



**Australian Government**  
**Australian Centre for  
International Agricultural Research**

# Revised Project annual report

*project* **A nutrition-sensitive approach to fisheries management and development  
in Timor-Leste and Nusa Tenggara Timor Province, Indonesia**

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*prepared by* Dr David Mills (WorldFish)

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*co-authors/  
contributors/  
collaborators* Dr Sinead Boylan (CSIRO), Dr Gianna Bonis-Profumo (WorldFish)

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*approved by*

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# 1 Executive Summary

This report covers the first nine months of project implementation. The project team in Timor-Leste is anchored by project post-doctoral fellow Dr Gianna Bonis-Profumo. Gianna came to the project with highly relevant experience and networks from conducting her PhD on nutrition and animal sourced foods in Timor-Leste. She joined the project in January 2022, and relocated from Australia to Dili in April.

The project commenced in September 2021, however COVID travel restrictions limited project activities to desk-based research in 2021, and a nutrition-focused team meeting between CSIRO, Dr Bonis-Profumo, and the PL in Brisbane in December. This meeting was used to confirm and further develop approaches and methodology relating to direct nutrition research within the project. A side meeting with a number of ACIAR RPMs saw an agreement that Dr Bonis-Profumo would co-author a national nutrition situation analysis with an ACIAR funded consultant in support of ACIARs broadening ambitions in Timor-Leste. This in turn saw a re-design of the review undertaken by the project, to focus on available data on fish consumption. Both reports are currently in draft stage.

Indonesian components of the project are currently on hold due to institutional restructuring of national research capacity. The newly formed National Institute for Research and Innovation (BRIN) will ultimately be the project partner organisation in Indonesia, however at the time of reporting, arrangements between ACIAR and BRIN were yet to be finalised for project contracting or funds transfer. Nonetheless a team meeting was recently held with the BRIN staff and Indonesian consultant Dr Dedi Adhuri to keep connected and updated. As a consultant, Dr Adhuri has been able to undertake some early actions to engage with the NTT based project partner UNDANA.

The initial design of holding a set of intensive training exercises for the Indonesian and Timor-Leste teams together in Dili had to be restructured. In Timor-Leste the team has moved ahead with fish nutrient sampling work, capacity building activities with university marine science students, site selection and the first stages of interactions with focus communities. The current plan remains to attempt to get the team together later in 2022, as the benefits from the face-to-face training and project planning activities will be considerable.

An inception meeting with the Ministry of Agriculture and Fisheries (MAF), and Ministry of Health in Dili was held in May 2022. Project sites selected in collaboration with government partners in Timor-Leste are on the north (Baucau and Lautem districts) and south coasts (Viqueque district). South coast sites add logistic complications, but were specifically requested by the Ministry of Agriculture and Fisheries. District level meetings (one for the north coast sites, and one for Viqueque) were held in June 2022, and were well attended and enthusiastically participated in by community members, local health and fisheries staff. These meetings consisted of an information session in the morning, and focus groups in the afternoon as the first activity towards community livelihood and governance baselines.

Fish sampling protocols were developed, permits obtained and an initial 'test set' of 12 species important in diets collected from sites around Timor-Leste and imported to Australia for nutrient analysis. Samples were imported frozen, removing the need to set up complex freeze drying systems in Dili. Analytical protocols for most micronutrients have been developed by the CSIRO laboratory team, while vitamin A and B12 analysis will be outsourced.

The household nutrition baseline survey has been designed and coded for data collection on tablets using Kobo. Final development and testing of visual tools for estimating fish portion size is underway, and the survey will be rolled out in focus sites in September/October.

While the project has had a number of early setbacks, project components in Timor-Leste and now progressing very well, and a strong team has been built to support the project. Methods and approaches developed in Timor-Leste will be rolled out rapidly in NTT once Indonesian partners are able to join the project. Ongoing communication with the Indonesian team and the Indonesian ACIAR office will be essential in the coming months to ensure rapid start-up of Indonesian activities once institutional arrangements are finalised.

