

A silhouette of a person wearing a wide-brimmed hat and holding a fishing rod, standing on a beach at sunset. The person is facing left, and the fishing rod extends across the frame towards the water. The sky is filled with warm, orange and yellow light from the setting sun, with some clouds. The water is calm with small waves lapping at the shore. The person is standing on a sandy beach.

# Social, attitudinal and motivational recreational fishing survey

Part of the 2010 Statewide Recreational Fishing Survey

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Cover photo: 'Fishing the sunset on Moreton Island' courtesy of Gaye Launder.

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## Executive Summary

This report summarises the results from the Social, attitudinal and motivational survey (conducted in 2011 as part of the *2010 Statewide recreational fishing survey*, (SWRFS)) and where possible compares them with results from the *2001 Queensland wash-up/attitudinal survey* (part of the *National recreational and indigenous fishing survey* (NRIFS) 2000/01). Many of the questions asked in the two surveys were identical, providing the rare opportunity to profile the views of fishers from over a decade.

The reasons why people go recreational fishing, satisfaction with fishing in Queensland and reasons fishers may have fished more or less compared to the previous year are discussed. Fishers' awareness of the freshwater stocking program supported by Fisheries Queensland is also reported. The main sources of information fishers use to find out about fishing regulations and how often fishers have seen field staff from various government organisations is also assessed.

The surveys provided fishers with the opportunity to express their own personal views on anything fisheries related and how they felt about the surveys. The views of all types of recreational fishers in Queensland were recorded, ranging from those fishers the Far North to the South East corner of the state, and avid fishers through to those who only fish once or twice a year.

In 2011, 43% of fishers felt they fished less often (49% in 2001) and of these 35% cited work or business commitments as the main reason. In 2011, 31% of fishers felt they fished more often (14% in 2001) and of these more than half cited a change of personal preference as the reason. Some fishers participated in the diary phase of SWRFS but didn't fish at all during the 12 month period. Of these non-fishing diarists 43% cited work and business commitments as the main reason for their inactivity.

Fishers in both surveys ranked eight different reasons for going recreational fishing. In both surveys, the majority of fishers felt it was very important to go recreational fishing to relax or unwind, to be outdoors in the fresh air, for the enjoyment of the sport and to catch fresh fish and crabs for food. Competing in a fishing competition was not an important reason to go recreational fishing for the majority of fishers. Going fishing to spend time with family and friends was ranked much higher in 2011 than it was in 2001.

In both 2011 and 2001, approximately 70% of fishers strongly agreed with the statement 'a fishing trip can still be successful, even if no fish or crabs are caught'. In 2011, 53% of fishers strongly agreed with the statement 'I'd rather keep one or two bigger fish than 10 smaller fish', while only 40% of fishers felt this way in 2001. Similarly, in 2011, 52% of fishers strongly agreed with the statement 'I like to fish where there are several kinds of fish to catch' compared with 43% in 2001.

In both surveys, the majority of fishers were quite satisfied with the quality of recreational fishing in the previous 12 months. In fact this figure increased from almost 53% in 2001 to just over 64% in 2011.

Fishers who were not satisfied with the quality of fishing in the previous 12 months were concerned with low fish stocks. They identified the negative impacts of both commercial (21%) and recreational fishing (21%) as contributing to this cause. The same concern was mentioned by fishers in the 2001 survey (almost 75% of responses fitted this concern) however, in 2001 the most commonly mentioned cause for this concern was commercial fishing practices (30% of responses).

In 2011, a slightly smaller proportion of fishers recalled seeing staff from Queensland Boating and Fisheries Patrol (QBFP) in the 12 months diary period than was reported in the 2001 survey (37% in 2011 compared to 42% in 2001). Around 40% of fishers recalled seeing Water Police in the same 12 month period which was similar to that reported in 2001.

Fishers were given the opportunity to comment on anything fishing related. In 2011, the majority of comments indicated fishers were generally happy with fishing and/or Fisheries Queensland (14%) but they indicated that there was a need for stricter compliance (11%). In 2001 comments were more concerned with the negative impacts of commercial fishing (23%) and the need for stricter compliance (14%).

Fishers in the 2011 survey were asked the main way they found out about fishing regulations and information about recreational fishing. Over a third of fishers cited government internet sites and social media as their main sources of fishing information. The fishers were also asked to identify their next most important way of finding out about fishing regulations and information about recreational fishing. In this case, friends and family (17%) and tackle shops (16%) were the most popular cited sources.

Over 70% of fishers in the 2011 survey were aware that Fisheries Queensland has supported stocking programs for freshwater fish in waterways and dams although only 20% of fishers were aware that over 100 waterways and dams were involved in stocking programs.

As happened in 2001 fishers were given the opportunity to provide comments on how they felt about the surveys they participated in. Over 90% of fishers were very happy with the way the surveys were conducted, the purpose of the surveys and the interviewers conducting the surveys; demonstrating that recreational fishers are willing to participate in the sustainable management of fisheries in Queensland. Fishers recognised the benefits that contributing their data would have towards fisheries management and appreciated the efforts made by the survey design teams and interviewers to make this contribution as easy as possible.

The results show that recreational fishers continue to gain many social benefits from fishing that extend beyond catching fish. Repeating these social and attitudinal surveys regularly will provide Fisheries Queensland with information on Queensland recreational fishers' motivations, attitudes and concerns in this rapidly growing and changing state. This will ensure that future management can balance the needs and views of recreational fishers, while ensuring that the harvest of fish stocks is sustainable.



## Introduction

Recreational fishing is a popular leisure activity in Queensland with an estimated 703 000 Queenslanders or 17% of the Queensland population aged five years or over going recreational fishing in the 12 months prior to June 2010 (Taylor *et al.* 2012). Although the number of recreational fishers in Queensland has declined over the last decade (Henry and Lyle, 2003; McInnes, 2006; Taylor *et al.* 2012) fishing still provides a wonderful opportunity for people to get out in the great outdoors and spend quality time with family and friends. Recreational fishing also provides an economic benefit to a variety of businesses in Queensland such as tackle shops, camping and sporting goods stores and accommodation providers.

The need to monitor and support recreational fishing has always been a major objective of Fisheries Queensland. Since 1996, Fisheries Queensland has been monitoring the catch and effort of recreational fishers across the state through regular surveys (for example see McInnes, 2008). The *Statewide recreational fishing survey* (SWRFS) completed in 2011 is the most recent 12 month telephone diary survey on recreational fishing in Queensland. It collected information on the number of Queenslanders who fish recreationally, their catch and their fishing effort for the 12 months ending in September 2011 (Taylor *et al.* 2012).

However, the total benefits of recreational fishing cannot just be measured by the number of fish people catch, the number of times a year they go fishing or the amount of money spent on a fishing trip. Assessing the social, attitudinal and motivational importance of recreational fishing is an essential part of understanding who our recreational fishers are. It is important to understand whether fishers are satisfied with their fishing experiences, what motivates them to go recreational fishing and what influences their fishing activities. Each statewide survey has attempted to capture this information by asking social, attitudinal and motivational questions about recreational fishing at the end of the 12 month diary surveys. This helps ensure management considers the needs and views of recreational fishers while ensuring that fish stocks are sustainable.

The aims of this survey were to update and improve information on recreational fishers and to:

- establish if diarists fished more or less during the diary survey than in the previous 12 months and what influenced this change
- investigate reasons why some diarists did not fish at all during the diary survey period
- establish what motivates people to go recreational fishing
- understand what makes a fishing experience important to the fisher
- gauge fishers' satisfaction with the quality of recreational fishing in Queensland
- allow fishers to have their say about anything fishing related and also about the survey they participated in
- identify how visible the Queensland Boating and Fisheries Patrol (QBFP), Water Police, Marine Park Rangers and Fisheries Queensland field staff have been
- establish how aware diary participants are of the freshwater stocking program supported by Fisheries Queensland
- find out how Queensland fishers are sourcing their information on fishing regulations.

Due to differences in the methodology, only data from the social, attitudinal and motivational components of SWRFS, completed in 2011, and the corresponding questions in the *National Recreational and Indigenous Fishing Survey (NRIFS)*, completed in 2001, were compared in this report. This allows for the attitudes and views of recreational fishers to be compared across a decade. The information reported here relates to the households that either fished or said they were likely to fish during the 12 month diary survey. Therefore, it does not reflect the attitudes of households that thought they were unlikely to go fishing.

By understanding how and why people fish, managers have more information available to create sustainable fishing opportunities in the future. Future management of recreational fisheries will be strengthened by the knowledge of who our fishers are in Queensland, how they react to changes in management practices and what influences fishers in their decision to fish more or less.

## Methodology

All social information outlined in this report was collected during the final stages of both the SWRFS and the NRIFS.

Both surveys used a telephone-diary method which involved a multi-phased survey design. The Telstra White Pages was used as the sampling base for the surveys. The primary sampling unit for each survey was private dwelling households (Australian Bureau of Statistics definition) in Queensland, with recreational fishers within the household representing the secondary unit. Samples of households were taken from the latest Telstra White Pages listings across all areas of Queensland (Taylor *et al.* 2012).

