EXPLORING FUTURE OPPORTUNITIES FOR THE TAUPŌ FISHERY

A Review of the Taupō Sports Fishery

20 May 2013

Acknowledgments

The development of this report was only made possible through considerable assistance and contribution from a number of people including, but not limited to, the following:

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The Fisheries Working Group consisting of Mark Venman (DOC) Joe Doherty (DOC), Rakei Taiaroa (TMTB), Rob Pitkethley (Eastern Fish and Game), Ian Kusabs (TMTB), and Alan Simmons (TFAC). The Peer Review Group of Will Samuel (TDC), Bill Fluery (DOC), Topia Rameka (TMTB), Maria Nepia (Lake Rotoaira Trust), Dave Bamford (TRC Tourism), Dave Conley.

The team from DOC including Dave Lumley, Michael Harbrow, Dave Wilks, Michael Gee, Kim Turia, Grant Sim, Lisa Bott, Randal Hart, Robyn Orchard, Peter Devlin, Mark Davies, Mike Bodie and the TNT Fishery Team.

Bryce Johnston, the Taupō Fishery Advisory Committee (TFAC), Donna Jarden and Vanessa Freeman (DGLT), Fritz Frohlike (EGLT), Graham Whyman, John Gibbs, Deryck Shaw and the team from APR Consultants, Jimmy Young (TRC Tourism), Billy Brough (Brough Resource Management) and all those who completed surveys, attended workshops and public meetings.

Executive *Summary*

Lake Taupō and the wider region has identified with trout since they were introduced as a sports fish more than one hundred years ago. The town of Tūrangi markets itself as the 'Trout Fishing Capital of the World', Taupō's waterfront is home to a large trout sculpture to welcome visitors to the town, and the region is home to the Tongariro National Trout Centre near Tūrangi. A study by APR Consultants, commissioned as part of this review process, has confirmed the importance of the Fishery to the economic and social wellbeing of the region, with an annual economic contribution of up to $29m per annum and close to 300 jobs dependent on it.

It became clear in the course of the review process that effective management of the Fishery needs to focus more specifically on the important contribution to the Taupō Region (and beyond) that the Taupō Fishery currently makes, and could make in the future. In essence, an overarching management goal should be focused on maximising the full value (in the broadest - economic, social, cultural and environmental - sense of the word) that the Fishery can deliver. This goal must then be used by the Department to establish objectives and targets, set budgets, and drive progress reporting.

The Department of Conservation initiated this review process with several broad factors in mind, with the key trigger points being:

- Rethinking how the fishery is managed in the context of a renewed commitment from the Department to work with others to help New Zealand flourish socially, economically and environmentally (and for New Zealanders to benefit from that management);
- Concerns from anglers and the wider community about the health of the fishery; and
- Declining participation rates and licence sales.

Through the review process, we found a fishery that is fundamentally in good shape. But it is also a fishery where there are huge opportunities that could be realised through a fresh management approach. To realise these opportunities, and maximise the value of the fishery, there must be a shift from the strong focus on the biological aspect of the fishery, to a broader consideration on managing *all* the different components of the fishery. In the Report, unsurprisingly, no single solution is identified. Rather a range of opportunities have been highlighted that focus on:

- Establishing an overarching goal for the fishery;
- Governance and management structures and processes;
- Ensuring there is clear direction focused on maximising the full value of the Fishery;

- Management of the resource (the trout);
- Engagement with anglers and licence-holders (particularly with a view to increasing participation); and
- Improving relationships more generally (adopting a ‘philosophy of partnering’)

Overarching goal for the fishery

During the course of the review it became evident that, while a range of objectives for managing the Fishery exist, there is no obvious overarching goal. The lack of an overarching management goal has led the Department to focus on the achievement of single objectives, potentially costing it the ability to maximise the value the Fishery could otherwise deliver to partners, stakeholders and the wider community. The goal needs to recognise the multi-dimensional and multi-disciplinary nature of fishery management and focus on three key elements – managing and enhancing the sports fish resource, working effectively with anglers and increasing participation in fishing, and developing strong partnerships with others to optimise the environmental, social and economic benefits for the Taupō region and beyond.

