



Title: Mackay Region Monitoring Plan

Q1: What do you intend to monitor?

Within the listed target species below, monitoring will primarily include, but not be limited to;

1. Aggregation patterns
2. Movement patterns
3. Population patterns
4. Growth patterns
5. Post-capture survival rates

Target Species:

Barramundi, *Lates calcarifer*

<http://fishesofaustralia.net.au/home/species/4643>

Mangrove Jack, *Lutjanus argentimaculatus*

<http://fishesofaustralia.net.au/home/species/548Other>

King Threadfin, *Polydactylus macrochir*

<http://fishesofaustralia.net.au/home/species/634>

Dusky Flathead, *Platycephalus fuscus*

<http://fishesofaustralia.net.au/home/species/3359>

Q2: Where will you monitor?

Mackay Region Queensland

Grid and site References

O24 - O26,

N24 - N25

M25



Q3: Why is this species and area a priority for monitoring?

Interested in monitoring the Mackay net free area and the listed target species;

- To assess the rate of recovery of previously commercially targeted species
- To assess the effect on other popular recreational target species; with particular attention to bycatch susceptibility from commercial netting and/or increased recreational fishing pressure
- to assess the effect on multi-species populations (biodiversity) after the closure to commercial netting; in particular future impacts from increased recreational fishing pressure

The barramundi is important because it is somewhat iconic, and is widely targeted by both the commercial and recreational sectors including in several annual fishing events. It is also protected from netting from St Helens down to Seaforth

Q4: Who will use your data?

1. Taggers
2. Mackay Recreational Fishers Alliance
3. Keppel Bay Sportfishing Club members
4. ANSA QLD
5. Wider community
6. Third Party Researchers

All data remains the property of individual taggers and cannot be reprinted, published, analysed or used in whole or part without the express written permission of these taggers and the Keppel Bay Sportfishing Club

Data will only be shared with any party (including ANSA Qld, ANSA National, Qld Fisheries, etc.) subject to the approval of these taggers. Each request for access is granted for a single instance and a separate request is required for each instance and may be subject to conditions as given by the taggers and the Keppel Bay Sportfishing Club

Q5: How will the data be used?

Data will be quality checked, collated and archived to be available for ANSA members and third parties upon request.

- Monitor the population and growth rates of previously commercially netted targeted species
- Monitor populations and growth rates of popular recreationally targeted species to gain an understanding of potential impacts on whole of system biodiversity
- Understand the impact and monitor growth rates and population of other non-commercial, recreational caught species
- Promote sustainable fishing on a local, regional and state level

Recreational Fishery Monitoring Plan



- Provide evidence on the benefits to recreational fishing of establishing net free areas
- assess potential “spill-over” of target species into surrounding areas after the closure to commercial netting through recapturing of tagged target species

Q6: What data quality do you require?

The primary objective of this project is to allow anglers opportunity to collect fishery data as a means of citizen science participation. The idea is to value add to the fishing experience and in doing so, create greater awareness of the study species (population, growth & movement patterns)

Although the primary focus of the program is citizen science based, data collection methods will be as robust as possible to ensure data quality is as high as possible to allow for as many potential end uses as possible. Data Quality will be set at a level where the complexity of collection and data entry methods does not greatly inhibit participation.

The quality of data is likely to be of indicative quality (better than demonstrative but not analytical)

Q7: What is the proposed period of monitoring? When and how often will you monitor?

Members will be encouraged to participate in monitoring when possible due to a lot of different rosters in the area. Members fish a great deal more often than the average recreational angler, and usually with greater effectiveness. One could anticipate monitoring to occur fortnightly or even more frequently in the study area.

Q8: What methods will you use?

It is envisaged that the majority of fish will be captured with as little stress as possible, before careful measurement, tagging, and quick release.

