

Torres Strait Scientific Advisory Committee Meeting 79

Meeting Record
9-10 June 2021
Sebel Harbour Lights Cairns

Note all meeting papers and records are available
on the PZJA webpage: www.pzja.gov.au



Australian Government

Australian Fisheries Management Authority

1 Meeting Administration

1.1 Acknowledgement of Traditional Owners, welcome and apologies

1. The 79th meeting of the Torres Strait Scientific Advisory Committee (TSSAC) was opened at 915am AEST, on Wednesday 9 June 2021.
2. Attendees were welcomed by the Chair who acknowledged the traditional owners of the land on which all participants were on, and paid respect to elders past, present and emerging.
3. Apologies were received from Dr. Steve Newman (scientific member) and Mr Maluwap Nona (Traditional Inhabitant Industry member).

1.2 Adoption of agenda.

4. The agenda (Attachment A) was adopted as circulated by AFMA. A Traditional Inhabitant member questioned an issue concerning fisher safety raised in a previous meeting, noting that, and he hadn't received finalised outcomes from that meeting. AFMA noted that this may have been an AMSA meeting, and that they would forward the query on to that organisation.
5. The TSSAC noted that the main agenda item was to consider whether the TSSAC recommends funding for the three projects in which full proposals were sought by the TSSAC following the April meeting.

1.3 Declarations of Interest

6. The Chair advised members and observers, that as provided in PZJA Fisheries Management Paper No. 1 (FMP1), all members of the TSSAC must declare all real or potential conflicts of interest in related to Torres Strait research, most specifically the projects being considered in the current meeting. It was noted that where a direct conflict of interest is determined to exist, the TSSAC may allow the member to continue to participate in the discussions relating to the matter but may also determine that, having made their contribution to the discussions, the member should retire from the meeting for the remainder of the discussions on that issue. The TSSAC also noted that the current conflict of interest procedure came out of some issues with the declaration of interest process on another committee, where instigated a new policy for all Commonwealth and Torres Strait committees.
7. Each TSSAC member declared their interests against the agenda, as documented in **Table 1** (below).
8. Conflicts specific to each agenda item are also detailed against each member.
9. The TSSAC noted that Dr Pitcher works in the same organisation as the project investigator for the "*Close Kin Mark Recapture (CKMR)*" project, however does not work directly with him. Ms Williams works in the same organisation as the project team for the "*Torres Strait Finfish Fishery Spanish mackerel stock assessment*" and stock assessment projects.

10. Dr Pitcher, Dr Dutra, Dr Bedford, Dr Skewes and Ms Williams left the meeting to allow the TSSAC to discuss their potential conflict.
11. The TSSAC agreed Dr Pitcher and Ms Williams, did not have a direct conflict of interest and were welcome to be a part of discussions.
12. The TSSAC noted the presence of, Kenny Bedford, Tim Skewes and Leo Dutra., in attendance as observers. They were invited to the meeting to discuss outcomes from their two projects, and answer any questions of the TSSAC regarding potential future work if these projects were to continue beyond the pilot stage. These observers were advised that they would no play a part in the development of any specific recommendations for these projects.

Table 1. Declarations of interest for members and observers against. Each member includes a list of their positions and associations which have potential to create a conflict of interest. A note is also included as to whether each member has any specific conflict related to the TSSAC 79 agenda.

Name	Position	Declaration of interest
Mr Ian Cartwright*	Chair	Fisheries consultant. Member of QLD sustainable fisheries expert panel. No specific conflicts against this agenda.
Ms Selina Stoute *	AFMA Representative	Senior Manager Torres Strait Fisheries, AFMA. No specific conflicts against this agenda.
Ms. Lisa Cocking*	Executive Officer (AFMA)	Senior Management Officer AFMA. EO of TSPMAC. No specific conflicts against this agenda.
Dr Roland Pitcher*	Scientific Member	Fisheries Scientist, CSIRO. Some CSIRO projects are held by researchers in same office. See section 1.2 of meeting record for the TSSAC decision on managing this perceived possible conflict against this agenda during discussions.
Dr Dirk Welsford*	Scientific Member	Research scientist at Australian Antarctic Division. Sub-Antarctic resource assessment group. No specific conflicts against this agenda.
A/Prof Natasha Stacey*	Scientific Member	Researcher at Charles Darwin University. Past (early 2020) FRDC NT Research Advisory Committee member. Not involved in any Torres Strait related projects currently, however was a member of the advisory committee for the non-commercial catch project. No specific conflicts against this agenda.
Mr Mark Anderson	TSRA Member	The TSRA hold in trust, on behalf of the traditional inhabitants, sunset licences for the Finfish Fishery and hold licences in the TRL and BDM Fisheries. No specific conflicts against this agenda.