Governance and Management Structures and Processes

In looking at the existing governance and management structures and processes for the Taupō Fishery, the primary objective was to identify how they are currently working and how they might best enable effective and well-aligned input from the key players. While the Taupō Fishery forms part of an integrated framework for managing sports fish across the country, it is also quite distinct and has a number of features that are unique to this particular fishery. The key ‘players’ in the Taupō Fishery are:

- The Minister of Conservation who approves the management plan that is developed for the purpose of managing the Taupō fishery and, with the concurrence of Ngāti Tūwharetoa, fixes forms and classes of fishing license and fees payable for licences;
- The Director-General of Conservation has the powers of a fish and game council in relation to the Taupō Fishery (with several modifications);
- Ngāti Tūwharetoa has a joint decision-making role in the Taupō Fishery, and a broader partnership role with the Crown. The dual roles are derived from the ownership of the lakebed —including much of the surrounding land— and the various agreements with the Crown contained in the Māori Land Amendment and Māori Land Claims Adjustment Act 1926 and the 2007 Deed of Settlement.

- Anglers have a distinct role in the management of the Taupō Fishery, through the establishment of the Taupō Fishery Advisory Committee and, because the Director-General is required to manage the sports fish in their recreational interest;

What we found is that there are some tensions and uncertainties about how the agreements reached between the Crown and Ngāti Tūwharetoa and the provisions of the Conservation Act fit together; there is little effective engagement between Ngāti Tūwharetoa and anglers (and hence no processes to align interests); and that anglers are frustrated with what they see as their negligible influence on management. We identified that angler voices are not being heard in the management of the fishery, and nor are they well integrated in either the statutory decision-making processes or the decision-making at an operational level.

We see the clear potential to re-examine the options to better recognise the Crown/ Ngāti Tūwharetoa relationship at a governance level, and to provide a more effective mechanism at the management level for all key players to work together to better influence decision-making. We believe the respective governance and management structures need to be addressed as a matter of priority so that there are clear processes for understanding and aligning respective interests and aspirations. This is fundamental to all parties achieving the maximum value from utilising the Fishery.

Management of the Resource

While it is well understood that the health of the fishery has fluctuated over the past 100+ years, what is less well understood are the causes of the upswings and downturns. This requires a better understanding of the dynamics of the whole of Lake Taupō (and catchments) environment, and the many different interactions that impact on it. We believe that no single player is in a strong position to make sense of this alone. A more collaborative approach to developing (and prioritising) this understanding is required by the many players involved in its use, including councils, power companies, Ngāti Tūwharetoa, and the Department. In relation to the management of the sports fish resource, what we found is that while the fishery continues to gather excellent information on trends (and there is now some evidence the fishery is emerging from a recent downturn), there is considerable opportunity to use this information more effectively to drive a more adaptive and flexible management approach generally, and also to communicate more effectively with the wider community.

At a more operational level, we heard a consistent message that catfish in the lake were a major issue, and we believe there is an opportunity for the Department to pilot an initiative to reduce their numbers. We also heard suggestions from anglers in particular of ways to address what they saw as a diminishing staff presence on the riverbanks and the lake. We think there is an opportunity to re-establish a presence through the adoption of networks of honorary rangers and 'ambassadors'.