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## 2 Reflection on Project Design

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### 2.1 Project research strategy

#### 2.1.1 Responsiveness of research strategy:

The reporting period includes project start-up activities. A major reorganisation of planned early training and collaborative teamwork was required due to issues with initiating the project with Indonesia partners. This has impacted the strategies associated with team training, and development of specific theories of action for policy change in the two countries. Our modified approach is further elaborated in section 2.1.2.

A number of shifts have taken place in our approach in Timor-Leste, all of which are of some consequence, but either strengthen the project or won't have a major impact on outcomes. Our partners in the Ministry of Agriculture and Fisheries were very keen for one of the project municipalities to be on the south coast of Timor-Leste. The south coast is isolated by a mountain range and poor road infrastructure, but also receives relatively little attention in donor projects – including fisheries. The team agreed to accommodate this request. A second WorldFish project (GEF climate change project IkanAdapt) will also have south coast sites, so a degree of cost sharing can be leveraged for accessing these sites.

There are two areas where our thinking about the context and experimental design have shifted in relatively minor ways. These came about from both the interactions with communities and national partners in the selection of sites, and to recent research in progress under another project currently being led by WorldFish Timor-Leste.

Firstly, the site selection process has brought us back to the basic unit of analysis in this project – the fishery (gleaning and FAD fishing). In working with partners to identify project sites, we struggled to find paired sites – 1 with FAD fisheries, 1 with extensive gleaning – adjacent to each other. However, the unit of analysis for the project is not the community, but rather the fishery. These fisheries operate in communities as very separate entities with little or no interaction. As such, in two of the three districts, we settled on the same community site for both FAD and gleaning fishery analysis. This will be positive for the project, as selected communities are the more fish-dependent communities in the district, and incentives for engagement in project activities will be stronger. This has meant we have gone from 6 to 4 primary research sites in Timor-Leste. We intend to keep 2 sites in NTT as planned.

Second, with the added evidence from a recent experimental trial on FADs and fish consumption (Tilley et al., 2022<sup>1</sup>) we have recognised the high priority need of moving fish from coastal communities to inland areas, where access to animal source foods is typically more limited, and malnutrition rates tend to be higher. Project activities were planned to look at the major market connections to nearby inland communities (activities 3.2.2 and 3.3.2), however project resources did not allow for targeted research in these communities. By focusing in on

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<sup>1</sup> Tilley, A., Byrd, K.A., Pincus, L., Klumphy, K., Dobson, K., dos Reis Lopes, J. and Shikuku, K.M., 2022. A randomised controlled trial to test the effects of fish aggregating devices (FADs) and SBC activities promoting fish consumption in Timor-Leste: A study protocol. *PLoS one*, 17(7), p.e0269221.

fewer fishing communities, we free up resources to better focus on barriers and enablers for improved fish consumption in inland communities.

A further shift in approach relates to the nutrition situation analysis. In the December 2021 workshop on nutrition components of the project, the team met with ACIAR program managers to plan a broader nutrition situation analysis, and project post-doc Gianna Bonis-Profumo teamed up with a consultant to produce this report. Because of this, and due to a number of situation analyses already being available, the decision was taken to use a scoping study approach for the project analysis. This involves a synthesis approach to existing studies and data on fish consumption in Timor-Leste. This will complement and add value to the broader ACIAR study.

Following the initial team meeting with CSIRO, staff from the nutrient laboratory suggested samples be returned to Australia frozen. As funds were allocated initially for the setup of sample processing in TL, we recommend funds be redirected to supporting required external analysis of vitamins (A and B12) in samples.

### 2.1.2 Activities & outputs:

The sequencing of project activities has shifted considerably due to Indonesian project staff being entangled in the move to the National Research and Innovation Institute (BRIN). It has not been possible for Indonesian project staff to engage in the project, as the mechanism for formal contracting of the project, and transfer of funds have not been in place. The initial plan for the project was to hold an intensive week-long training workshop with all team members in Dili. This was to include the development of country-focused theories of change, and monitoring plans (activities 1.1.1, 1.1.2). However, as the project has not been able to commence in Indonesia, these activities have been delayed. We have run a number of inception meetings as required to launch project activities in Timor-Leste (nutrition team meeting in December 2021, inception with Timor-Leste MAF partners in April 2022, municipal-level inceptions (north coast and south coast) in June/July 2022). However, we have opted to delay the major training events until the Indonesian team can join the project. If institutional arrangements for Indonesia are not settled by October 2022, we will reassess this approach. A less ideal alternative is to run a hybrid event with Indonesian staff gathered in Jakarta and Timorese staff in Dili.