Name	Position	Declaration of interest
Mr Rocky Stephen*	Traditional Inhabitant Industry member	Kemer Kemer Meriam member. TSIRC Councillor for Ugar. President of Kos and Abob Ugar fishers association. Finfish working group member and Finfish RAG member. Partnership in fisheries business. TSRA member for Ugar. Member Zenadth Kes Fisheries Limited. Was a part of the project steering committee for the non-commercial catch project. No specific conflicts against this agenda.
Mr Patrick Mills*	Traditional Inhabitant Industry member	Member of the Torres Strait Fishers Association. TIB fisher. TRL Working Group industry member. No specific conflicts against this agenda.
Mr Gavin Mosby*	Traditional Inhabitant Industry member	Member Zenadth Kes Fisheries Limited. Member TSPMAC. No specific conflicts against this agenda.
Ms Michelle Winning	Queensland Fisheries member	Works in the same department as the principle investigator of the Spanish mackerel biologicals project being discussed. See section 1.2 of meeting record for the TSSAC decision on managing this perceived possible conflict against this agenda during discussions.
Observers¹		
Ms Toni Hay	TSRA	Works at TSRA. No specific conflicts against this agenda.
Mr Tim Skewes	Consultant	Independent consultant presenting on the project “ <i>Developing an approach for measuring non-commercial fishing in Torres Strait in order to improve fisheries management and promote sustainable livelihood</i> ”. Historic work on the sea cucumber survey. See section 1.2 of meeting record for the TSSAC decision on managing this perceived possible conflict against this agenda during discussions.
Mr Kenny Bedford	Consultant	Independent consultant presenting on the project “ <i>Developing an approach for measuring non-commercial fishing in Torres Strait in order to improve fisheries management and promote sustainable livelihood</i> ”. Director of Zenadth Kes Fisheries Limited. See section 1.2 of meeting record for the TSSAC decision on managing this

¹ Although observers are not a part of the recommendation process for the committee, possible conflicts of interest are still reported.

* denotes members who attended the tour of the Northern Fisheries centre, following the meeting on Thursday.

Name	Position	Declaration of interest
		perceived possible conflict against this agenda during discussions.
Dr Leo Dutra	Consultant	Independent consultant presenting on project “Scoping a future project to address impacts from climate variability and change on key Torres Strait Fisheries”.

1.4 TSSAC 78 meeting record and action items from past meetings

13. The TSSAC noted the ratified TSSAC 78 meeting record, distributed to members on 28 May 2021.
14. The TSSAC noted progress against actions arising from past meetings. They discussed action item 73.6 “*consider options for presenting information on research to a TSIRC meeting, giving a bigger picture view of research for communities*” in further detail, noting this action item came out of an initiative to strengthen community relationships, and understandings around research in the Torres Strait.
15. The TSSAC agreed that it would still be useful for a representative of the TSSAC to attend a TSIRC meeting, to give them the bigger picture and context of research in the Torres Strait. This will help them understand why TSSAC are sending them information about research during the pre-consultation phase.
16. They also agreed it would be useful to continue to develop better stakeholder engagement, which is specific to each stakeholder group. The review of the Torres Strait guidelines for research, which AFMA is reviewing against the new AIATSIS guide, should provide a good starting point for discussion at TSSAC in November.
17. One of the researchers presenting at the meeting who is also a traditional owner in the Torres Strait provided feedback based on his experience on the pre-consultation requirements for Torres Strait research. He noted that there is a need to balance the need for the pre-consultation process, with the time and resource requirements this places on the researchers, before a project is even funded. He noted that it was even difficult for him as a traditional owner to do this pre-consultation, so he wondered how hard it would be with those who don’t have connections. He was concerned that if the pre-consultation process is too complex, it will put off some researchers from working in the Torres Strait.
18. The TSRA noted that they are currently working with communities to develop a strategic communication plan, from the ground up, working with the communities to identify their priorities for communication.
19. The TSSAC noted the progress made to date with engaging Torres Strait community members as a part of PZJA consultation processes. The recent black teatfish briefings visited every community and took 1-2 hand collectable committee Traditional Inhabitant member with them, as well as a Malu Lamar representative.

ACTION 79.1: AFMA to contact TSIRC to discuss options for providing a presentation on Torres Strait research at a TSIRC meeting. This aims to give councillors background on research, including the pre-consultation processes TSSAC use to engage councillors as a part of project development.

2 Presentations and discussions on past scoping projects

20. The TSSAC noted that the objectives of agenda item 2 are to:

- receive a presentation on each project;
- understand the major outcomes relating to the objectives of the two scoping research projects undertaken in 2019-20 and 2020-21;
- discuss the possible elements of future projects, if either of these projects were to move beyond the scoping phase, including the risks and benefits; discuss estimated budgets for each project, and possible external funding sources if the projects were to go ahead; and
- determine whether the two projects are still considered important, and worth discussing at the November scoping meeting, where a list of projects for future funding will be identified.