The design of both surveys consisted of four related main surveys:

1. an initial screening survey to gather fishing and boating information from a sample of the Queensland population
2. a 12-month diary survey where all recreational fishing activities were recorded from a sample of recreational fishers
3. a social, attitudinal and motivational survey where these recreational fishers' opinions on a range of fisheries-related topics were recorded
4. a follow-up survey of non-intending fisher households (Taylor *et al.* 2012).

The philosophy of each survey design was to minimise the burden on respondents and maximise the data quality (Henry and Lyle, 2003). This was achieved by using extensively trained telephone interviewers and a proven, tried and tested survey design that maintained a very high retention rate of survey participants (Taylor *et al.* 2012). The social data was recorded by the same interviewers the fishers had for the 12 months of each diary survey, ensuring considerable rapport was established between interviewer and diarist.

All households that completed the 12 month diary surveys were eligible to take part in the social, attitudinal and motivational surveys. In the SWRFS approximately 99% of the households eligible to take part in the social, attitudinal and motivational survey answered all of the questions (Taylor *et al.* 2012).

Refer to Taylor *et al.* (2012) and Henry and Lyle (2003) for a more detailed overview of how these surveys were conducted.

This report will focus on the social, attitudinal and motivational surveys of the SWRFS and NRIFS.

### Weighted estimates

In 2001, the survey questions were asked of one randomly selected member in the household (whether they fished during the survey or not) aged 15 years or more. In the 2011 survey, in a household that contained more than one person who fished in the previous 12 months, the questions were asked of the 'main' fisher in the household, aged 15 years and above. In a household where no one fished for the duration of the survey, the questions were asked of the person who was the 'main reporter' throughout the survey. Because only a single person from each household completed the social, attitudinal and motivational survey, results are presented at the level of household rather than individual fisher. For the purposes of expanding the results, the person providing answers to the survey is assumed to represent the household.

Where practical, sample data were expanded to the number of private dwellings households in Queensland using weights generated from the Recsurvey statistical package. Recsurvey is implemented in the statistical computing language R (Lyle *et al.* 2009) and was used throughout the SWRFS. Weights were based on households that completed the social, attitudinal and motivational surveys. As part of this expansion process adjustments were made for various types of non-response using calibration and response propensity modelling. For a detailed explanation of how the Recsurvey process works, refer to Lyle *et al.* 2009.

## Survey scope

Only Queensland private dwelling households with a listing in the Telstra White Pages were eligible to participate in the survey. Therefore fishing activities by people from households in another state or overseas were not recorded (Taylor *et al.* 2012). These surveys collected information from Queenslanders fishing in Queensland.

One fisher aged 15 years or more was selected from each household that completed the diary survey to answer the questions in this report. In many cases, this represented the main fisher that provided all fishing information to the telephone interviewer during the diary survey. A total of 1663 households completed the social, attitudinal and motivational survey in 2011. If no fishers in the household were aged 15 years or more, the household was not asked to complete the social, attitudinal and motivational survey; this occurred in 12 cases.

## Geographical scope

Recreational fishers who participated in the social, attitudinal and motivational survey came from all parts of Queensland. Both the SWRFS and the NRIFS stratified sampling across Queensland using the same residential regions. These regions mostly conformed to Australian Bureau of Statistics census boundaries (e.g. statistical divisions, statistical subdivisions and local government authorities) (Taylor *et al.* 2012). The nine residential regions (Figure 1) were:

- Brisbane
- Moreton
- Wide Bay-Burnett
- Darling Downs
- Central West/North West/South West (CW/NW/SW)
- Fitzroy
- Mackay
- Northern
- Far North.



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Figure 1: Nine residential regions of Queensland used in the SWRFS and the NRIFS

## Sample size

Participants in the surveys represented all of the nine residential regions of Queensland as mapped above in Figure 1. Response rates were very high in each of the regions, as shown in Table 1 below.

**Table 1: Response rates for the Social, attitudinal and motivational recreational fishing survey**

<b>Residential region</b>	<b>Number of households completing the survey</b>	<b>Response rate</b>
Brisbane	362	97.8%
Moreton	246	98.8%
Wide Bay-Burnett	186	98.4%
Darling Downs	124	99.2%
CW/SW/NW	136	100.0%
Fitzroy	161	99.4%
Mackay	145	98.6%
Northern	161	98.8%
Far North	142	96.6%

## **Comparison with previous survey**

In 2011, two different surveys were used depending on whether anyone in the household had fished or not. Additional information on motivation, fishing satisfaction and awareness was recorded from households containing a fisher. Throughout this report, when the same questions were asked of fishers and non-fishers, the information was combined. If the question was only directed at fishers or only directed at non-fishers this has been noted in the results. In 2001, the same survey was used for both fishers and non-fishers.

In the 2011 survey, in a household that contained more than one person who fished in the previous 12 months, the questions were asked of the main fisher in the household, aged 15 years and above. In a household where no one fished for the duration of the survey, the questions were asked of the person who was the main reporter throughout the survey. In 2001, the survey questions were asked of one randomly selected member in the household (whether they fished during the survey or not) aged 15 years or more.

## **Open ended responses**

Recreational fishers were given the opportunity to provide their own fishing related comments. It must be noted that in the 2011 survey if a fisher made a fishing related comment when asked to provide a reason why they were dissatisfied with fishing during the 12 months of the diary survey (refer to Table 4) they may not have repeated this comment in the open ended responses.

## Results

### Fishing frequency

In both the 2001 and 2011 surveys, households were asked if they fished more, less or about the same number of days during the diary survey compared to the 12 months prior to the survey. In the 12 months prior to the 2001 survey, approximately 49% of households said they fished fewer days than during the survey compared to 43% in 2011 (Figure 2). Interestingly, in 2001, only 14% of households said they fished more often during the survey but in 2011 this figure was 31%. Approximately 37% of households in 2001 and 26% of households in 2011 estimated they fished about the same number of days in both periods.

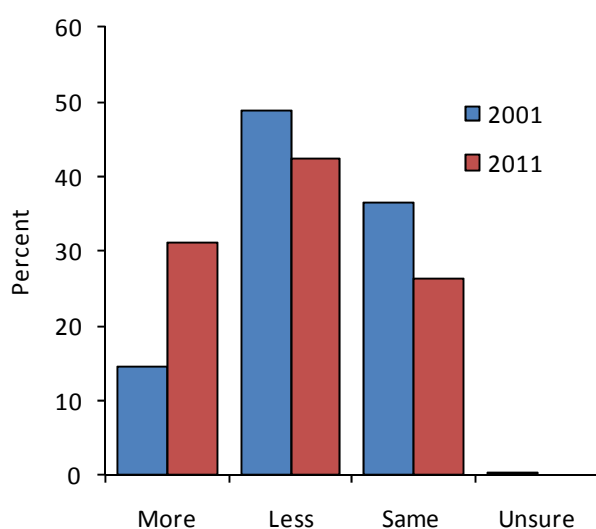


Figure 2: Change in fishing activity between the diary survey and the previous 12 months.

In the 2011 survey, households were asked to provide the main reason why they fished less or more during the diary survey period compared to the previous 12 months. Answers were categorised into 16 different reasons (Figure 3; Figure 4). For those who fished less often, the most common reason given was work or business related commitments (35%) followed by home or family commitments (18%), such as a renovating or the arrival of a new baby (Figure 3).

The most common reason to explain an increase in effort during the diary survey period compared to the 12 months prior, was a change in personal preference (56%), for example households personally chose to be more involved in fishing as a sport or recreation (Figure 4).

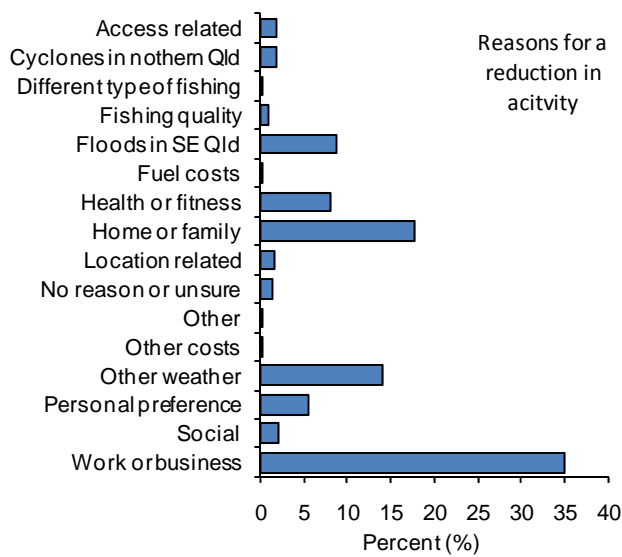


Figure 3: Reasons why there was a reduction in fishing activity (2011 survey)

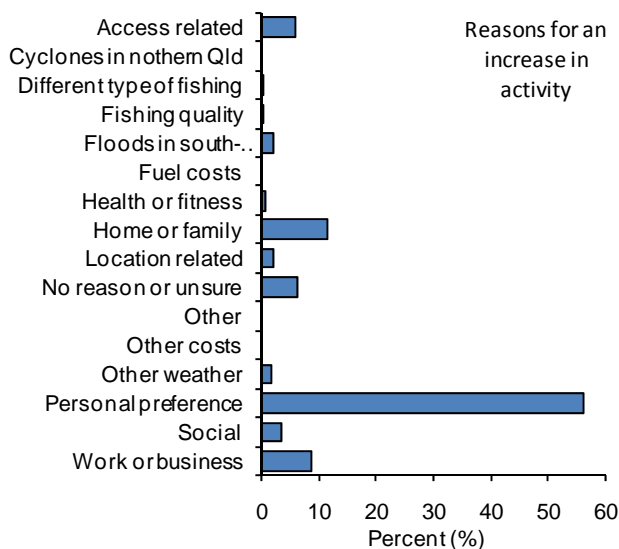


Figure 4: Reasons why there was an increase in fishing activity (2011 survey)

Those households who participated in the SWRFS but didn't fish over the 12 month survey period were also asked to provide a reason as to why they didn't go fishing. Approximately 43% of these households cited work and business related reasons to explain their inactivity. Health and fitness concerns restricted 12% of households from going fishing and a similar percentage of households cited home or family commitments as their main reason for not going fishing (Figure 5).