- As part of normal recreational fishing activities, fish capture information as outlined in field of form: <http://www.ansaqld.com.au/awards/entry-form/> will be collected for captured King and Blue Threadfin and other species identified by Fisheries Queensland or third party researchers.
- Members will fish according to the ANSA QLD code of Ethics (<http://www.ansaqld.com.au/code-of-ethics/>) and the National Code of Practice (http://www.ansaqld.com.au/wp-content/uploads/2014/06/recfish_australia_ncop_brochure.pdf) adopted by ANSA QLD.
- Fish destined for release will be released according to the ANSA Code of Practice for Releasing Fish (<http://www.ansaqld.com.au/code-of-practice-for-releasing-fish/>)
- Tagging will be conducted according to the AUSTAG Manual (<http://www.ansaqld.com.au/wp-content/uploads/2016/07/Austag-Manual-Complete-with-Work-Instructions.pdf>) noting that the manual will be updated into the future. Tagging data is added directly by members who tag a part of the fish capture form. Any field sheets used reflect fields in this web-form.

Recreational Fishery Monitoring Plan



- Location of fish will be recorded using Queensland Government Logbook Maps (<https://www.business.qld.gov.au/industry/fisheries/commercial-fishing/monitoring-and-reporting/reporting-commercial-fishers/queensland-logbook-maps>)
- Fishes of Australia (<http://fishesofaustralia.net.au/>) is used to identify fish species

Pending advice and request from third party researchers (eg DAF and/or JCU) members may also be trained in the retrieval of otoliths. If required members will retain the large specimens to enable determination of both age and sex (identified as a key information gap).

Q9: Who will be involved and how?

Monitoring will be conducted by members and other ANSA QLD members who visit the area of interest. Reporting of recaptures will be open to the general public.

ANSA QLD will provide fish capture database facility, tags and support to members

Q10: How will the data be managed and reported?

- Data is added directly by members into the fish capture form.
- When submitted this is logged in the ANSA QLD MySQL database.
- Results will be reported online using a series of codes that query the database and then visualise this data. Data will also be provided to Fisheries Queensland and third party researchers to report
- Records are maintained on ANSA QLD server using MySQL database. Database is regularly backed up.

Version

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Background

Why do we need a plan like this?

ANSA Qld and our members have limited resources (money and time) to contribute to monitoring, so we need to make sure we are doing it for good reasons.

The plan is simply to help you think about why and where you want to direct your efforts. We should make sure that we are contributing to highest priority issues, not just tagging as many fish as we can. For this reason the ANSA Qld executive committee will seek input from Fisheries Queensland and other research institutions into highest priority species and locations to help refine monitoring effort.

It also demonstrates to others that we are professional in our approach to monitoring.

How is the revised ANSA Qld tagging program different to what we have previously done under Suntag?

Tagging will be conducted according to the AUSTAG Manual (<http://www.ansaqld.com.au/wp-content/uploads/2016/07/Austag-Manual-Complete-with-Work-Instructions.pdf>) noting that the manual will be updated during 2016-17. Specific revisions include:

- ANSA QLD Tagging is now the name of our state program for Queensland
- Tagging data is added directly by members who tag as part of the fish capture form. Any field sheets used reflect fields in this web-form.
- Tags use the web address www.ansaqld.org.au instead of a phone number for submission of recaptured fish information.
- Tag and recapture information is generated online at www.ansaqld.org.au and replaces letters and certificates. Recapture certificates will be emailed to anglers in the future when an automated facility for this function is developed
- Records are maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
- Recreational Fishery Monitoring Plans are required for all ANSA QLD Research and Tagging projects. These documents provide detail on target species and other project related matters
- Tag purchase is currently through Floytag. ANSA QLD reserves the right to select any supplier based on access, price and customer service.
- Tag Register and Audit will be maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
- Location of fish will be recorded using Queensland Government Logbook Maps (<https://www.business.qld.gov.au/industry/fisheries/commercial-fishing/monitoring-and-reporting/reporting-commercial-fishers/queensland-logbook-maps>)
- Fishes of Australia (<http://fishesofaustralia.net.au/>) is used to identify fish species