2.1 “Developing an approach for measuring non-commercial fishing in Torres Strait in order to improve fisheries management and promote sustainable livelihood”

Project background and recommendations

21. Mr Kenny Bedford and Mr Tim Skewes, part of the project team for the project “*Developing an approach for measuring non-commercial fishing in Torres Strait in order to improve fisheries management and promote sustainable livelihood*” (non-commercial catch project) presented on the major outcomes of the project. The TSSAC discussed options and considerations if the project was to move forward into the next phase.
22. The project objective was to identify which type of non-commercial monitoring program in the Torres Strait would most effectively meet the needs of stakeholders, including traditional inhabitants, fishery managers, fishery scientists and the broader public.
23. This project was an initiative of the quota working group subcommittee of the TSRA Board, and identified as a priority by the Traditional Inhabitants (TIs). TIs identified a need to improve estimates of non-commercial catch of commercial species to inform stock assessment and set sustainable catch levels, as well as determine the catch sharing between the sunset sector, and how much to keep for community consumption.
24. For this reason, the project is needed in order to protect traditional non-commercial catches.
25. The project team explained that stakeholders were generally supportive of the project in the pre-consultation phase. The TSSAC noted that if the project progresses beyond this scoping phase, pre-consultation will occur again to understand if the support of the project is still present. This is vital for continuing to build trust, particularly for a project such as this.

26. The TSSAC noted that the process used to identify the best method for data collection in Torres Strait included a literature review of current methods used in traditional and recreational fisheries around Australia, many of which were looking at Torres Strait traditional fishing, and lessons learned in using these past approaches.
27. The project team used assessment criteria to rank each possible method, based on the stakeholder needs that had been identified, and their level of importance. The results indicated that self-reporting using an app (or web-based approach indistinguishable from an app) is the best option. Extensive consultation was completed with stakeholders regarding this approach through the project, and would need to continue if the project goes ahead. This would ensure communities are on board with this option, and identify risks and concerns that would need to be managed around it.
28. The project recommendations included the need to pair the self-reporting approach with a data validation method, and household surveys were identified as an option by the project team.

TSSAC discussion of project recommendations and extension

29. The TSSAC discussed the possibility of collecting additional data through the “app”, beyond that directly relevant to fisheries management, both through household surveys and through other methods, but linked to the “app”. They agreed on the following major points:
 - The primary focus must remain on estimating the non-commercial catch of commercial species, which is AFMAs’ only mandate and core interest for fisheries management.
 - There could be some value in exploring, with communities, the extent to which the project could be used for the collection of data on other species, if this is driven by them due to a community need.
 - If there is an extension to non-commercial species, it should occur in a step-wise manner that would need considerable community consultation and trust-building, given the concern that there would be external constraints on additional species.
 - There would also be value in obtaining information on broader scale environmental and other changes e.g. fish kills, changes in fish behaviour, environmental influences related to climate change. This should be considered in building the app, through consulting stakeholder groups. This will assist with fisheries management however should also have buy on from communities.
 - The TSSAC noted that building confidence and connections with communities is the first step with the project, to ensure a sense of trust in the process, and more likelihood of success.
30. The TSSAC discussed some different views on the above, including whether or not the project should:

- Only focus on commercial species initially – where the methodology is developed first for commercial species only, then use the experience and relationships built to expand data collection to other species if desired by communities or
 - Begin to collect data on other species of interest at the start of the project, if communities decided it was desirable, noting this decision and any resulting data would be the business of the individual and communities.
31. The TSSAC considered a number of issues regarding the project if it is to move forward, listed below.
- I. Ongoing and extensive community consultation (include all islands and NPA areas) and co-design /participatory approaches will be essential throughout the project to ensure its success, and that the focus remains on the needs of communities, but also data needs to manage fisheries.
 - II. Data needs and data confidentiality concerns of communities remain paramount. Communities will guide what sort of data storage they feel meets these needs and decide how public the data they provide is (is it shared with family group, island group, cluster group or broader).
 - III. AFMA has the ability to house non-commercial catch data in house, and build the app type self-reporting system, which may be more economical than doing this externally. Communities, should they agree to such a system would be able to extract this data as well as enter it. This can be considered alongside external data management systems when communities explore their needs and wants around data storage and collection.
 - IV. It would be useful to consider AFMA's current data systems in terms of the format of data collected and stored. If communities decide to share some of this data for science, it will be much easier to use if it is in a format that will interface with the AFMA or other science agencies existing database systems.
 - V. The project team should work closely with TSRA and others to ensure that existing data and processes developed through other projects are used to best effect. The traditional ecological knowledge (TEK) team within the TSRA assisted communities to develop a data collection and storage system, which allows individuals to select who the data they enter is shared with (family, island, cluster groups or for science).
32. The TSSAC noted that the project team have recommended five steps to progress the project beyond this scoping phase:
- i. Community consultation and sign on (re engaging community regarding the suggested monitoring method to gauge support).
 - ii. App design and development options (including data collection and storage options, and what data may be collected beyond non-commercial catch of commercial species (such as other species, environmental etc)). This process should be through co-design with communities and Government to meet stakeholder needs).
 - iii. Develop App, database and data flow infrastructure

- iv. Community rollout – pilot (on some communities).
 - v. Community rollout – full-scale (to all communities).
33. The TSSAC agreed that if this project goes ahead, it should happen in two phases:
- Phase 1 should include steps 1 and 2 above
 - Phase 2 should include steps 3-5 above
34. The TSSAC agreed that the project scope released in the call for research should only include phase 1 (steps 1 and 2). This is noting it is not possible for the project team to cost all five steps, until step 1 and 2 are complete, and it is difficult for a funding provider to support a project which has an undefined budget for parts of the work.
35. The TSSAC, RAGs and relevant funding bodies can then consider the results of the first phase including costs, and decide whether to proceed through to the other three steps to implement the monitoring system.

