority setting workshop**

A workshop to identify the priorities for the strategic plan was held in Bogor, Indonesia, 11 and 12 March 2014 (Appendix 2). The workshop's objectives were:

- To develop the priorities for the strategic plan for ACIAR's Fisheries Program engagement in capture fisheries research in Indonesia. Specifically:
  - Building on the relevant aspects of the *Capacity Development Framework for Marine Capture Fisheries Management* in the Indonesian context.
  - Confirm priority drivers for capture fisheries research in the Indonesian context.
  - Identify priority research themes in terms of fisheries, regions/locations and approaches (such as Ecosystem Based Fisheries Management).
  - Consider opportunities to progress previous projects along the impact pathway.

The workshop aimed to gather the priorities from the Indonesian agencies, and so most participants were from Indonesia agencies and the workshop discussion was conducted in Bahasa Indonesia.

The workshop outcomes were provided to key Australian researchers for comment on any potential gaps. The additional information provided from this process was considered at a follow-up meeting in Indonesia.

A follow-up meeting (Appendix 3) was held at RCFMC, Jakarta, Indonesia, 2 May 2014, to finalise and elaborate on the priorities identified in the March 2014 workshop. This meeting finalised the priorities in terms of species, regions and research issues. The final priorities were then provided to RCFMC for follow-up discussions with key agencies.

### **Strategic plan**

The draft strategic plan was drafted by ABARES based on the priorities identified in the Indonesian workshops. Drafts were provided to Indonesian colleagues for input and comment. The draft plan provides the context and high priority areas for ACIAR engagement in capture fisheries research and capacity building identified through the Indonesian priority setting workshop and follow-up meeting. The strategic plan has been structured around key result areas (the priorities) and for each of these, the medium (5 years) and long term (10 years) outcomes, strategies and measures of success are identified.

The agreed approach taken was to maintain a broad focus to portray the complete range of opportunities for future engagement. Therefore, the priorities and strategies are potentially broader than ACIAR investment in the timeframe considered.

The launch of the plan is anticipated in late 2015.

### **Australian advisory group**

The project had an Australian advisory group, with representatives invited from ACIAR, the Department of Agriculture, the Department of Foreign Affairs and Trade, the Department of the Environment and the Australian Fisheries Management Authority (AFMA). The advisory group met twice during the project to consider progress and provide input. Project updates were provided to the Indonesian – Australian Working Group on Marine Affairs and Fisheries.



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## 5 Achievements

### 1. Identification of priorities

The project team worked with senior officers within the key national agencies, primarily AMAFRAD, to identify their priorities for ACIAR's engagement in capture fisheries research and capacity development. The priority identification workshop had a high level of engagement from agencies at a senior level, with the acting Chairman of AMAFRAD opening the workshop (Appendix 2). There was participation by the Directorate of Fish Resources and the Directorate of Conservation and Marine National Parks, the policy and management agencies within the Ministry for Marine Affairs and Fisheries. This contributed to identifying research priorities that link to the policy and management drivers.

The priorities (key results areas) reflect the species and regions where ACIAR engagement was regarded as important and the most beneficial (Appendix 1). The priorities build on previous ACIAR engagement, where Indonesian agencies identified benefit in extending and expanding this engagement. The priorities also contain some areas of new focus, particularly in the fisheries – habitat conservation interface. This reflects the increasing focus of RCFMC in this area and the potential for collaboration and capacity building through ACIAR.

Opportunities for capacity development, for technical, research and science management staff, are a focus of the priorities. Elements of this would be delivered within fisheries specific projects. However, an explicit priority was identified to build capacity in areas that assist in integrating research outcomes with management and policy development. This includes building capacity to have closer and more effective engagement between research and management and policy areas and building capacity in the dissemination and communication of the research results.

There was a strong desire to replicate the human and institutional level capacity building that had occurred in Bali, demonstrated by the Research Institute for Tuna Fisheries (described in the information box in the draft strategic plan, Appendix 1). ACIAR was a key contributor to this institutional capacity development and there is an identified need for similar capacity development in the Bitung region of North Sulawesi.

A new focus that came through the priorities was increasing the understanding of women's role in fisheries and associated communities and the ability to more effectively engage with women stakeholders. ACIAR has a history of gender-related research in other programs in Indonesia, and there was a strong desire to build capacity and understanding of this within capture fisheries research. This was seen as important in assisting Indonesian agencies to improve the effectiveness of management and policy, assist in the implementation of the millennium development goals and link with the Ministry of Women Empowerment and Child Protection (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak)

The draft priorities were used to inform ACIAR's focus for new Indonesian fisheries proposals in 2014. The priorities should be regularly reviewed to ensure they continue to reflect Indonesia's needs and the best use of Australian-Indonesian partnerships through ACIAR.

### 2. Draft strategic plan

The development of the draft strategic plan was the primary objective of the project and represents a key achievement (Appendix 1). The draft plan provides context to the importance of ACIAR's engagement in capture fisheries research and capacity

building in Indonesia, the past focus of ACIAR work and the future priorities. The priorities in this plan were identified by the Indonesian agencies.