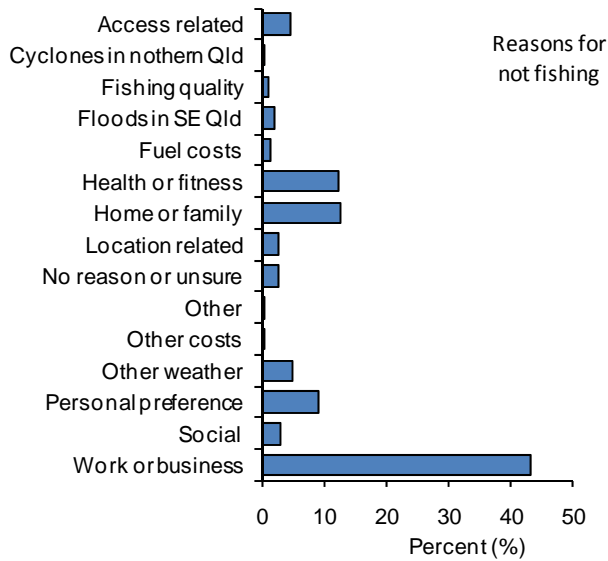


Figure 5: Reasons why no fishing activity occurred (2011 survey)

## Reasons why people go recreational fishing

In both the 2001 and 2011 surveys households were provided with eight different possible reasons as to why people go recreational fishing. For each of these reasons they were asked whether they thought this reason was very important, quite important, not very important or not at all important.

To relax or unwind was an important reason for fishing in both surveys. Almost 60% of households in 2001 said it was very important and this figure grew to approximately 70% of households in 2011 (Figure 6).

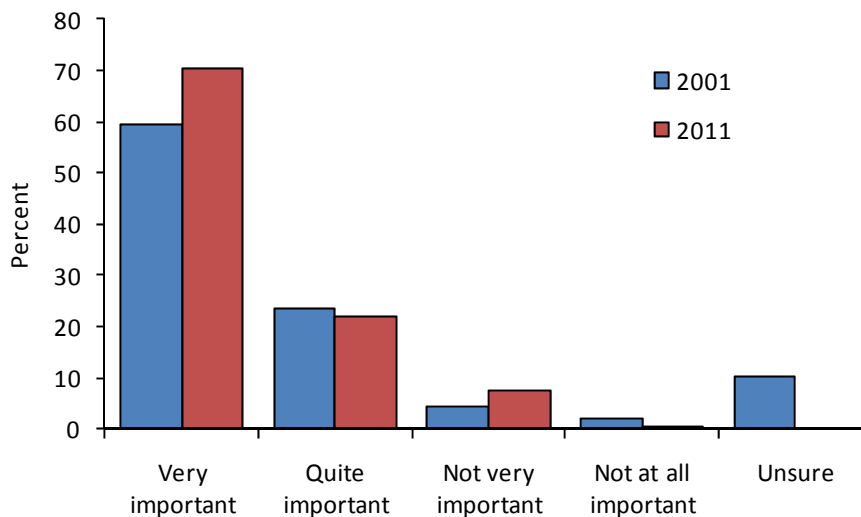


Figure 6: Fishing reasons - the importance of "to relax or unwind..."

The second reason to be asked of fishers was, to be outdoors, in the fresh air, to enjoy nature. In 2001, 50% of households felt it was very important to be outdoors in the fresh air while this figure increased considerably to just over 70% in 2011 (Figure 7).

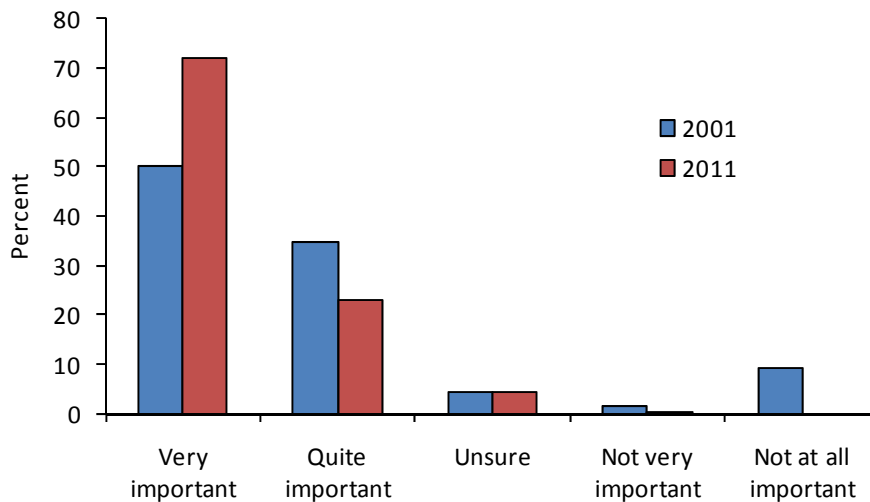


Figure 7: Fishing reasons - the importance of “to be outdoors”

The third reason to be asked of fishers was, to be on your own, to get away from people. The percentage of households who indicated this reason was not very important increased considerably from 21% in 2001 to 47% in 2011. This change is mainly due to reductions in the unsure and not important at all categories in 2011 (Figure 8).

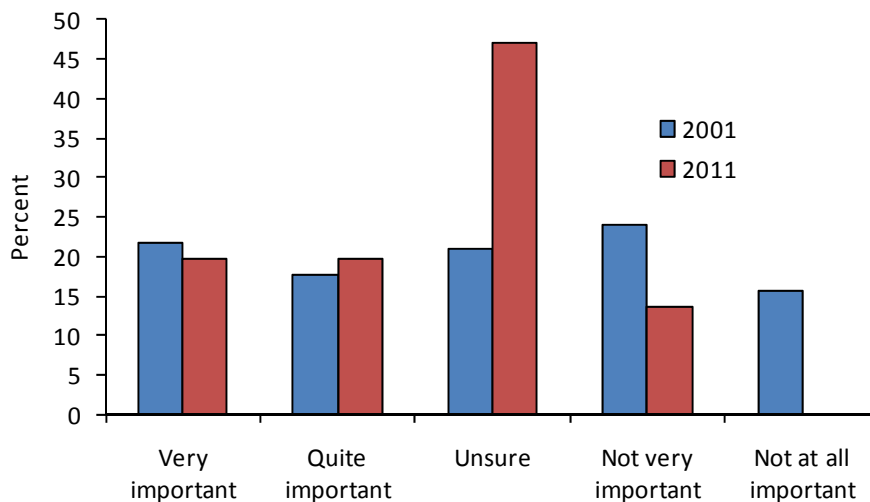


Figure 8: Fishing reasons - the importance of “to be on your own...”

The next reason why people go fishing was, to spend time with your family. It can be seen that the opportunity for people to spend time with their family was more important in 2011. The percentage of households rating spending time with their family as very important increased from 38% in 2001 to almost 66% in 2011. Only 3% of households rated this as not at all important in 2011, dropping from 17% in 2001. No fishers indicated unsure for this reason in 2011 whereas almost 10% of households were unsure in 2001 (Figure 9).