There were also delays in the inception and early activities of the project due to COVID travel restrictions and the recruitment of key staff. Dr Gianna Bonis-Profumo was recruited as the project post-doctoral fellow. Her experience, skill set, and networks are a fantastic asset to the project, however she was unable to relocate to Dili until the end of March 2022. In the time prior to relocating, she allocated most of her working time to the ACIAR Nutrition Situation Analysis for Timor-Leste.

While a number of project activities remain behind the original project workplan for the reasons outlined above, in recent months the team has been able to catch up with most activities as planned for the Timor-Leste components of the project.

Minor changes have been made to other activities for the project:

- 1) The stakeholder mapping exercise (activity 2.1.2) was dropped, as the recruitment of Dr Bonis-Profumo to the team meant that we brought on board a new set of existing networks in the health and nutrition sectors. A level of stakeholder analysis is also included in the ACIAR scoping report. not necessary as already documented, and existing networks.

- 2) Due to Marie Curie fellow Dr Ariadna Burgos joining the project team (see section 4 – Partnerships), we have been able to expand the capacity building activities with UNTL. Currently, Dr Burgos assisted by other WorldFish country program staff, are running a set of training workshops with 4<sup>th</sup> year UNTL students. These students will take up 3-month field placements in project focus sites and will work with women fishers to collect data on invertebrate fisheries and gleaning activity.

### 2.1.3 Intermediate Outcomes:

The selected intermediate outcomes for the project remain appropriate progress markers. Project inception activities with national and district partners have reinforced that there is considerable work to do in order to address current gendered perceptions around fishing activities. Despite engagement throughout the project design process, in the inception meeting with MAF, the project team met with some resistance to the project investing effort into gleaning fisheries, with notions expressed that they weren't valuable, and were environmentally destructive. The team was able to use previous research to push back and provide evidence of the importance of these activities. This underscores the effort that will be required to empower women in decision making and co-management processes (intermediate outcome "Women empowered and engaged in co-management across scales").

The project approach to participatory research (intermediate outcome "Co-developed nutrition solution trees.....") was also questioned at one of the community inception meetings. District officials noted "we know you are a research organisation, but what will you bring to communities?" The notion that this would be decided together with communities what the intervention actions would be was a very different approach, and led to an extended discussion on strength-based approaches and the value of collaboration between local and international players.

Strong engagement from the Ministry of Health in district meetings provided a very solid start to building the networks required to institutionalise nutrition sensitive approaches in the fisheries sector.

### 2.1.4 Project Monitoring and Reviews:

At this early stage of the project, we do not envisage any substantial changes to project monitoring activities.

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## 2.2 Reflection on gender strategy

The project is fundamentally gendered by design, with women's fisheries at the centre of project activities and women's access to fish fundamental to nutrition outcomes. Sites were selected based on having active women's fisheries. Engagements with government partners and community so far have strongly emphasised this feature of the project. Engagement from women and women's groups at district level meetings was strong for the north coast sites, although less so on the south coast. Meetings were held centrally in large hall areas, and we are confident that once project activities move directly into focal villages, women's engagement will be stronger.

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## 2.3 Reflection on capacity building strategy

As noted, team and partner capacity building activities planned around the inception meetings have been delayed. We are hopeful that we do not have to change strategy here, but can conduct these activities as soon as the Indonesian partners are able to join the team.

Capacity building activities with UNTL have been strengthened by the addition of Dr Ariadna Burgos to the project team. Details of the expanded activities with UNTL are provided in section 3.4.

## 2.4 Recommended adaptations to the research strategy

Beyond the changes mentioned in 2.1.1, the remaining uncertainty around the institutional arrangements with BRIN represent an ongoing risk to the planned research strategy. The contrasts between the governance setting in Indonesia and Timor Leste, while not central to the research questions for the project, add a particular dimension of interest. Currently, we have been able to move ahead in Timor-Leste with methods development and desk analysis, and we believe the Indonesian component can rapidly catch up once the team are on board. However, we still do not have a definite timeline for this, and will continue to assess our options moving forwards as new information comes to light.