RECOMMENDATIONS AND ACTIONS REGARDING THE NON-COMMERCIAL CATCH PROJECT

The TSSAC **AGREED** on the following recommendations and actions, if this project moves forward:

- The project should be split into two phases, and the project scope released in the call for research should only include step 1 and 2 (“phase 1”) of the five step process above. These two steps will cost out the rest of the project, at which time the relevant PZJA forums and TSSAC will consider the project for funding the remaining steps (pilot and full implementation). This is noting it is not possible for the project team to cost all five steps, until step 1 and 2 are complete, and it is difficult for a funding provider to support a project which has an undefined budget for parts of the work.
- That the focus of this project should remain with non-commercial catch of commercial species initially, however if communities wish to collect other information early on in the project, as their own initiative, this could be incorporated. This would be determined through step 1 and 2 of the project, using a co-design method with communities. In particular, communities should be consulted on whether they have any data they would like to collect (such as non-commercial species data) through this app for their purposes (not related to fisheries management as it isn’t the PZJAs mandate), which would add value to it beyond non-commercial catch of commercial species. They also need to guide the data storage and access process, including the types of people they would want to share the data with (like family groups, island groups or broader).
- Community expectations need to be managed around the full project going ahead, noting only the first two steps will be funded initially, if the project goes ahead.

- All Torres Strait communities, and Northern Peninsula Area communities should be consulted as a part of any future project.
- The non-commercial catch monitoring project research scope should include a requirement to consider alternative tools to an app, that fulfil the same function (such as webforms) as the non-commercial take monitoring tool, to ensure value for money, including upkeep and maintenance costs.
- Ensure data biases are accounted for if the non-commercial catch monitoring project progresses, noting there will be some fishers reporting a lot and others not at all, skewing results. Statistically adjusting the data will account for this, and needs to be considered in this project.
- Ensure project team work alongside AFMA if the non-commercial catch monitoring project progresses, to ensure the data is collected in a way that will allow the data to be pulled into the AFMA database (if AFMA was chosen to be used to store the data).
- Draft scope for the non-commercial catch data collection project to be developed for TSSAC 80 meeting in November, for scoping discussions.
- Data ownership and intellectual property for the non-commercial catch data collection project needs to be discussed and managed effectively based on community needs. This can be established during the consultation phase of the project.
- Non-commercial catch data collection project team to consider what environmental (or other) data that could be collected through the app, which would be useful for managing climate change or other factors relevant to managing commercial fisheries.

The TSSAC **NOTED**:

- That the first two steps may take longer than a year, given their complexity (including deciding what data to collect beyond commercial species, and where and how to house the data) and the level of consultation required. However undertaking the work as quickly as possible is a priority.

2.2 “Scoping a future project to address impacts from climate variability and change on key Torres Strait Fisheries”

Project background and main outcomes

36. Dr Leo Dutra, the project lead presented the background and main results to come from the project “Scoping a future project to address impacts from climate variability and change on key Torres Strait Fisheries” (climate change project):

- The project was looking at Torres Strait fisheries including prawn, tropical rock lobster, finfish, beche-de-mer, turtle and dugong.
- The project undertook a literature review to identify what we already know about climate change predictions and impacts in the Torres Strait.
- The project identified the environmental drivers that affect recruitment, growth, mortality rates, catches and species habitats, which would be inputted into the model. This included nutrients, sediments and currents, temperature, wind, major climate events and PH.
- Dr Dutra explained that species information, predators, habitats and environmental influences all input into the model (Figure 1).
- The project identified limited datasets for most Torres Strait fisheries, and for climate information in the Torres Strait, however global climate models and some BOM data are available, meaning the modelling will be able to begin sooner, and then continue to be refined throughout the process.
- Regular climate and fishery data is needed for input into the model if it is developed.