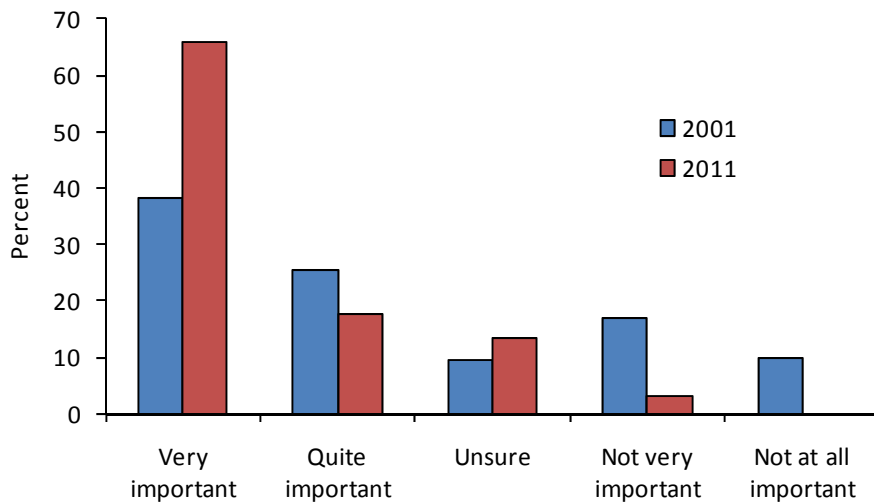


Figure 9: Fishing reasons - the importance of “to spend time with family...”

In 2011 households classified spending time with friends or others as a very important reason to go recreational fishing. This figure more than doubled from almost 27% in 2001 to 61% in 2011. No households were unsure in 2011 whereas almost 14% were unsure in 2001 (Figure 10).

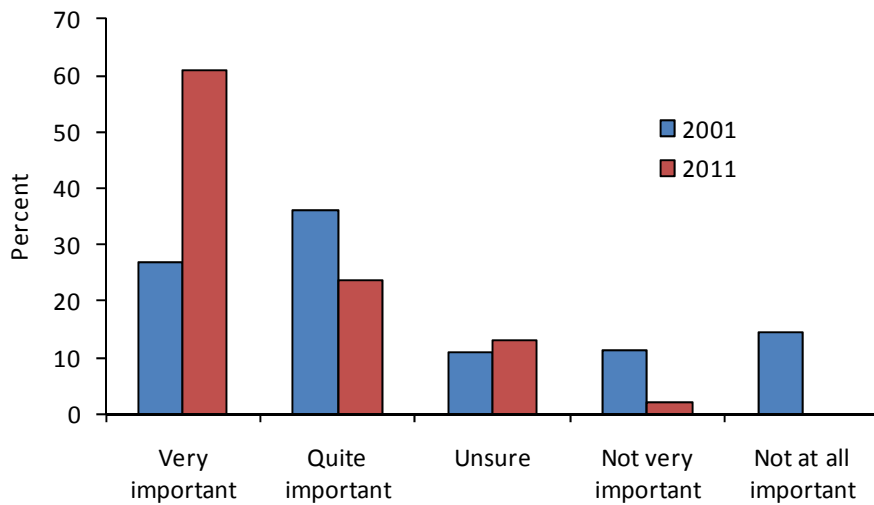


Figure 10: Fishing reasons - the importance of “spending time with friends...”

Households were asked to rate the importance of, to compete in a fishing competition of any kind, as a reason for going fishing. In both years, over 90% of households rated this reason as either not at all important or not very important (Figure 11).

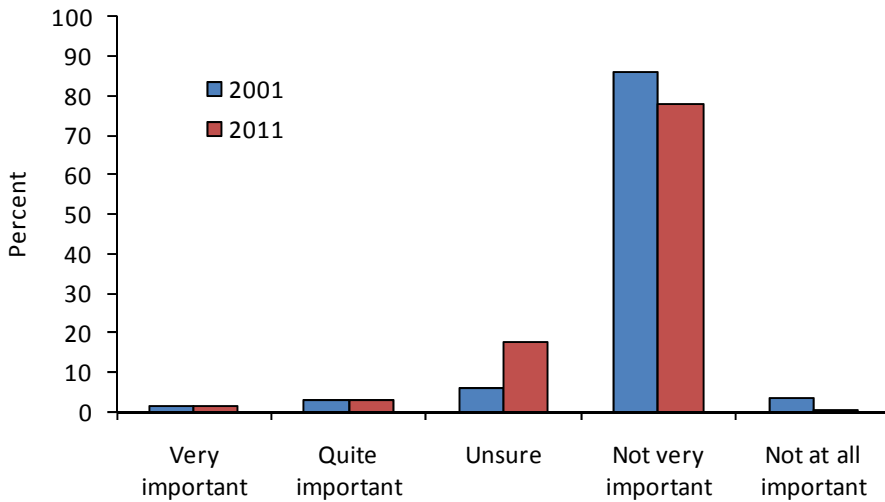


Figure 11: Fishing reasons - the importance of “to compete in a fishing competition...”

Households were asked to rate the importance of, for the enjoyment or sport of catching fish, crabs etc, as a reason for going recreational fishing. In 2011, 11% of fishers believed this reason was not very important, an increase from just over 2% in 2001, and in 2011 almost 7% found it not at all important. A slightly lower percentage of fishers in 2011 felt this reason was very important or quite important (Figure 12).

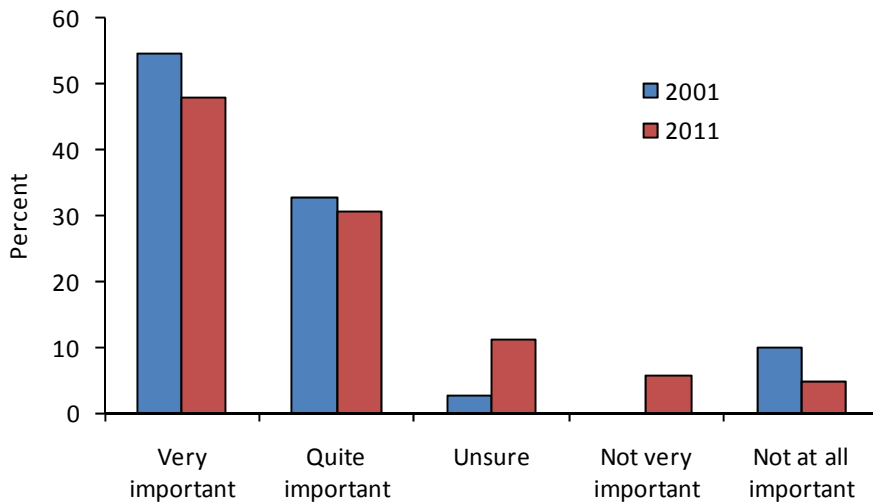


Figure 12: Fishing reasons - the importance of “for the sport of catching fish...”

Finally, recreational fishers were asked to provide comment on the importance of fishing to catch fresh fish, crabs etc. for food. More fishers in 2011 stated this reason as very important, as the percentage rose from approximately 34% to just over 40%. In 2001, 13% of fishers found this reason to be not at all important, the figure in 2011 was only 4%. It must be noted that almost 14% of fishers in 2001 were unsure of their answer (Figure 13).

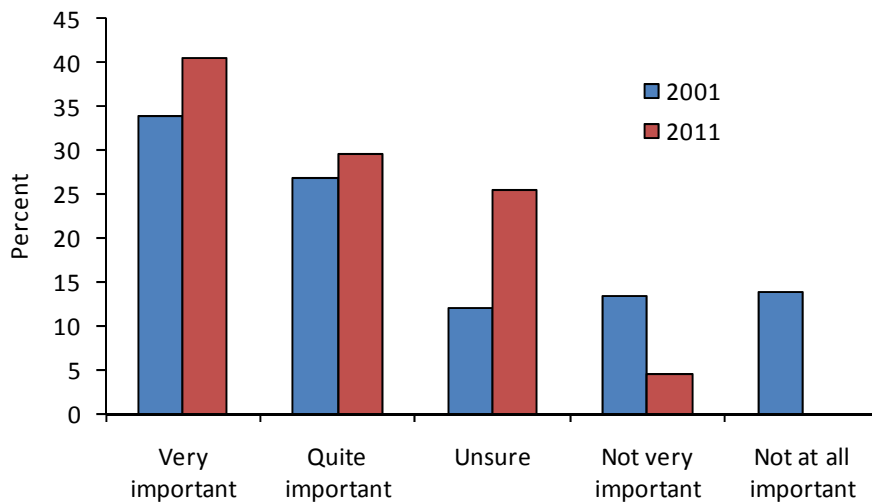


Figure 13: Fishing reasons - the importance of “to catch fresh fish, crabs...”

### Statements about recreational fishing

In both the SWRFS and NRIFS, fishers were read three statements about recreational fishing and asked to rate their agreement or disagreement with each. They were provided with the following scale; strongly agree; mildly agree; neither agree nor disagree; mildly disagree and strongly disagree.

The first statement was ‘a fishing trip can still be successful, even if no fish or crabs are caught’. In the 10 years between the two surveys, fishers’ thoughts on this statement changed very little. In both surveys, over 70% of households strongly agreed that a fishing trip can still be successful even if they didn’t catch any fish or crabs (Figure 14).