# 3 Delivery on project activities, outputs and intermediate outcomes

## 3.1 Activities and outputs

Note – the table includes all activities with due dates within or soon after the reporting period, and any other activities on which the team has made substantial progress.

**Table 1: Project activity table**

No.	Activity	Outputs/ milestones	Completion date
1.1	Inception/training workshop and focus community selection	<p>Detailed, revised research framework and TOC co-produced with all partners with a facilitated focus on gender Yr1, Q2</p> <p>Detailed M&amp;E indicators and processes/Yr 1, Q2</p> <p>Country-specific theories of change/Yr, 1 Q2</p> <p>8 project focus communities selected (6 in TL, 2 in NTT) Yr 1, Q2</p>	<p>Due Yr1, Q2 Not completed</p> <p>Due Yr1, Q2 Not completed</p> <p>Due Yr1, Q2 Partially completed for TL</p> <p>Due Yr1, Q2 Completed for TL Partially completed for Indonesia</p>

<p><b>Comments for this reporting period</b></p>	<p>The inception meeting/week was conceptualised as major face-to-face activity involving substantial training for key project team members in both focal countries. The delay in the Indonesian partners joining the team led to a decision to delay this training/inception activity. The resources would not be available to repeat the training. Instead, a number of focused meetings have been held to ensure that activities could start in Timor-Leste, with major training activities to be held once the Indonesian team joined. An initial methods meeting was held between WorldFish and CSIRO from December 1-4, 2021. This meeting was particularly important due to the imminent departure of Dr Jess Bogard (and integral part of the project design team) on parental leave. A focus of this meeting was to make progress with the design of early key nutrition activities, including nutrient analysis, the scoping review, and the household survey. The project level TOC was revisited, and pathways between TOC levels further elaborated for nutrition work. This event included a meeting with a number of ACIAR RMPs and nutrition specialists to design a food systems scoping review, to benefit both ACIAR country-level objectives and project integration into food system research.</p> <p>A project 'socialisation' even with our MAF partner in Timor-Leste was held in March to elaborate components of the shared objectives, as well as discussing site selection and how this would add value to existing MAF and WorldFish activities. Notably, MAF strongly requested that one of the three project nodes be on the south coast. This</p> <p>Municipal workshops (one for Baucau and Lautem (74 attendees), one for Viqueque (55 attendees) involving men and women from focal communities, municipal fisheries and health staff (directors and key local team members) were held on June 9 and July 4, 2022. These were one-day events where key project objectives and methods were presented in the morning, while the afternoons included focus group discussions and presentation sessions from participants. Partners from UNTL (National University) assisted with group facilitation.</p> <p>Detailed TOCs and associated indicators have not been developed, as the resourcing available to the group will only be available for a single, whole of team, inception. We are hopeful that this will occur in Q4 2022 (Delayed due to Indonesian partners not being able to join the project).</p> <p>In Indonesia, while no project activities have been possible with BRIN partners as yet, a recent meeting with Indonesian project partners resolved that consultant Dr Dedi Adhuri will start the process of setting up the NTT sites and developing the collaboration with partners from UNDANA (activity previously under the BRIN TOR). As a result, we are in discussions with a health and nutrition academic from UNDANA to join the team, and discussion with the fisheries department are also underway. Preliminary discussions about site selection have been held, and this should be finalised in July.</p>		
<p>1.2</p>	<p>Participatory diagnosis of knowledge gaps in areas of seasonal livelihoods, resource and asset dependence</p>	<p>Further development of livelihood analysis tools first used in FIS/2010/097 and adopt recent innovations from the Pacific</p> <p>Gendered livelihood calendars in focus communities</p> <p>Asset maps for focus communities</p>	<p>Due Y1, Q3 Delayed</p> <p>Due Y1, Q3 Delayed</p>
<p><b>Comments for this reporting period</b></p>	<p>Activities delayed due to project recruitment processes, adding the additional ACIAR nutrition situation review (see 2.1 below), and the delay in initial deployment of the project post-doc to Dili.</p> <p>Engagements with fishers gleaners municipal health and fisheries teams initiated in Timor-Leste through municipal inception meetings, with initial livelihood scoping conducted through focus groups.</p>		