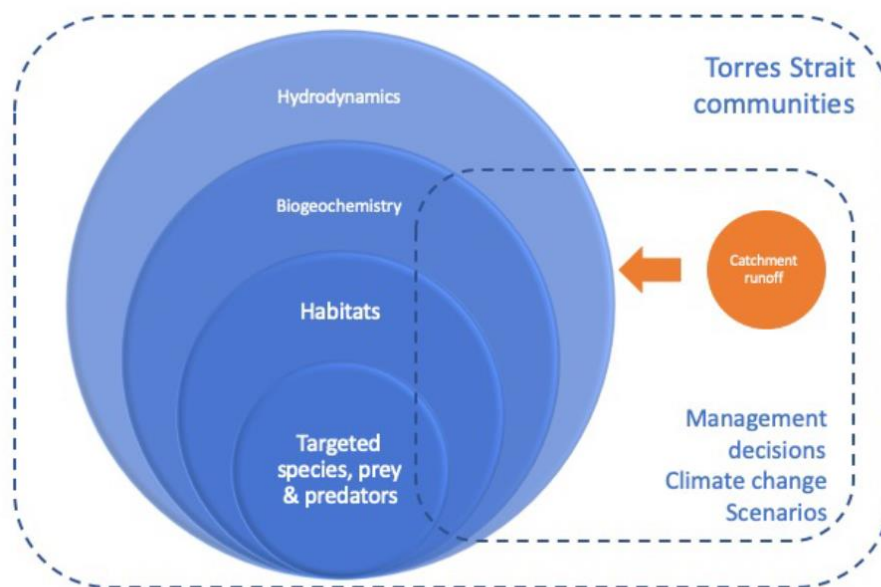


Figure 1. Desirable Torres Strait Climate model features.



TSSAC discussion of project recommendations and extension

37. The TSSAC discussed options for gathering more data if the project was to go ahead, and noted that employing someone to collect climate data (2 deployments of 2 months each would be recommended by Dr Dutra) would be very costly.
38. The TSRA noted the land and sea management within TSRA are already collecting ongoing climate data (weather and marine monitoring), which is managed by AIMs. This data could be used for the project.
39. The TSSAC noted that there is a need to generate a greater awareness at the political level of the predicted climate change events and the wide range of

impacts it will have on Torres Strait communities, including fisheries, infrastructure and inundation. This is very important to communities, beyond fisheries resources, as Torres Strait is particularly vulnerable and exposed to climate change. Torres Strait islanders have a higher reliance on living marine resources for food, and as livelihood as they don't have other industries (such as mining) to move into, in the remote area.

40. A traditional inhabitant member noted that he will raise the matter with the TSIRC mayor, for tabling at a TSIRC meeting.
41. The TSSAC noted that some of the information on these slides would already be a useful communication tool, which could be turned into an infographic or such, for community extension.
42. Some of the information that could be gathered through this project could have applications beyond fisheries management, and thus seeking support and funding from other agencies or bodies may be helpful and appropriate, to make the most of this project.
43. If the project was to progress beyond this scoping phase, the TSSAC agreed the project would provide a range of information that is of value to fisheries management, including:
 - Understanding interactions between fisheries and ecosystems.
 - Understanding impacts that different climate change scenarios could have on fisheries/ species.
 - Understanding impacts of changes in catchment conditions and rainfall.
 - Understanding impacts of incidences.
 - Assisting fisheries managers and communities with preparation for adaptation, where possible.
 - Providing predictions of changes in abundance, growth, reproductive capacity and distribution.
 - Helping to differentiate between the relative effects of fishing and environmental (climate) change on marine resources.
 - Use existing, and new data to be collected, to generate information of value to other sectors beyond fisheries, e.g. water circulation, winds, predicted sea level rise, rainfall and wind speed.
44. The TSSAC agreed that the FRDC could be approached for funding (noting FRDC will be invited to attend the November meeting), however other agencies should be considered as well. This should include exploring federal and other funding options beyond FRDC (councils, state environment agencies), and any identified could be invited to the November meeting.

RECOMMENDATIONS

The TSSAC **AGREED** that the project needs to:

- be made a priority, as there are very real climate change threats to the Torres Strait;
- be tackled at a national /political scale and funding beyond TSSAC will need to be secured due to the high cost of the project;
- provide clear guidance on risks, threats and opportunities (if any) associated with climate change, and actions to address them;
- identify other participants both for funding and end users; and
- that the modelling should start with focusing on commercial fisheries, and then can be upscaled to have more information on other fisheries etc.

ACTION 79.2: AFMA/ TSRA to consider whether information within the climate change slideshow could be useful to put into an infographic for presentation to communities.

ACTION 79.3: AFMA to work with other TSSAC members (including Natasha Stacey and Toni Hay) to identify a list of possible funding sources (Government and otherwise) for the climate change project, and consider whether they should be invited to the November meeting.

3 Full Proposals

Spanish Mackerel and Coral Trout Biological Sampling project presentation of results to date

45. Before the committee started discussions on the full proposals, Mr Andrew Trappett, part of the project team for the Spanish mackerel and coral trout biological sampling project presented on results and lessons learned around this project during the first two years that have been completed.
46. The TSSAC noted, in the interest of conflicts of interest, that he would be presenting on the project to date only, and is able to answer any questions related to the these first two years, however will not be talking about the current proposal being presented for consideration today.
47. The following key points were noted about the project to date:
 - The objectives of the project are to collect representative length measurements from the fishery, as well as sex and age (commercial catches) through collecting fish frames.