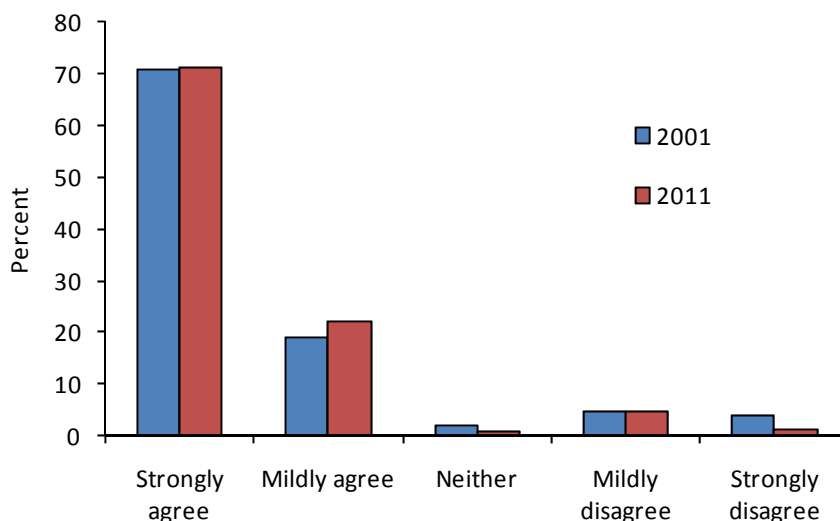


Figure 14: A fishing trip can still be successful, even if no fish or crabs are caught

The second statement was ‘I’d rather keep one or two bigger fish than 10 smaller fish’. Households appeared to become more interested in taking home one or two bigger fish rather than 10 smaller fish. In 2001, 40% of fishers strongly agreed with this statement and in 2011 this figure increased to 53%. In 2001, 12% of fishers strongly disagreed with this statement and in 2011 fewer than 2% of fishers strongly disagreed with this statement (Figure 15).

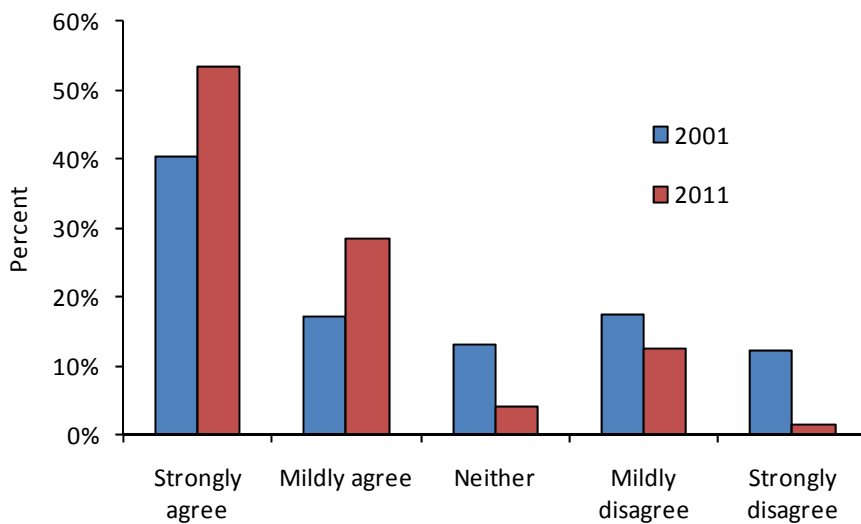


Figure 15: I'd rather keep one or two bigger fish than 10 smaller fish

The third statement was 'I like to fish where there are several kinds of fish to catch'. In 2011, more households strongly agreed with this statement, with the percentage increasing from 43% in 2001, to 52% (Figure 16).

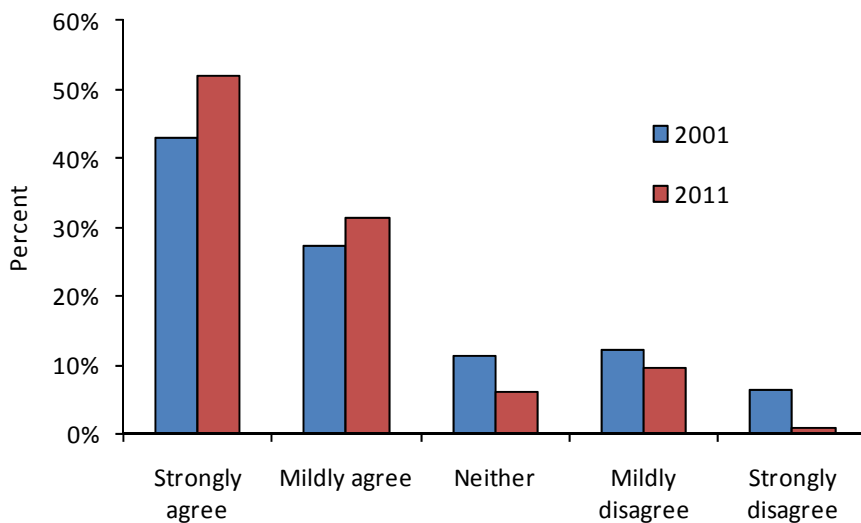


Figure 16: I like to fish where there are several kinds of fish to catch

## Satisfaction with the quality of recreational fishing

In both the SWRFS and the NRIFS, fishers were asked to think back over the 12 months of the diary program and comment on how satisfied they were with the overall quality of the fishing during that time. Fishers were asked to state if they were very satisfied, quite satisfied, not very satisfied, not at all satisfied or if they were unsure of how satisfied they were.

In 2001, almost 7% of fishers stated they were not at all satisfied and over 30% of fishers were not very satisfied. In 2011, households who completed this survey were generally more satisfied with the overall quality of fishing, with less than 3% of households stating they were not at all satisfied and nearly 19% saying they were not very satisfied (Figure 17). In 2011 the percentage of

households who were quite satisfied had increased from nearly 53% in 2001 to approximately 64%.

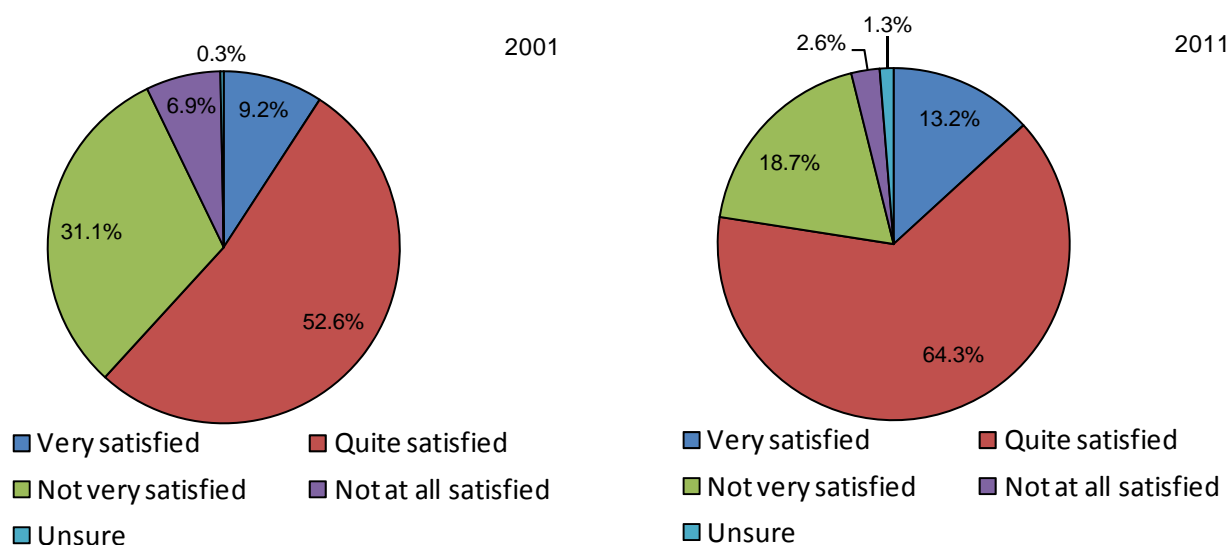


Figure 17: Satisfaction with the quality of fishing

Those households who stated they were not very satisfied or not at all satisfied were then asked to provide reasons and identify causes for their dissatisfaction.

### Dissatisfaction in 2001

In 2001, 93% of concerns provided by fishers related to low fish stocks, the small size of fish caught and no time or access to fishing (Table 2). By far, the most commonly mentioned concern was the lack of fish or low fish stocks. Almost 75% of all concerns provided by fishers cited this as a concern. The next most commonly mentioned concern was the small size of the fish caught, with just over 12% of fishers indicating this as a concern. Almost 6% of fishers who completed the survey were concerned by having little or no time to fish or were unable to access fishing locations because they had no boat or ability to get to them.

Table 2: Top three concerns in 2001

Concern	Percentage
Low fish stocks	74.8
Small size of fish caught	12.3
No time or access to fishing	5.8

In 2001 fishers provided quite a variety of causes for their dissatisfaction in fishing during the survey. The top five causes identified accounted for approximately 67% of responses provided (Table 3). Commercial fishing was the most common cause provided by fishers to account for their dissatisfaction with fishing during the survey. Another popular cause, which represented 20% of responses, was the amount of overfishing by both recreational and commercial fishers.