The priorities in the plan are structured into six key results areas, which cover the four species/regions regarded as high priority for ACIAR engagement and then two capacity development priorities. The plan identifies outcomes and strategies that can be used to address these key results areas. The priorities and strategies in the plan are potentially broader in scope than future ACIAR investment. Along with guiding ACIAR engagement, the plan can be used within AMAFRAD and RCFMC to assist in their planning process, and can assist in informing other Australian agencies of the Indonesian priorities.

### **3. Experience in undertaking the structured strategic planning process**

The process of conducting the priority identification workshops, particularly the use of the structured capacity development framework provided participating Indonesian participants, primarily research managers, with an approach to organising and undertaking strategic planning. The use of the human capacity development framework meant that the project built on a framework that Indonesian agencies had participated in the development of, operationalising it for capture fisheries research. The framework provided a structured approach to considering the drivers, the outcomes that were needed and the activities that could contribute to those outcomes. It is hoped that this experience may assist in structuring internal planning process within RCFMC.

### **4. Background documents.**

The project produced background documents to inform the priority setting workshop and provide context and background to the discussion.

- *Australian – Indonesian partnerships on capture fisheries research* (Appendix 4). This provides the context of previous ACIAR projects, the drivers for these and previous impact assessment work (Martin 2008). The project outcomes were categorized with respect to the capacity development framework and it is clear that most projects contributed broadly across a range of capacity development outcomes. The document informed discussion about how far along the uptake pathway different projects had progressed. The document also provided a brief overview of the current ACIAR strategy, other Australian Government initiatives and major activities underway with other donors. A draft was provided to researchers that had been involved in Indonesian ACIAR projects for comment.
- *Overview of Indonesia's capture fisheries, 2013* (Appendix 5). This document provided a high level overview of Indonesian capture fisheries and global trends. It summarises trends in production, trade, demand and supply, highlighting the role of capture fisheries in Indonesia. This document includes information on projected global trends in seafood demand and supply and potential implications for Indonesia. The brief summary of management arrangements within Indonesia, the international agreements and implementation of the ecosystem approach to fisheries management provided some context to the complexity of Indonesian fisheries. A draft was provided to Indonesian collaborators for input and review.

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## 6 Conclusions and recommendations

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### 6.1 Conclusions

- The project has developed the draft *Strategic plan for ACIAR's engagement in capture fisheries research and capacity building in Indonesia, 2015-25* (Appendix 1) The draft strategic plan identified the priorities (key results areas), that cover four species/regions and two cross-cutting capacity development priorities:

- Productive and sustainable tuna fisheries
- Productive, sustainable and coordinated management of inland waters
- Evidence-based policy and management of marine protected areas
- Ecologically sustainable and healthy aquatic environments (marine and inland)
- Highly capable research institutions and research that contribute to evidence-based fisheries management and policy
- Effective engagement with women in stakeholder discussions, management and policy development.

- The plan identifies outcomes and strategies that can be used to address these priorities. The processes used to develop the plan provide confidence that the plan represents a sound basis for future ACIAR investment and wider engagement in research and capacity building. The launch of the plan is anticipated in late 2015. Longer term, the priorities should be regularly reviewed to ensure they reflect Indonesia's ongoing needs.

- The priorities identified by the Indonesian agencies build on past successes, where ACIAR partnerships have contributed to addressing key research issues and building human and institutional capacity. The priorities include new areas of focus, such as understanding the role of women in fisheries and increased capacity to engage with women stakeholders. There is also increased emphasis on capacity development within the research institutions to enable researchers to contribute to evidence-based management and policy development.

- The strategic planning process built on the human capacity development framework developed under the RPOA IUU (DAFF 2011). This provided an opportunity to extend this framework in the Indonesian context and experience in the application of a structured, strategic planning tool.

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### 6.2 Recommendations

- The draft *Strategic plan for ACIAR engagement in capture fisheries research and capacity development in Indonesia 2015-25*, be used to focus for detailed discussion on future ACIAR projects.

- After the launch of the strategic plan the priorities and progress against these priorities should be regularly reviewed.

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### 7.2 List of publications produced by project

Draft *Strategic plan for ACIAR engagement in capture fisheries research and capacity development in Indonesia, 2015-25* (Appendix 1)

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## **8 Appendixes**

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**8.1 Appendix 1: Draft Strategic plan for ACIAR engagement in capture fisheries research and capacity development in Indonesia 2015-25**

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**8.2 Appendix 2: Priority identification workshop for the Strategic plan for ACIAR's Fisheries Programme engagement in capture fisheries research and associated institutional capacity development in Indonesia, Workshop Report**

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**8.3 Appendix 3: Priority identification workshop for the Strategic plan for ACIAR's Fisheries Programme engagement in capture fisheries research and associated institutional capacity development in Indonesia, Follow-up Meeting**

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**8.4 Appendix 4: Australian-Indonesian partnerships on capture fisheries research**

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**8.5 Appendix 5: Overview of Indonesia's capture fisheries, 2013**

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**8.6 Appendix 6: Extracts from *Net Returns: a Human Capacity Development Framework for Marine Capture Fisheries Management in South East Asia***