



Title: Townsville Region Monitoring Plan

(North Queensland Flyfishers Inc. (NQFF))

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. 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/548>

Golden Trevally, *Gnathanodon speciosus*

<http://fishesofaustralia.net.au/home/species/4274>

Snubnose Dart / Permit / Oyster Cracker, *Trachinotus blochii*, *T anak*

<http://fishesofaustralia.net.au/home/species/2993>

<http://fishesofaustralia.net.au/home/species/1664>

Giant Trevally, *Caranx ignobilis*

<http://fishesofaustralia.net.au/home/species/4268>

Giant Queenfish, *Scomberoides commersonianus*

<http://fishesofaustralia.net.au/home/species/1660>

Other species identified by Fisheries Queensland or third party researchers

Q2: Where will you monitor?

Townsville Region - Grid references: J21 – K21

Primarily between Cape Bowling Green to the South, and Halifax Bay to the North, in Bohle River, Ross River (including weirs), Ross Creek, Magnetic Island, Crocodile Creek, Alligator Creek, Haughton River, Morrissey's Creek, Barrattas Creek, Alva Beach, inshore reefs and many smaller waterways to the North, within the area.

Other areas may be included on review of the plan.

(See <https://www.business.qld.gov.au/industry/fisheries/commercial-fishing/monitoring-and-reporting/reporting-commercial-fishers/queensland-logbook-maps> to determine grid/s and site/s of study area)

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

The target area encompasses areas north and south of Townsville, currently the largest city in Northern Australia, and home to one of the highest per capita populations of fisher-folk in Australia.

The species selected as part of this monitoring plan are important primarily as recreational target species.

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 within Cleveland Bay.

Further, the mangrove jack is a highly sought after recreational target both for its fighting and table qualities. It has a slow growth rate and complex breeding cycle which could make it potentially vulnerable to changes in fishing pressure.

Golden trevally and permit are particularly important species within shallow water environments, and may be inadvertently impacted by commercial barramundi fishing operations. Giant trevally and queenfish are increasingly popular targets for recreational targets.

Q4: Who will use your data?

1. North Queensland Flyfishers Inc. (NQFF)
2. ANSA QLD

Q5: How will the data be used?

Data will be quality checked, collated and archived to be available for ANSA members.

On a regular basis NQFF members, and ANSA Qld, will use the data collected to,

- monitor populations, movement patterns and growth rates of the target species to gain an understanding of the impacts of potential increased recreational fishing effort in the Townsville region
- monitor survival rates of each of the listed target species through tagging & recapture
- promote sustainable fishing on a local, regional and state level
- assess the level of “spill-over” of target species into surrounding non-net free areas

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.

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NQFF members who choose to partake in tagging of fish from the target species list will be required to be approved taggers under the ANSA Qld Tagging guidelines.

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?

The intent is to commence monitoring in the Bowling Green Bay, Cleveland Bay and Halifax Bays in February 2017 in order to correspond with the opening of the barramundi season. Monitoring from then will be ongoing with no end date specified at this time.

The NQFF will review the effort and results of the monitoring program on an annual basis with a view to learning and improvement, and assessment of whether resources could be better allocated to another priority or area.

Monitoring will primarily be opportunistic in nature (when members are fishing) noting that the club fishes at least once a month as part of routine club activities. Club activities usually occur on the weekend.

NQFF members also fish the Hinchinbrook Island frequently.

Members will be encouraged to participate in monitoring outside of scheduled club activities. Some 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?

- All target and non-target species captured will be handled so as to cause as little stress as possible.
- Target species will be measured, tagged and released as quickly as possible so as to maximise the chances of survival.
- Fish capture information as outlined in field of form: <http://www.ansaqld.com.au/awards/entry-form/> for each of the target species.
- 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 during 2016-17. 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

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- 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>)
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- Fishes of Australia (<http://fishesofaustralia.net.au/>) is used to identify fish species

Q9: Who will be involved and how?

- Monitoring will be conducted by NQFF 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 NQFF members.

Q10: How will the data be managed and reported?

- Data is added directly by NQFF members into the fish capture form or via a multi-capture upload file and submitted to the NQFF Tagging Officer. 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.
- Records are maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
- The NQFF Tagging Officer will store manual field capture record forms when submitted unless future reviews warranty it unnecessary.
- The NQFF Tagging Officer will maintain electronic Tagging Data for the club. It is also suggested members also keep a copy of their own records.

Version

Version 1.2

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Recreational Fishery Monitoring Plan



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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.