Anglers and Licence holders

In respect of the relationship with anglers, we identified the need to greatly improve the interface they have with the Department. Improved licencing options, better communication and more effective marketing of fishing opportunities in the region were all identified as aspects needing improvement. We confirmed that participation rates (like in many places) have steadily declined from a peak in the 1980s, and most significantly there has been a 20% drop in licence sales over the past five years. Given the major economic and social contribution to the region from the Fishery, and given that it is licence fees that pay for fisheries management, this is a significant issue that needs considerable focus and attention. No single cause was identified, but a range of factors was highlighted. This included concerns about the health of the Fishery (people do want to know they will catch fish), broad trends that highlight declining participation in outdoor recreation generally, the on-going economic downturn, and perceptions that fishing is a difficult activity in which to participate. While a number of these factors are not easy to address, the general approach for the Department should be to make fishing as easy as possible – 'easy to think of, easy to purchase, and easy to do'. There are a number of barriers to participation that can be removed (or at least reduced), and there should be increased effort to promote and market the fishing experience.

Relationships

In order to achieve the broad goal of maximising the value from utilisation of the Fishery, we identified that the Department will need to adopt more fully what was described to us as the 'philosophy of partnering'. This will require a commitment to empowering others to take a more active role in participating in management, such as setting management priorities. The review process itself revealed a strong commitment to more effective and positive engagement, and partnerships, with the Department, and a desire to develop a stronger sense of 'ownership' of the fishery by others (with all the responsibility that entails). It became clear in the course of the review that it is only through a partnership approach that the value and associated benefits of the fishery to the region can be maximised

In particular we believe that there are obvious opportunities to improve the effectiveness of the Department's relationships with Fish and Game (given they are in the same 'business'). Currently the relationship appears to be disjointed and 'competitive' rather than collaborative. There are also opportunities to develop stronger relationships with the tourism and wider business sector in the region (for mutual benefit), and with the Lake Rotoraira Trust.

OPPORTUNITIES

The following is the complete list of opportunities that have been identified and are fully discussed within the report.

A. Establishing a Clear Goal

1. Establish a clear goal for the management of the Taupō Fishery that focuses on maximising the full value (in economic, environmental, social and cultural terms) that the Fishery can deliver.

2. Align the management of the Taupō Fishery to the new goal by:
   a. Setting meaningful management objectives and targets;
   b. Aligning the staffing structure and budget allocations; and
   c. Monitoring and reporting progress against the objectives and targets.

B. Creating Effective Governance and Statutory Decision-Making Processes

1. Establish a shared decision-making role for Ngāti Tūwharetoa for approving the sports fish management plan through a legislative change, and/or establish agreed engagement processes for the preparation and approval of the sports fish management plan;
2. Agree on processes that give better effect to the existing shared decision-making (concurrence) role in relation to fixing of forms and classes of fishing licenses and fees for licenses; and
3. Develop stronger links between Ngāti Tūwharetoa's governance and statutory decision-making roles, and their role in the current, and any future, management structures.

C. Management Structures and Processes

1. Work with Ngāti Tūwharetoa and licence-holders either to refine or develop new management structures and processes for the management of the Taupō Fishery
2. Consider the development of a new advisory structure with shared membership between Ngāti Tūwharetoa, licence-holders, and the wider community (including the business sector) through a regulatory change
3. Work with the Taupō Fishery Advisory Committee in the short-term to ensure it is supported to provide an effective angler voice in the management of the Taupō Fishery
4. Re-examine existing administrative and overhead charges and identify where savings can be made and applied to the operational management of the Taupō Fishery.