- The second year of the project introduced the collection of catch composition (sex, age and length) for four coral trout species.
 - Another objective has been to provide the findings to the communities.
 - They have a strong focus on explaining to communities that it is there data to support their fisheries, to try to improve understanding and interest in being involved.
 - They have completed community workshops on Erub, Masig, Ugar and Mer focused on explaining the science of the fishery and how they data they are providing supports the stock assessment.
 - There has been a lot of community interest in this project.
 - As well as the initial community meetings, they have completed more dedicated training on Erub and Mer to provided 1-1 training in data collection for some interested community members that are actively providing a lot of samples for the project.
 - The second year of the project has brought some samples from Ugar, which is a big step forward for the project.
 - Both the traditional and sunset sectors are providing samples.
 - 1500 mackerel length measurements were taken from 41 catches last year, with a subset of 225 to sex and age, and store genetic samples for any future genetic work.
 - In the 2020-21 season:
 - 2300 Spanish Mackerel were measured from 52 catches. Sex and age was recorded for 302 samples, and 292 genetic samples were stored.
 - 716 coral trout were measured from 15 catches with 140 having sex and age recorded.
 - The project team are still hoping to get more volunteer fishers for measuring length sheets and providing around 1-2 catches a month if possible to get a good data set across time.
 - They are also encouraging businesses to integrate that data collection into their business practice where possible.
 - Fishers are paid for their samples (\$5 per frame and \$40 per catch) to compensate for their time and freezer space.
 - The project team have been developing infographics to show the results to have and would be grateful for feedback on them. If the project is funded again, they hope to develop more infographics, videos etc to present results.
48. The TSSAC thanked Mr Trappett for presenting on the project and for all of the great work that has occurred regarding engagement with communities, building trust and understanding. Mr Trappett thanked communities for their ongoing support in the project.
49. Mr Trappett left the meeting.

TSSAC full proposals and budget

50. The TSSAC discussed the project budgets and proposals.
51. The TSSAC noted that the TRL project is still under contract, committing \$290,824.
52. Given TSRAs commitment of \$150 000 to research funding in 2021-22, there is still sufficient funding to cover all three projects between AFMA and TSRA funding, with the projects totalling \$559,692 in 2021-22.
53. The Spanish mackerel stock assessment and finfish biologicals projects are seeking three years of funding each. The close kin mark recapture project is only for one year of funding in 2021-22.
54. The TSSAC noted if the three projects are supported, the available budgets in 2022-23 and 2023-24 will be greatly reduced.
55. The TSSAC noted that all three projects fall under theme 1 and 2 of the strategic research plan.
56. The TSSAC noted there had been a decrease to the budget for the CKMR project in the full proposal compared to the pre-proposal. This decrease is the result of Rik Buckworth's time being offered in kind.

3.1 Torres Strait Finfish Fishery: Coral Trout and Spanish Mackerel Biological Sampling 2021-24

57. The TSSAC noted that this proposal would take the project into its third year, and is seeking three years of funding.
58. The TSSAC noted the responses to the questions put forward by the TSSAC to the pre-proposal. These responses are detailed in the cover letter for the full proposal at [Attachment B](#). The TSSAC were comfortable with the responses to the questions.
59. One of the research members raised a need to consider how all three projects being considered interact with one another, particularly the stock assessment project. However they are definitely supportive of this project.
60. Another scientific member noted the incredible commitment and passion of the team, in not just providing data, but working hard to educate and improve community outreach to ensure a good outcome for the project.
61. The TSRA noted that they have funds for installing freezers on every community, which will help fishers in general, and may also support this project with freezer space, however they are having difficulty getting sign off on the land where they would be installed.
62. The TSSAC agreed that there is strong support for this project, which will be needed for at least three more years, and noted there are some links between this project and the stock assessment and CKMR projects.

RECOMMENDATION: that the Finfish biological sampling project be supported for funding for three years without changes to the proposal.