**Table 3: Top five causes of concerns in 2001**

Cause	Percentage
Commercial fishing	30.2
Overfishing by both recreational and commercial fishers.	19.9
Illegal fishing i.e. taking undersize fish or exploiting possession limits	6.1
Pollution of waterways	5.8
Lack of fishing skills	5.3

## Dissatisfaction in 2011

As in 2001, the top three concerns accounted for over 90% of all concerns provided by fishers. Interestingly the top three concerns were the same in both surveys, with little variation in the percentages. Once again the most commonly mentioned concern was the low stocks of fish, accounting for 72% of concerns cited (Table 4).

**Table 4: Top three concerns in 2011**

Concern	Percentage
Low fish stocks	72.3
Small size of fish	11.3
No time or access to fishing	8.1

In the 2011 survey, a large variety of causes for dissatisfaction with the overall quality of fishing during the 12 months of the survey were provided. The top five concerns in 2011 were slightly different from those in 2001 (Table 5). The top cause cited was still commercial fishing (21.4%), although this figure had reduced from the 2001 figure of 30%. Similar to 2001, overfishing by both recreational and commercial fishers was mentioned in around 20% of causes provided by fishers. In the 12 months the 2011 survey was conducted, Queensland experienced major floods, cyclones and unsettled weather and this was reflected in the responses. Almost 11% of comments mentioned weather in general, nearly 6% mentioned floods, and although not listed in the top five causes below, almost 2% of comments in the diary listed cyclones as a cause.

**Table 5: Top five causes of concerns in 2011**

Cause	Percentage
Commercial fishing	21.4
Overfishing by both recreational and commercial fishers	20.5
Weather	10.7
Floods	5.7
Regulations being too tight or difficult to understand	3.4

## Contact with authorities and field staff

### Queensland Boating and Fisheries Patrol and Water Police

In both 2001 and 2011, households were asked if they could recall seeing Queensland Boating and Fisheries Patrol (QBFP) officers or Queensland Water Police officers during the 12 months of the respective diary surveys. In 2001, 42% of households said they saw a QBFP officer compared to 37% in 2011 (Figure 18). In both 2001 and 2011, approximately 40% of households said they saw Water Police officers during the 12 month dairy surveys (Figure 19).



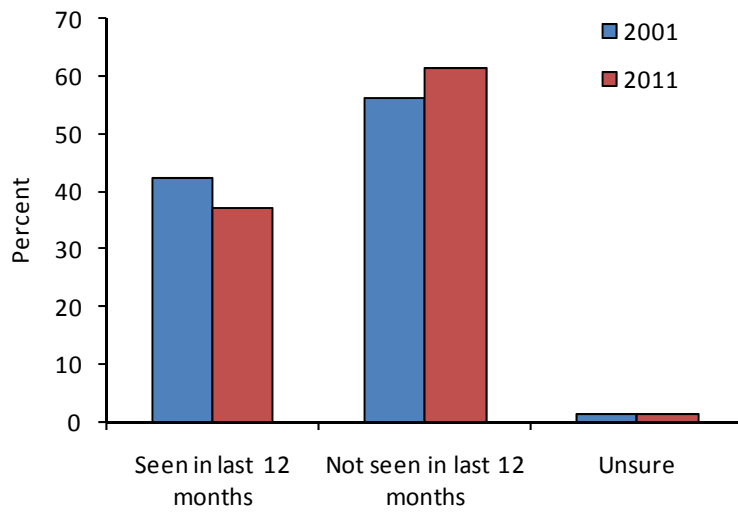


Figure 18: Contact with Queensland Boating and Fisheries Patrol

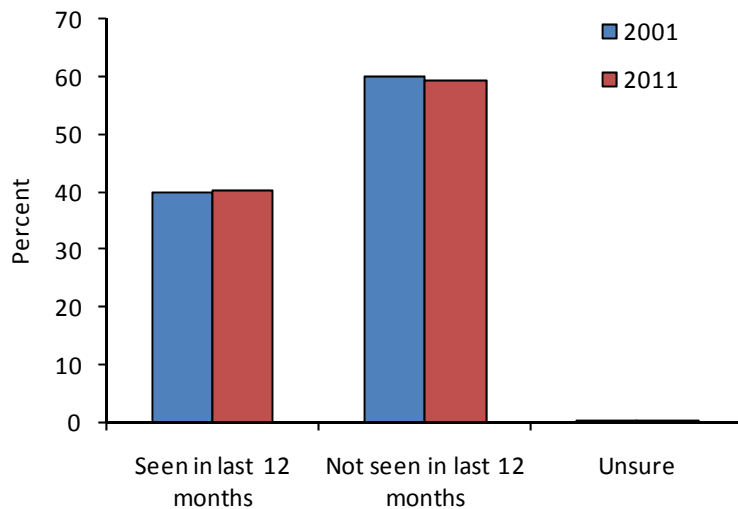


Figure 19: Contact with Water Police

### Marine park rangers and researchers—2011 only

In 2011 only, households were asked if they recalled seeing any marine park rangers or researchers and other fisheries staff during the 12 months diary survey. Approximately 18% of households reported seeing marine park rangers during the diary survey, 78% said they had not, and the remainder were unsure (Figure 20). Only 12% of households recalled sighting any researchers or other fisheries field staff, 84% did not recall seeing any researchers or other field staff, and the remainder were unsure (Figure 21).

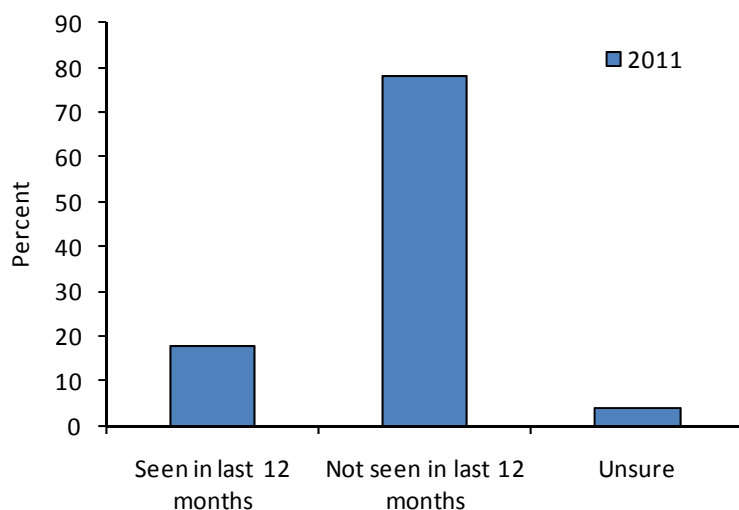


Figure 20: Contact with marine park rangers during 2011

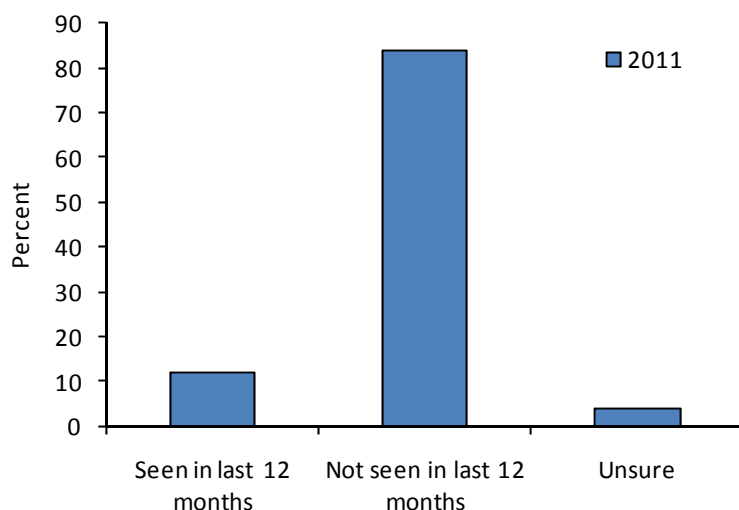


Figure 21: Contact with researchers or other fisheries staff during 2011

## Open ended responses

Diary participants were provided with the opportunity in both the NRIFS and the SWRFS to comment on anything fishing related and how they felt about the survey they participated in. They were freely able to make comment without prompting from interviewers. They were also given the opportunity to provide comments on anything related to the environment and water. The environment and water quality information is not presented in this report due to the diversity of responses, however is available by submitting a data request to Fisheries Queensland.

## Fishing related responses

For reporting purposes, all open ended fishing related comments were collated. The top eight most commonly mentioned fishing related comments have been displayed for both the NRIFS (Table 6) and the SWRFS (Table 10). These have been divided into concerns, suggestions and positive categories.

## 2001—NRIFS

Households participating in the NRIFS provided 808 fishing related comments. Of these, 60 comments could not be coded into common categories. Table 6, below, shows the top eight fishing related responses made by participants in the 2001 diary program.

In 2001 almost a quarter of all fishing related responses mentioned some concern over commercial fishing practices. The second most commonly mentioned response (13.6%) was the suggestion that stricter compliance was needed, calling for more patrolling times and areas covered. The third most commonly mentioned response (7.5%) involved illegal fishing concerns, with the most common complaints being fishers taking undersize fish or not obeying possession limits.