D. Information and Tools to Assist Managing, Maintaining, Enhancing the Sports Fish Resource

1. Work with other organisations – power companies, district and regional councils, Ngāti Tūwharetoa, academic institutions, Crown Research Institutes, and Fish and Game – to develop a shared science and research strategy for Lake Taupō
2. Consider the establishment of a collaborative structure to deliver the science and research priorities for Lake Taupō
3. Establish clear processes to ensure that science and monitoring information is used effectively to:
   a. Take a more active role in 'intervening' in the Fishery;
   b. Monitor the effectiveness of those interventions; and communicating with anglers
4. Amend the current Taupō Fishery Regulations to enable the use of Angler Notices as the key mechanism for regulating angler impacts on the Fishery
5. Consider initiating a pilot programme to reduce the number of catfish in Lake Taupō
6. Initiate the planned review of the entire Tongariro National Trout Centre site and examine the role of the hatchery in that wider context
7. Encourage greater 'ownership' and responsibility for fishery management among Ngāti Tūwharetoa and licence-holders generally, and in particular:
   a. Re-engage a network of honorary rangers;
   b. Establish a network of 'ambassadors' or 'Friends of the Taupō Fishery.'
8. Investigate the use of infringement notices for minor breaches of fishing regulations.

E. Working Effectively with Anglers and Increasing Participation

1. In relation to the existing licencing system:
   a. Put in place an on-line system in close collaboration with Fish and Game;
   b. Develop a national licence option;
   c. Offer a fuller range of licence options, with the priority being a family licence, a weekend licence, and a 12 month licence;
   d. Consider ways to support charter boat operators in the development of a boat licence concept; and
   e. More actively promote the fact that licence fees pay for fishery management.
2. In relation to the destination product:
   a. Define and brand the full extent of the Taupō Sports Fishery;
   b. Develop and implement a marketing and communications plan to raise the profile of the fishery nationally and internationally; and
   c. Initiate the development of a collective vision and a strategic plan for the Tongariro River to address the competing demands on the river and surrounding land.
3. In relation to improving access to the fishery:
   a. Expand opportunities to learn to fish for all people, including expanding the kids 'fish-out' days to a daily occurrence for all visitors (not just children);
   b. Support the establishment of learn to fish classes by clubs and/or commercial operators; and
   c. Work with others to develop a policy-driven approach to enabling more spin fishing opportunities in the Fishery.
4. In relation to communication:
   a. Develop a new communications strategy, including reconsidering the role of the Target Taupō publication;
   b. Adopt regular, timely and less formal communication, including better use of social media and more active engagement with and support for existing sites;
   c. Review the Department's website and explore the benefits of a standalone Taupō Fishery website; and
   d. Develop clear financial reporting for licence-holders.

F. Developing Strong Relationships

1. Promote stronger alignment with Fish and Game, including, where appropriate, shared strategy, research and infrastructure, shared processes, and more consistent regulations
2. Work collaboratively with Destination Great Lake Taupō and the wider tourism and commercial sector to explore more innovative ways of working together to promote and market the Taupō Fishery and the wider region
3. Support the Lake Rotoaira Trust in developing its vision for Lake Rotoaira.

Contents

Volume II

Foreword

A healthy and well-managed Taupō Fishery is an important part of the overall wellbeing of the Taupō region – in social, economic and environmental terms.

The Department of Conservation manages the Taupō Fishery under the provisions of the Conservation Act 1987 and the 1926 Maori Land Claims and Maori Land Adjustment Act and chose to undertake this full review of its management. The review was carried out in close co-operation with key partners, stakeholders and the wider community, because of the importance of the Taupō Fishery to the Taupō region. The aim was to obtain a good cross-section of views from individuals and organisations with an interest in the Taupō Fishery. The level of participation, and the quality of input provided to the Review, is a credit to all those who took part, and reflects the high degree of public interest. We hope the inclusive process will also have helped build a better understanding of the Fishery..

The Terms of Reference for the Review established that the review process must provide an examination of the current state of the Taupō Fishery and its management, and identify opportunities for future improvement. A key objective of the process was to ensure that there was sincere and open engagement with all key players throughout.

Part One of this Report describes the process followed, particularly in relation to the public survey that was undertaken, and gives more detail of the reasons that the Review was undertaken at this time.

Part Two of the Report sets the scene and describes the current management regime for the Taupō Fishery. It gives some detail around the basic history and ecology of the Taupō Fishery, and explains the administrative and legal regime that it is managed under. Part Two also provides an overview of the responses that emerged from the public survey that was undertaken as part of the review process.