2.1	Nutrition situation analysis for Timor-Leste and NTT, Indonesia	<p>Working paper (based on 2.1.1 and 2.1.2) with identification of key knowledge gaps/Yr 1 – Q4</p> <p>Report/infographic brief on fish consumption patterns relative the diet (Added objective)</p> <p>Work with ACIAR consultant to produce nutrition situation analysis</p>	<p>Yr 1 - Q4 On track for TL Delayed for NTT</p> <p>Yr 1 – Q4 On track for TL Delayed for NTT</p> <p>Yr 1, Q2 Completed on time</p>
<b>Comments for this reporting period</b>	<p>Through discussion at the initial CSIRO/WorldFish project meeting, a scoping review approach was adopted for the analysis of the state of knowledge on fish consumption, and methodology developed, replacing the proposed situation analysis. This was because of the added objective requested by ACIAR of the project post-doc working with the ACIAR nutrition consultant (Heather Grieve) to produce a broader country-level nutrition situation analysis, but also the availability of a number of recent similar situation analyses. The fish consumption scoping review works more directly with available data to present the state of knowledge on fish consumption in Timor-Leste for different demographic groupings.</p> <p>Dr Sinead Boylan of CSIRO has completed a draft of the scoping review.</p>		
2.3	Survey of dietary patterns	<p>Standardised tools developed and validated for use</p> <p>Overview of fish species consumed, to ensure appropriate coverage of species in 2.4</p> <p>Report on dietary patterns of target group with special emphasis on the contribution of fish (filling key knowledge gaps identified in 2.1)</p>	<p>Yr 2 –Q1 On track</p> <p>Yr 3 –Q1 On track for TL</p> <p>Yr 3 – Q4</p>
<b>Comments for this reporting period</b>	<p>The survey design is 90% complete, with the final development and testing of a visual aid to portion size estimation currently underway. Kobo coding is at a similar stage. The baseline will be undertaken in Timor-Leste in September 2022.</p> <p>The project benefits substantially from recent experience among the WorldFish country team in conducting similar surveys. A team of eight local enumerators have recently completed 3 rounds of household surveys for projects on aquaculture and capture fisheries systems. This provides dividends in terms of both the likely data quality, and reduced need for close supervision in the early stages of sampling. It will substantially improve overall efficiency of the survey.</p>		
2.4	Nutrient composition analysis	<p>Journal manuscript on nutrient composition of important fish and seafood species in diets of vulnerable groups</p> <p>Data contributed to global database (FAO Infoods, potential new nutrition layer in FishBase) to increase capacity for nutrition sensitive policy development/</p> <p>Policy briefs in Tetun and Bahasa on nutrition benefits of gleaning, FAD and other coastal fisheries</p>	<p>Yr 3 On track for TL Delayed for NTT</p>