**Table 6: Top eight comments in 2001**

Comment category	Times Mentioned (%)
Negative impacts of commercial fishing	22.7
Need for stricter compliance	13.6
Illegal fishing concerns	7.5
Unhappy with current fishing rules and regulations	5.8
Against recreational fishing licence	5.3
Supports closed seasons or areas	4.8
Generally happy with fishing and/or Fisheries Queensland	3.9
More boat ramps or better boat ramp facilities	2.6

Table 7 shows the eight most commonly stated concerns from all fishing related comments provided in 2001. Households provided 371 fishing related concerns, almost half of these mentioned commercial fishers and their practices (49%). Comments about illegal fishing (16%) and being unhappy with current fisheries rules and regulations (13%) were also common concerns.

**Table 7: Top eight concerns in 2001**

Concern category	Times mentioned (%)
Negative impacts of commercial fishing	49.0
Illegal fishing concerns	16.2
Unhappy with current fisheries rules and regulations	12.6
Overfishing concerns	4.7
Fish stocks low	4.4
Concerns about seafood export practices	2.7
Pest fish concerns	2.5
Crab pot theft	1.7

Fishers in the 2001 survey provided 314 fishing related suggestions and the top eight suggestions are presented below in Table 8. A third of households felt stricter compliance was needed. This included the need for more patrols and for the patrols to cover larger areas. Just over 13% of suggestions made included comments about the fisher's opposition to a recreational fishing licence. Interestingly, 4.7% of all suggestions made by fishers mentioned their support for a recreational fishing licence.

**Table 8: Top eight suggestions in 2001**

Suggestion category	Times mentioned (%)
Need for stricter compliance	33.7
Against recreational fishing licence	13.2
Supports closed seasons or areas	12.0
More boat ramps or better boat ramp facilities	6.5
Supports recreational fishing licence	4.7
Better access to/or more information on fisheries rules and regulations	4.3
More stocking needed (in both fresh and saltwater)	4.0
More education on sustainable fishing practices	2.9

Fishers in the 2001 survey provided 63 positive fishing related comments which were coded into five categories (Table 9). Although the number of positive comments was not large, over half of the positive comments stated that fishers were generally happy with fishing and/or Fisheries Queensland.

**Table 9: Top positive comments in 2001**

Positive comment category	Times mentioned (%)
Generally happy with fishing and/or Fisheries Queensland	54.3
Happy with and supportive of fish stocking practices	33.8
Supports the freshwater fishing permit.	5.4
Fishing is a wonderful sport for the young	3.8
Fishing in Queensland is improving	2.6

## 2011—SWRFS

Participants in the SWRFS provided 929 fishing related comments. Of these, 14 comments were not able to be coded into common categories. The top eight fishing related comments given by the participants are presented in Table 10. Almost 14% of comments indicated that the diary participant was generally happy with fishing and/or Fisheries Queensland. More than 11% of comments suggested the need for stricter compliance. Just over 10% of comments made expressed unhappiness with current fisheries rules and regulations.

**Table 10: Top eight comments in 2011**

Comment category	Times mentioned (%)
Generally happy with fishing and/or Fisheries Queensland	13.8
Need for stricter compliance	11.3
Unhappy with current fisheries rules and regulations	10.3
Negative impacts of commercial fishing	9.2
Better access to/or more information on fisheries rules and regulations	8.4
More boat ramps/better boat ramp facilities	5.7
Illegal fishing concerns	5.2
Fish stocks low	3.3

Table 11 shows the eight most common fishing related concerns made by households participating in the SWRFS. Of all the concerns provided by households, over 25% said they were unhappy with current fisheries rules and regulations. These comments generally included reference to being unhappy with current size or possession limits.

During the SWRFS, Fisheries Queensland closed Gladstone Harbour and the surrounding area to fishing, while Biosecurity Queensland investigated a condition affecting some locally-caught fish. Less than 3% of all fishing related concerns related to this.

**Table 11: Top eight concerns in 2011**

Concern category	Times mentioned (%)
Unhappy with current fisheries rules and regulations	25.4
Negative impacts of commercial fishing	22.6
Illegal fishing concerns	12.7
Fish stocks low	8.1
Do not support Green Zones	6.9
Overfishing concerns	5.5
Financial concerns	2.9
Gladstone Harbour concerns	2.7

Households participating in the SWRFS provided 396 fishing related suggestions and the top eight are shown below (Table 12: Top eight suggestions in 2011). Around 25% of suggestions mentioned the need for stricter compliance. In nearly 20% of suggestions, households felt that fisheries rules and regulations should be easier to access and understand and that fishers should be provided with any updates. A similar percentage of suggestions were in support of a recreational fishing licence, as those opposed to the licence.

**Table 12: Top eight suggestions in 2011**

Suggestion category	Times mentioned (%)
Need for stricter compliance	25.4
Better access to/more information on fisheries rules and regulations	19.4
More boat ramps/ better boat ramp facilities	13.2
Against recreational fishing licence	6.4
Support recreational fishing licence	6.0
Promote taking large female crabs	5.9
Green zones are confusing	4.6
More consultation needed with the recreational fishing community	3.2

Table 13 presents the percentages of positive fishing related comments received. Fishers provided 139 positive fishing related comments in the 2011 survey and all of these comments could be coded into four categories. The majority of positive comments related to fishers being generally happy with fishing and/or Fisheries Queensland (89%).

**Table 13: Top positive comments in 2011**

Positive comment category	Times mentioned (%)
Generally happy with fishing and/or Fisheries Queensland	89.0
Supports green zones	5.3
Happy with and supportive of fish stocking practices	5.3
Finds fishing an enjoyable pastime	0.3

### **Comparison of responses between the NRIFS and the SWRFS**

The most frequently mentioned comment made by households in 2011 could be categorised as being generally happy with fishing and/or Fisheries Queensland (14%) (Table 10). In 2001, this was the seventh most frequently mentioned comment representing less than 4% of all comments (Table 6). In 2001, the most frequently mentioned fishing related comments referred to participants

making negative comments about commercial fishing practices. Almost 23% of comments could be coded into this category. In the 2011 survey only around 9% of responses included negative comments about commercial fishing practices.

In both 2001 and 2011, households reported the need for stricter compliance. Most comments included concerns over undersize fish being taken, possession limits not being followed and fishers not being aware of the fisheries rules and regulations. In both surveys, participants also mentioned the need for more boat ramps to keep up with the growing population and for better facilities such as fish cleaning tables to be provided at boat ramps.

In 2001, almost 5% of comments showed support for closed areas and closed seasons for recreational fishing. Interestingly, in the 2011 survey we can see both support and opposition to green zones. Some households reported that they found the green zones confusing.

### **Survey related responses**

In both 2001 and 2011, households were given the opportunity to provide open ended comments on the survey they participated in.

In 2001, 92% of participants in the survey were generally happy with the way the survey was conducted, the purpose of the survey and the interviewers conducting the survey. In 2011, 93% of diarists were generally happy with the survey they took part in.

Interest levels in the results of the survey were also very high. In 2001, over 90% of diarists requested the results of the survey they participated in be sent to them on completion. In 2011, almost 80% of diarists requested the results.

In 2011, households were asked if they would be willing to be contacted again if any other fishing related surveys were conducted during the next 12 months. Over 80% of fishers said, if selected, they would be happy to contribute further information.

### **Sources of information**

In 2011 only, fishers were asked to identify the primary and secondary way they found out about information relevant to fishing regulations and other recreational fishing information. Almost 37% of fishers identified government internet sites and social media as their primary source (Figure 22). Other popular sources included tackle shops (14%), other fishers including friends and family (13%) and government brochures and publications (13%).

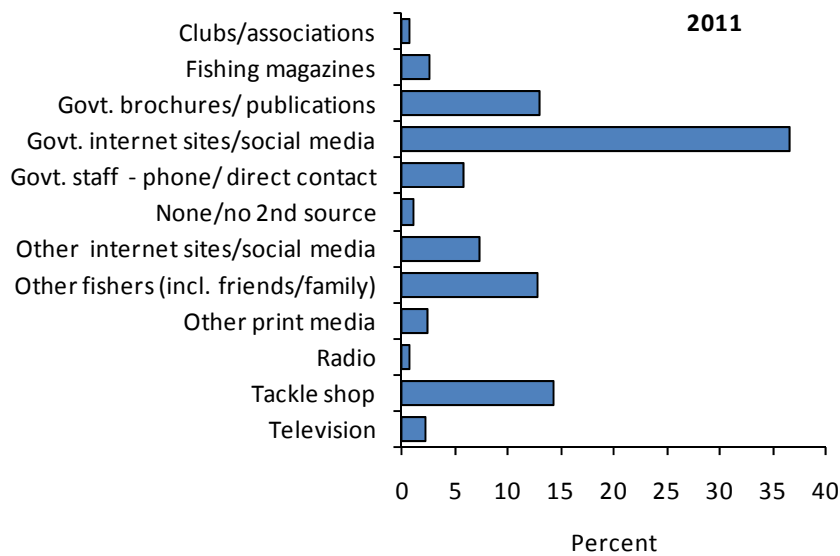


Figure 22: Primary source of information on fishing regulations

The majority of fishers did not provide a secondary source of information but those who did listed other fishers (including family and friends) (17%) and tackle shops (16%) (Figure 23).