Part Three of the Report provides the detail of what was concluded in the course of the Review. It divides the Fishery into its core components and records what was heard from participants in the review, what was concluded from that, and identifies the core opportunities that should be explored by the Department.

There were a large number, and a full range, of views expressed to the Review Group. In a number of cases, those views were strongly held. This Report endeavours to capture the essence of those views, but inevitably not all will be reflected in the opportunities that have been identified. This does not reflect on the quality of the views provided, but rather is a product of choosing to focus on those areas where the Department, often in partnership with others, can arguably make the most positive difference.

The aim of the Report is to provide guidance for the Department and its partners in the on-going management of the Taupō Fishery. It is expected that the opportunities will be implemented over time and through various means. For example, it should form part of the thinking for a new statutory Taupō Sports Fish Management Plan, and it is also hoped that the Report will provide some useful thinking about the role and function of fishery management as the Department continues to work through a full process of organisational review in 2013

Henry Weston

Part One: Introduction and Overview

1.1 Why was a review undertaken?

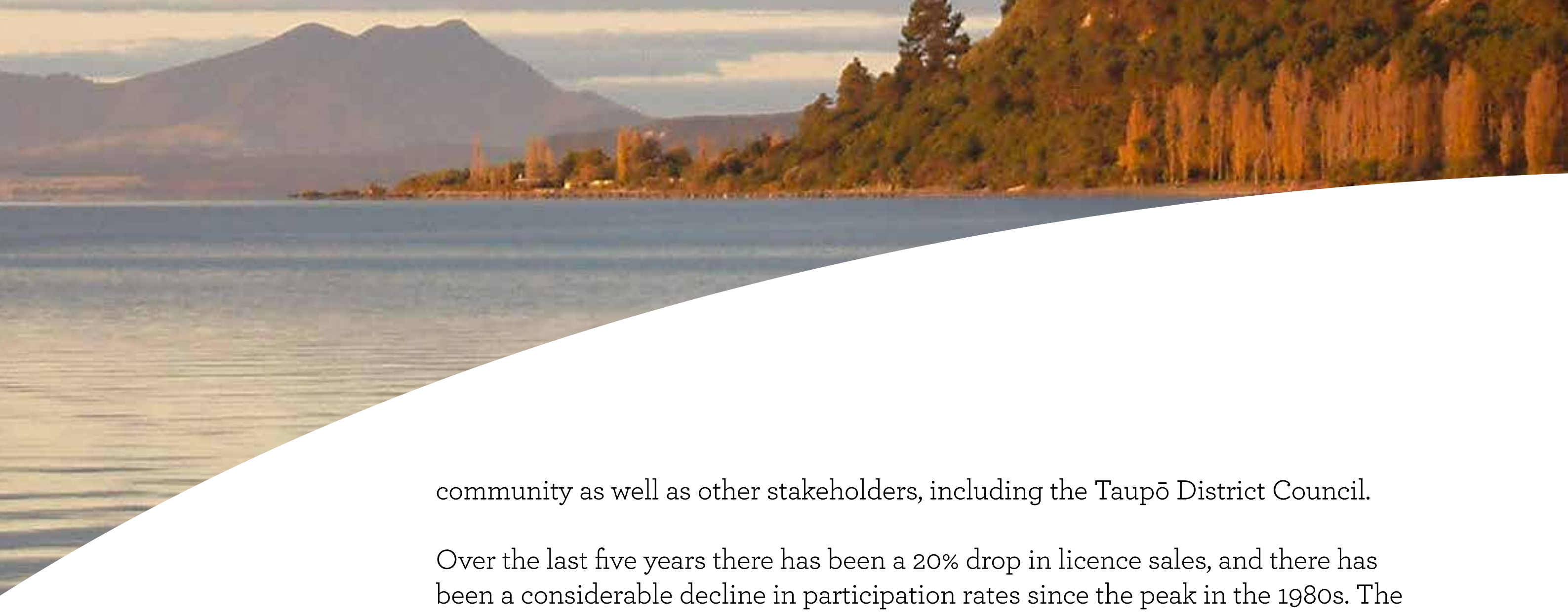
The Director-General of Conservation manages the Taupō Fishery under the sports fish and game provisions of the Conservation Act (the same provisions under which Fish and Game functions are carried out in the rest of New Zealand). Broadly, s/he is required to 'manage, maintain and enhance the sports fish resource in the recreational interests of anglers'. It is a role that is quite distinct from (although in many cases complementary to) the Department's more widely known conservation functions. It is a role that is focused on sustainable use, rather than protection and preservation.