<b>Comments for this reporting period</b>	<p>In consultation with the WorldFish team, CSIRO laboratories, the Institute of Marine Research (Norway) and relevant airlines, Dr Boylan (CSIRO) developed a comprehensive sampling and transport protocol for the project. An import permit for transport of fish samples from Timor Leste to Australia was also acquired through CSIRO.</p> <p>1 round of fish sampling was completed in April 2022, with samples from 12 species of fish imported to Australia.</p> <p>External laboratories have been identified to undertake vitamin analysis that the CSIRO laboratories are not equipped to conduct. Analysis will be undertaken after a second set of seasonal samples are collected in September 2022.</p>		
3.1	<p>Reflective diagnosis of current or previous tenure rights, participation, and catch utilisation from FAD and gleaning fisheries</p>	<p>Overview of the functioning of FAD and gleaning systems across project focus communities</p> <p>Contribution to a regional (Asia–Pacific) science paper on management of FAD fisheries/</p>	<p>Yr 2 – Q4 Commenced in TL</p> <p>Yr 3 – Q4</p>
<b>Comments for this reporting period</b>	<p>The district level workshop held in Viqueque (South coast) included preliminary focus group discussion covering tenure, use rights etc. This will be done in greater depth with livelihood groups in focal communities as the next step in this analysis.</p>		
4.1	<p>Develop governance profiles and baselines in focus communities</p>	<p>Typology of existing governance and management systems affecting fisheries in focus communities</p> <p>Governance baselines as a key component of project M&amp;E</p>	<p>Yr 1 – Q4 Commenced in TL Delayed in NTT</p> <p>Yr 1 – Q4 Commenced in TL Delayed in NTT</p>
<b>Comments for this reporting period</b>	<p>As above, the district level workshop held in Viqueque (South coast) included preliminary focus group discussion covering tenure, use rights etc. This will be done in greater depth with livelihood groups in focal communities as the next step in this analysis.</p> <p>The project will host a New Colombo Plan scholarship holder (Ms Tarryn O’Leary – anthropology/marine biology dual major 4<sup>th</sup> year JCU student) for 6 months commencing October 2022. Ms O’Leary will focus on further developing the baseline governance analysis and approaches to monitoring change.</p>		
5.1	<p>Review relevant research from case study countries and national and regional SSF policies, their effectiveness and potential for integration of inclusive nutrition-sensitive approaches.</p>	<p>Working paper on the current policy environment and potential for integration of nutrition-sensitive approaches as background for activity 5.2</p>	<p>Yr 1 – Q4, updated in Yr 4 – Q1 Delayed</p>
<b>Comments for this reporting period</b>	<p>As this will be of greatest benefit as a comparative analysis between Timor-Leste and Indonesia, we have delayed this analysis until the Indonesian team can participate.</p>		
5.2	<p>Develop detailed theories of action/change for policy impact in Indonesia and Timor-Leste</p>	<p>Theories of action/change for policy engagements in Indonesia and Timor-Leste/</p>	<p>Y1, Q4 Delayed</p>
<b>Comments for this reporting period</b>	<p>This will be a facilitated activity as part of the joint project team training meeting. The project does not have the resourcing to do this twice (with TL and Indonesian project teams), and as such have delayed the activity until the BRIN team can join. This will be reassessed if it does not look like the BRIN team will be on-board by October 2022.</p>		

### 3.2 Summary of progress towards anticipated outcomes

At this early stage of the project, changes are not strongly evidenced through the monitoring system. (I note also the taxonomy of outcomes here does not align with that used in the proposal,

where intermediate outcomes ARE end of project outcomes, and ‘Outcomes’ are the broader objectives you are trying to influence, but have no direct control over).

**Table 2: Summary of project outcome information**

Intermediate outcomes	Results Summary	Evidence
Women empowered and engaged in co-management across scales	<ul style="list-style-type: none"> <li>Discussions with MAF partners in Dili, and district fisheries staff have consistently raised the profile of women’s fisheries, at times in response to direct questions about why we view these fisheries as important</li> </ul>	Captured in notes from project meetings
Increased capacity among diverse next users to engage in project lessons, tools and guidelines for implementing NSFIM	<ul style="list-style-type: none"> <li>UNTL students trained in collection of quality data on gleaning fisheries – training includes raising awareness of nutrition contributions from gleaning</li> <li>Strong engagement by health and fisheries government staff in project workshops builds understanding of the potential of fish to address nutrition security issues.</li> </ul>	<p>9 students completed week-long training course</p> <p>Captured in notes from project meetings</p>
End of project outcomes	Results Summary	Evidence
Unanticipated outcomes	Results Summary	Evidence
None at this stage		

### 3.2.1 Gender outcomes

The project is fundamentally gendered by design, with women’s fisheries at the centre of project activities and women’s access to fish fundamental to nutrition outcomes. At this stage focus groups have provided an indication of the active women’s groups in focal communities, and this will be used to build networks for further project actions. Team members will continue to actively build networks with women’s groups active in focal communities, and these will be key points for engagement as community activities ram up over the coming months.

As the first WorldFish project for our Timor-Leste program to be largely led by women in daily operation, this provides a strong role model to partners, and a strong signal to community participants regarding women in leadership.

### 3.2.2 Capacity building outcomes

Many of the early and substantial team capacity building activities of the project have been held off until Indonesian partners are able to join the team. We remain hopeful that this may happen late in 2022.

Section 3.4 provides detail on newly strengthened capacity building activities with UNTL under the project.