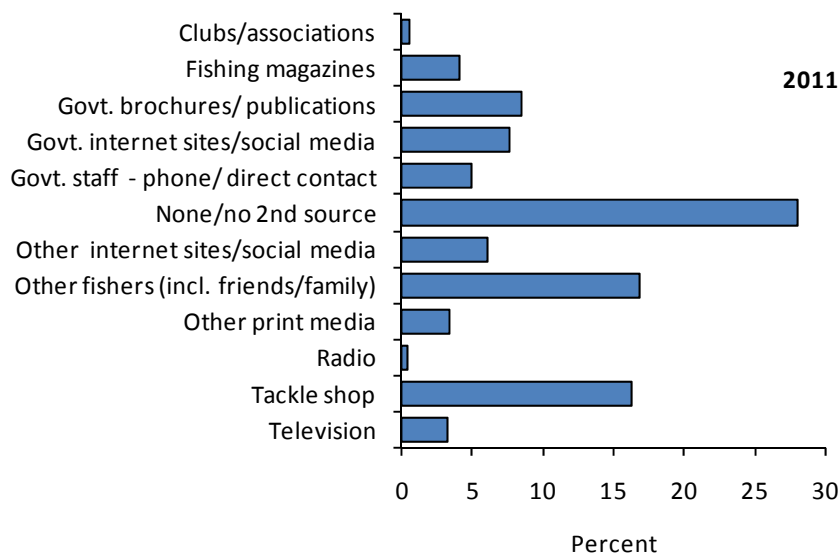


Figure 23: Second source of information on fishing regulations

## Awareness of freshwater stocking programs

In 2011 only, fishers were asked about their awareness of stocking programs in freshwater dams and waterways supported by Fisheries Queensland. Fishers were firstly asked if they could recall seeing or hearing anything about the stocking programs. Over 70% of households had either seen or heard about the freshwater stocking programs (Figure 24).

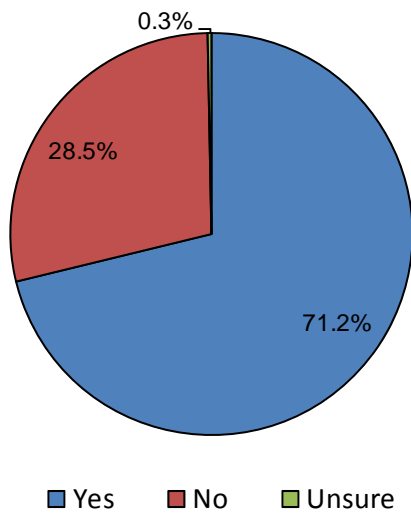


Figure 24: Households who had seen or heard about freshwater stocking programs

To find out if fishers were aware of how extensive the freshwater stocking programs are, fishers were then asked if they were aware that over 100 waterways and dams are involved in these stocking programs. Just over half of the fishers asked were unaware that the stocking program involved over 100 different dams and waterways. 20% of fishers were aware of the extensiveness of the stocking program, with the remainder being unsure (Figure 25).

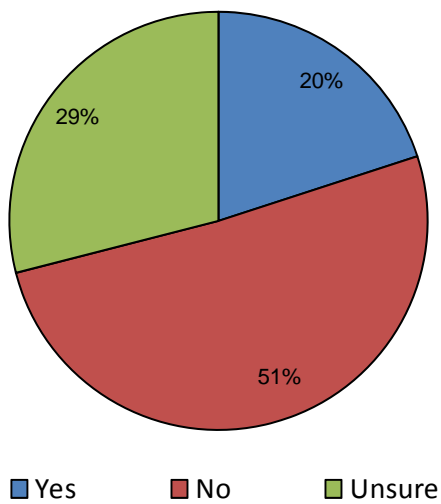


Figure 25: Extensive awareness of freshwater stocking program



## Discussion

A key element of fisheries management involves understanding the needs and behaviour of recreational and commercial fishers. Recreational fishing continues to be a popular pastime across the state, with approximately 17% of the Queensland population, aged five years and older, going fishing at least once in the 12 months prior to June 2010 (Taylor *et al.* 2012). To understand the needs of recreational fishers, managers and scientists must have a complete picture of who our recreational fishers are, what motivates them to fish, what prevents them from fishing and what makes their recreational fishing experience enjoyable. While previous research has collected social information from recreational fishers living within 50km of the Queensland eastern coastline (Tobin *et al.* 2010), this report provides the first social information representing all of Queensland's recreational fishers, including those living in rural Queensland. The report summarises data collected from two surveys, 10 years apart, that used a very similar methodology, allowing changes in fishers' characteristics and behaviour to be compared.

The response rate in 2011 (SWRFS) was very high, with 99% of fishers eligible to participate completing all questions in the social, attitudinal and motivational survey. This demonstrates that fishers are willing to be involved in surveys such as these and to have their chance to provide more information than just what they catch and where they go fishing. This high response rate combined with the sampling design means that we are confident that the information in this report is representative of Queensland's recreational fishers.

It appears that fishers are not getting to spend as much time fishing as they would like due to work and business commitments. When they do go fishing however, they place great importance on spending time with their friends and family. The importance of spending time with friends and family while fishing has increased considerably in the last 10 years. Perhaps recreational fishing is being used more often as a way for families to spend time together.

The results show that the success of a fishing trip cannot just be measured by the number of fish caught. Recreational fishers thought that a fishing trip could be successful even if no fish were caught, preferring more the opportunity to escape into the outdoors. Fishers in Queensland appear to be happy just to take home one or two big fish rather than a large number of smaller fish. They also like to fish in areas where they have the opportunity to catch several different types of fish. Fishers appear more concerned with the enjoyment they find in their fishing experience rather than to ensure they maximise their possession limits on every fishing trip.

Fishers surveyed in this study were generally satisfied with most aspects of their recreational fishing experience but a substantial number of fishers expressed concern over the perceived decline in fish stocks and the small size of fish. Commercial fishing practices continue to be blamed for this decline in fish stocks. However, in the last 10 years fishers have become increasingly concerned with the number of people recreationally fishing and the number of fish they are catching. In the 12 months prior to this 2011 survey, Queensland experienced major flooding in the south and Cyclone Yazi in the north. Not surprisingly, a number of fishers cited weather as a hindrance to their satisfaction with fishing in the previous 12 months.

In some respects, it appears that fishers in Queensland have become happier with their fishing experiences and the way Fisheries Queensland manages fishing. This is based on the fact that in 2011 the most commonly made comment about recreational fishing related to fishers' general happiness with fishing and/or Fisheries Queensland. When fishers were given the same opportunity to provide comment in 2001, they were dominated by concerns about commercial fishers and their practices.

The 2011 survey also provided the opportunity to assess how frequently recreational fishers come into contact with a variety of fisheries staff. In the 12 months prior to the 2011 survey, around 37% of fishers had seen or come in contact with QBFP. A considerable number of fishers in the 2001 and 2011 surveys suggested the need for stricter compliance through QBFP, and in particular for more officers to be present on the water, covering a larger area.

In both 2001 and 2011, particular support was mentioned for the freshwater impoundment stocking program. Over 70% of fishers were aware of the stocking programs of freshwater dams and waterways supported by Fisheries Queensland. However, only 20% of fishers were aware of the extensiveness of the stocking programs, with the majority of fishers unaware that over 100 dams and waterways are stocked in Queensland. These findings suggest that some fishers may be unaware of the excellent fishing opportunities on offer in stocked waters across the state.

The results show that fishers strongly rely on government internet sites and social media such as Facebook to access information about recreational fishing rules and regulations. They also rely on friends and family, local tackle shops and government publications and brochures. However, a number of fishers expressed concern that fishing rules and regulations were not always easy to access and found it difficult to keep up to date with regulatory changes. Knowing how recreational fishers find out about fishing will help Fisheries Queensland better communicate with stakeholders in the future.

Continued monitoring of the social, attitudinal and motivational aspects of recreational fishing will help ensure management practices are relevant to the behaviour of recreational fishers. Although only the years 2001 and 2011 were analysed in this report, changes to fishers' concerns and satisfaction were visible across the 10 year period. In 2011 a substantial number of fishers were generally happy with recreational fishing and the management provided by Fisheries Queensland. Maintaining the support of recreational fishers is paramount and future management plans and communication strategies will benefit from the results in this report.

The data presented in this survey will be useful for the long term monitoring of the recreational fishery into the future. Social, attitudinal and motivational data is needed to compliment the recreational catch and effort information currently collected by Fisheries Queensland. This data will enable a complete picture to be formed of who our recreational fishers are and what makes their fishing experience enjoyable and fulfilled. It is essential that surveys such as this are repeated on a regular basis. This will allow Fisheries Queensland to identify trends through time in how people feel about their fishing experiences, how they feel about new management practices and how the rapidly growing population in Queensland may change the way people are fishing.

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