3.2 Torres Strait Finfish Fishery Spanish Mackerel Stock Assessment

63. The TSSAC noted and discussed the questions which had been raised with the researchers, by the TSSAC, relating to the streamlining process and the costs and benefits of staying with a bespoke model versus moving to an open source stock assessment model.
64. The TSSAC were unsure whether the savings outline in the full proposal, as being related to the streamlining process, are applicable to the current bespoke model, or only if they move to the new stock synthesis open source model, which is now suggested in the proposal.
65. The TSSAC questioned whether investing money in further developing and streamlining this stock assessment at this point is a good investment of money, if that model may not fit CKMR data into it. They agreed the project team should be asked whether the stock synthesis model will be able to integrate the CKMR data if we move that way.
66. The TSSAC discussed the links between the three projects, and whether carrying them out all together is the best option, or if it should be strategically prioritised, noting information from some projects may affect others.
67. They agreed that the biologicals project is a standalone, and even if CKMR is used in the future, it will be extra data to input into the stock assessment and the biological data would still be needed.
68. They also noted that if the fishery does move to a stock synthesis model the CKMR outputs should still be able to be inputted into that type of model. So working on moving to that type of model would not be redundant. It was agreed that this assumption should be clarified with the project team.
69. The TSSAC discussed the possible ongoing expenses associated with all of the methods being considered or used in this fishery, and whether it was feasible to be using all of these methods in such a small fishery with relatively low GVP (if the biologicals, CKMR and stock assessment are needed every year). They agreed that the RAG will need to provide advice regarding the level and frequency required for each these components going forward, but that it is still worth investing in the CKMR work now.
70. The TSSAC agreed that two questions needed to be clarified with the project investigator before the second day of the meeting if possible, to enable TSSAC to make a recommendation on this project:
 - Will the stock synthesis model be fully delivered as a part of the project as it stands, if supported by the RAG?
 - Will a stock synthesis model need redevelopment if the CKMR work is successful, or would a completely different model be needed?

71. The TSSAC continued discussions on Thursday, where Michael O’Neil, the project primary investigator joined the meeting via teleconference at 915am.
72. Dr O’Neill clarified for the TSSAC that some streamlining will be undertaken early on in the project. This streamlining is generic, and applies to both models, and will increase the efficiency of report writing right away. The streamlining will then be finalised once the RAG make their final recommendation on which model should be used (bespoke or stock synthesis). This final and specific streamlining will only occur for that chosen model.
73. Dr O’Neill also indicated that he is unsure of whether the stock synthesis model will be able to handle CKMR data, however the bespoke model would. He knows the stock synthesis model can handle multiple indices of abundance, so hopefully they will be able to make it work.
74. The TSSAC thanked Dr O’Neill for the clarification on the questions and accepted his responses.

RECOMMENDATION:

The TSSAC **AGREED** to support this project to go forward with no changes to the full proposal.

The TSSAC **NOTED** the streamlining process will occur in two phases:

1. Streamlining of the data will occur early in the project, noting it is relevant to which ever model is chosen.
2. The streamlining of the model will occur once the FFRAG decide which model to use.

3.3 Designing a close kin mark recapture (CKMR) study for Torres Strait Spanish Mackerel

75. The TSSAC again noted that the purpose of the CKMR method is as a tool that will tell us if a trend in the CPUE is due to a declining stock, or something else, creating greater certainty in the assessment. This feasibility study aims to determine how many samples will need to be collected over what period, in order to answer this question. The method can also be used ongoing, or as a point estimate as a once off for the stock assessment.
76. They discussed the questions put to the project team by the TSSAC, of which the full questions and answers are detailed in Attachment X. A few major points were discussed in further detail:
 - The TSSAC did not necessarily agree that samples from PNG were less important as they are not commercially fishing, as we need to know how many fish are in PNG and if they are related to the Torres Strait stock. However if they are unable to get this data, given they will be getting data from Bramble Cay, and given area this is so close to PNG with considerable stock exchange, that should be sufficient.

- The TSSAC also noted the desire from some traditional inhabitant members to have rules on treaty endorsements, to mandate that PNG fishers under a treaty endorsement must provide catch data when they fish.
 - The TSSAC also noted that knowing the relationship between the PNG and Torres Strait stock will also be useful for climate change work.
77. The TSSAC noted that ideally the TSSAC would be provided with an estimate of the number of samples needed for a full CKMR project, and a costing of taking and analysing those. This would let the FFRAG consider whether it's worth investing in a feasibility study, if estimates of a full scale project are cost – prohibitive.
78. The TSSAC noted the project team are not able to provide any further information than they have regarding this, which is 3000-5000 samples over the life of the project (3-5 years). This would work out at \$50 000 a year (\$250 000 total) for the genetic analysis (SnPs), and \$25,000 per year for epigenetic aging. So a very rough estimate would be around \$100 000 a year.
79. The TSSAC have some concerns regarding the likelihood of being able to gather that number of samples, even using the sampling gun, noting it is unknown how many samples will be contaminated.
80. The TSSAC noted that testing the sampling gun method should be a part of the feasibility project, rather than just assuming it will work in a full project in the future.

RECOMMENDATION:

The TSSAC **AGREED** that this project should go ahead, providing the Finfish RAG are confident that two concerns of the TSSAC below, are manageable/ less of a concern in their expertise:

- The scale of sampling and related cost in a full-scale project (not the feasibility study) relative to the scale of the fishery. If this is cost-prohibitive then proceeding with this feasibility project is questionable. An estimate of costs could/should be developed that would answer this question.
- Currently only several hundred otolith samples are being collected through the finfish biologicals project – stepping up to several thousand field samples in any

ACTION 79.4: AFMA to provide TSSAC advice to the Finfish RAG regarding the TSSAC concerns with the CKMR project, and seek their advice as to whether they believe the project should go ahead regardless.