## 3.3 Key Findings/Knowledge generation

Project activities to date have largely been to building partnerships for implementation and for action in communities.

The review of fisheries consumption data has provided the best overview to-date of data availability and gaps. Most fish consumption data exists as only as consumption frequency, and as such a very limited component of the data provides quantitative data on consumption by different population groups. Consumption frequency data varies greatly between studies, sounding alarm bells regarding

method comparability. Overall, the analysis confirms low levels of fish consumption away from the coasts but provides some indication of increased consumption in recent years. The most comprehensive figures, and the most frequently cited statistics on fish consumption, come from a study with a small sample size that spanned only 5 of the 13 districts in Timor-Leste. The survey also confirmed that fish availability and access were the two major impediments to consumption, with a high percentage of households indicating they would consume more fish if it were available and affordable.

### 3.4 Most Significant Change observed by the project team this year



The project is at the centre of a new capacity building partnership between UNTL and WorldFish. The first actions of this partnership are to provide final year marine science students with internships to conduct their dissertation projects. These are the first 4<sup>th</sup> year students to come through the new Marine Science program at UNTL. The program is under-resourced, and the project provides an opportunity for high-quality training for a select number of high-performing students.

Project team member Dr Ariadna Burgos, and a number of WorldFish national team members have provided a 4-day intensive course on interdisciplinary approaches to fisheries research and management, and they will conduct a 5-day field methods training course for the students prior to their field placements in July 2022. Three students will be placed in project focal sites to collect data on invertebrate and gleaning fisheries. Six students will study governance arrangements in fishing communities. Students stay in the communities for 3 months, providing the opportunity for an intensive data collection exercise that will add depth to fisheries analysis within the project. This high-level training stands in contrast to limited opportunities provided within the marine science course at UNTL, due to very limited resourcing.

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## 4 Partnerships

Central to all WorldFish projects in Timor-Leste is partnership with the Ministry of Agriculture and Fisheries, who host our team (provide office space) in their compound in Dili. Research continues to be tangential to the fisheries activities undertaken directly by MAF, with the WorldFish annual budget substantially outsizing the government provision for research activities. Nonetheless, in 2022 for the first time, research activities with WorldFish have been specifically included in the National Budget allocation from the Ministry of Finance. WorldFish is the only agricultural research or development partner mentioned by name in the national budget documents. Areas to be funded include research on fish and nutrition. This investment from government is seen as co-funding for ongoing collaborative research efforts (including this project) and is the outcome of a decade of building trust through legitimate partnership.

Dr Bonis-Profumo brings a new set of networks to the WorldFish/government relationship, which have very quickly provided dividends to the project. The Ministry of Health (MoH) have engaged very directly, sending representative to district-level project meetings, and engaging very well with participants. The MoH have requested that we develop a 'nutrients calendar' for national fish production, that can be set alongside work they are doing with other food production sectors. This is a reasonably straightforward task given the catch and nutrient data we now have, and is a very useful addition to the nutrition-sensitive outputs and tools from the project.

A new 'opportunistic' partnership has developed within the project. Dr Ariadna Burgos, who has previously worked with the WorldFish team in Timor-Leste, was awarded a Marie Curie Fellowship co-supervised by the PL and Dr Natasha Stacey of Charles Darwin University. Dr Burgos is an ethnologist with the French international research institute IRD. Dr Burgos specialises in invertebrate fisheries and will work directly on gleaning components of the project, adding additional depth to outcome/outputs in the areas of interactions between taxonomy, social and nutrition outcomes from gleaning activities. Dr Burgos will be based with the team for 2 years.

The partnership with Universidade Nacional Timor Lorosa'e (UNTL) has developed well, led by WorldFish country staff and Dr Ariadna Burgos (see above). As noted in section 3.2.2, the team is currently training a group of 4<sup>th</sup> year students to collect data on gleaning fisheries during a 3-month field placement period. The project is directly supporting these students, and providing supervision and individual training for their field placements.

The project will host a New Colombo Plan scholarship holder (Ms Tarryn O'Leary – anthropology/marine biology dual major 4<sup>th</sup> year JCU student) for 6 months commencing October 2022. Ms O'Leary will focus on further developing the baseline governance analysis and approaches to monitoring change.

For Indonesia, institutional partnerships have been fraught, due to the development of the National Research and Innovation Institute (BRIN). The leader of the Indonesian project component (Dr Sonny Koeshendarajana) has moved to BRIN, and has assembled a new operational team from BRIN staff. Currently, the team appears similar in composition to that outlined in the proposal, however they have limited experience with nutrition research. The Indonesian team has identified a strong nutritionist from UNDANA (project partner university in Kupang) and conversations are underway for her to join the team.

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## 5 Risk Management

Due to the early stage of the project, we are not at a point to reassess risks associated with harm to environment or people. Any such risks will be associated with PAR activities of the project in years 2-4.

### *Project implementation*

There are two ongoing risks associated with project implementation:

**COVID situation in Timor-Leste.** WorldFish has a policy of regularly reviewing COVID risk associated with activities in our country programs. Currently, there are no restrictions in-place in Timor-Leste.

**Indonesian partners.** As noted, project activities in Indonesia have not started due to institutional change and an inability to contract the project with partners. This remains an evolving situation and will be managed through regular interaction with the project team in Indonesia and the Indonesian ACIAR office.

## 6 Appendices

### Appendix 1: Publications list

The project has not produced any publications to-date. A paper on approaches to measuring portion size in fish consumption surveys, and the Timor-Leste fish consumption scoping review are in draft.

### Appendix 2: Personnel table

List of active project members.

Optional to also provide details of any significant project personnel changes during the reporting period (maximum ½ page).

Project member	Institution	Comments
Dr David Mills	WorldFish	Project leader
Dr Sinead Boylan	CSIRO	Nutrition specialist – maternity leave replacement for Dr Jess Bogard
Dr Gianna Bonis-Profumo	WorldFish	Project post-doc. Recruited from mid-January 2022, based in Dili
Mr Mario Pereira	WorldFish	Community engagement
Mr Mario Gomes	WorldFish	Technical officer
Dr Ariadna Burgos	IRD/WorldFish/CDU	3 year Marie Curie Fellowship to work in association with the project on invertebrate fisheries
Ms Noviana das Dores Faria Simões	WorldFish	Temporary staff to assist with arrangements for district level project workshops
TBD – Research analyst	WorldFish	RA position currently being recruited. First round of interviews complete. Appointment expected next month
Dr Dedi Adhuri	Consultant	Currently providing some organisational capacity in Indonesia

Note – BRIN staff are not listed here as they are not currently active project members. Dr Koeshendarajana has assembled a new team for the project from BRIN staff who will be engaged once institutional arrangements for project operation have been finalised.

### Appendix 3: Annual Budget

The table provides the budget from project signing to the end of 2022, and the expenditure to-date. The substantial underspend in travel relates to COVID restrictions, and a trip in June not yet being reflected in the budget figures. Spend rate for research operating will increase substantially once Indonesian partners are on board, and community PAR activities commence.

The partner budget for CSIRO is in the billing process now, and the transfer will occur in July. CSIRO spending is on track. The partner budget for RCMF Indonesia has not been accessed due to the institutional issues with BRIN. We do not envisage any change to the BRIN budget at this point.

<b>Commissioned Organisation Expenditure</b>	<b>Budget Sept 2021 to Dec 2022</b>	<b>Expenditure Sept 2021 - June 2022</b>
Personnel	312,564	\$196,941
Research Operating Expenses	144,142	\$34,368
Travel	36,211	\$6,681
Capital	-	\$0
Infrastructure	64,080	\$30,943
<b>Sub-Total</b>	<b>556,997</b>	<b>\$268,933</b>

  

<b>Partners</b>	<b>Budget Sept 2021 to Dec 2022</b>	<b>Expenditure Sept 2021 - June 2022</b>
CSIRO,	150,362	56,015
RCMF, Indonesia	84,423	-
<b>Sub-Total</b>	<b>234,785</b>	<b>56,015</b>

Note : The expenditure amount has not gone through internal review therefore the amount may vary from the upcoming financial report which is due on the 31 July 2022.

### Appendix 4: Intellectual Property

No IP issues have arisen in the reporting period.