4 Other Business

4.1 Funding

81. The TSSAC noted the ongoing concerns about the level of funding for TSSAC research. They noted the following main points:
- When considering inflation, the budget today, of around \$420 000 is very low, compared to the spending power of the \$500 000 budget provided in the

past. The TSSAC is in need of sufficient funding to provide adequate information to enable fisheries resources to be managed effectively.

- In addition to the value of the dollar, the issues we are dealing with and trying in Torres Strait fisheries today are more complex, and there are more research needs.
- AFMA's budget is limited (not just in research), and they have also taken on more PZJA functions the last few years from the Queensland Government (licensing and compliance), with no extra funding.
- The Chair suggested a high-level inter-agency discussion, noting that if three agencies have responsibility for Torres Strait fisheries, all three agencies should be contributing an appropriate level of funding for fisheries research.
- It was noted, with thanks, that the TSRA are now providing more ongoing support for Torres Strait research.
- Queensland fisheries used to complete and pay for the prawn and beche-de-mer research as well, which is now being funded through the general TSSAC budget.
- Continuing to try to build other funding partnerships is a good initiative.
- The TSSAC noted that there was a recent announcement of 100 million dollars for sea-country management from the Department of Environment (Susan Lee), which could be a funding source for some of or projects, particularly the non-commercial take project.

RECOMMENDATION: The TSSAC RECOMMENDED that the Chair speak to the AFMA CEO regarding TSSAC research funding, and a conversation between PZJA senior officials regarding research funding contributions.

ACTION 79.5: TSSAC Chair speak to the AFMA CEO regarding TSSAC research funding.

ACTION 79.6: Associate Prof Stacey to provide contact details for staff in the Department of Agriculture, Water and the Environment (DAWE) that may have funding available that could be used for TSSAC research.

ACTION 79.7: AFMA to consider inviting a representative from the DAWE to the November funding meeting.

4.2 Next meeting

82. The next meeting will be held on Tuesday 30 November to Wednesday 1 December on Thursday Island. This meeting will invite FRDC and any other agencies of possible funding providers identified.

4.3 meeting close

83. The Chair thanked members for attending the meeting. The meeting was closed with a prayer at 1015am.
84. A number of members attended (indicated with a star in the attendees table) a tour of the Northern Fisheries Centre facility, to learn about some of the practices used in the Finfish Biological Sampling project. This initiative came out of TSSAC 78, where a tour was suggested as an opportunity for members to gain a better understanding of this ongoing project work, given the meeting was happening in Cairns.

Table 2. Actions from TSSAC 79 and progress against actions from past TSSAC meetings.

Action	Action item	Member	Progress
79.1	Contact TSIRC to discuss options for providing a presentation on Torres Strait research at a TSIRC meeting. This aims to give councillors background on research, including the pre-consultation processes we use to engage councillors as a part of project development.	AFMA	
79.2	AFMA/ TSRA to consider whether information within the climate change slideshow could be useful to put into an infographic for presentation to communities.	AFMA/ TSRA	
79.3	AFMA to work with other TSSAC members (including Natasha Stacey and Toni Hay) to identify a list of possible funding sources (Government and otherwise) for the climate change project, and consider whether they should be invited to the November meeting.	AFMA	
79.4	AFMA to provide TSSAC advice to the Finfish RAG regarding the TSSAC concerns with the CKMR project, and seek their advice as to whether they believe the project should go ahead regardless.	AFMA	
79.5	TSSAC Chair speak to the AFMA CEO regarding TSSAC research funding.	TSSAC Chair	
79.6	Associate Prof Stacey to provide contact details for staff in the Department of Agriculture, Water and the Environment	Natasha Stacey	

	(DAWE) that may have funding available that could be used for TSSAC research.		
79.7	AFMA to consider inviting a representative from the DAWE to the November funding meeting.	AFMA	
ONGOING ACTIONS FROM PAST MEETINGS			
77.1	TSSAC EO and the Chair to explore other funding options from other Government and non-government agencies, noting that fisheries are more and more recognised as providing value to other areas of priority, include people's health and wellbeing and 'Close the Ga'p initiatives. This action will include formal communication with TSRA, FRDC and AFMA regarding funding commitments and options, for presentation to the TSSAC through a paper on funding options.	TSSAC EO	Ongoing. This will be addressed at our November meeting.
77.2	TSSAC to consider priorities that could be put forward for FRDC funding carefully, noting limits to funding for Torres Strait projects. There are several priority areas to consider that may be attractive to FRDC, including climate change, non-commercial catch monitoring and alternative indices of finfish abundance).	AFMA	Ongoing. This will be addressed at our November meeting.
73.10	Add a standing agenda item which reviews projects against the SRP themes to keep track of which themes we are covering. The review should also consider whether multi-fishery projects are being considered, which are often missed in fishery specific plans.	AFMA	Ongoing. This item was due to be considered at this meeting, however has been set aside for discussion at the November 2021 meeting.