Lake Taupō is one of the largest freshwater lakes in the southern hemisphere and has some of the best trout fishing in the world. It receives the highest level of angling use of any fishery in the country providing approximately 20% of New Zealand's total freshwater sports fishing. The Taupō Fishery provides for exciting river and lake fishing all year round in a stunning natural setting, and attracts anglers from all around the world. It is integral to the economic wellbeing of Taupō and the wider region.

The Taupō Fishery includes Lake Taupō and its tributary rivers including the Waikato River to Huka Falls; Lakes Moawhango, Kuratau and Otamangakau. Lake Rotoaira, separately managed by the Lake Rotoaira Trust, is a distinct but important part of the Taupō Fishery.

The Department, alongside Ngāti Tūwharetoa, decided to undertake a review primarily to ensure that its management of the Taupō Fishery is well-targeted and contributing optimally to the overall wellbeing of the region. The Department's vision is for New Zealand to be the greatest living space on earth. While this vision is bigger than the Department, it has identified its key purpose as providing conservation leadership for a prosperous New Zealand. Ultimately the Department wants its work to be better connected to the wider aspirations of the communities it works within, and to see New Zealanders gaining environmental, social and economic benefits from healthy functioning ecosystems, recreation opportunities and living our history.

The Regional Conservator also identified this review as an important project in the context of the current worldwide economic downturn and a recent decline in the health of the Fishery. The latter has drawn concern from some in the angling



community as well as other stakeholders, including the Taupō District Council.

Over the last five years there has been a 20% drop in licence sales, and there has been a considerable decline in participation rates since the peak in the 1980s. The consequence of this decline is less revenue that can be applied to managing the Taupō Fishery, and a negative impact on the economic health of the wider region. Other factors that led to this Review being undertaken included:

- the Taupō Sports Fishery Management Plan was due for a formal review in 2012, and so is now overdue;
- the way that fishing licences are sold is under review; and
- there have been several recent structural changes within the Department culminating in a merger between the Tongariro-Taupō and Whanganui conservancies. The newly created Tongariro-Whanganui-Taranaki Conservancy includes a new Area office joining the Fishery and Tūrangi Taupō Areas into one, known as the Taupō-nui-a-Tia Area.

It is timely, therefore, to look at the present management regime and identify opportunities and options for improving fishery management as a whole.

1.2 The Objective of the Review Process

The Terms of Reference identified that the objectives of the Review are to ensure that management of the Taupō Fishery:

Delivers an internationally renowned and sustainable trout fishery; and
Contributes optimally to the social, economic, environmental and cultural well-being of the region.

To achieve these objectives the Department and Ngāti Tūwharetoa want to ensure that:

- Taupō is internationally renowned as a sustainable fishery and a destination for anglers;
- The Taupō Fishery is an integral and integrated part of Destination Great Lake Taupō, and the Department's management contributes to the social, economic and cultural wellbeing of the region;
- Te tino raNgātiratanga and kaitiakitanga of Ngāti Tūwharetōa over Taupō-nui-a-Tia and the fisheries within the Tūwharetōa rohe is acknowledged and recognised;
- The Department is meeting the Crown's obligations under the 2007 Deed to Ngāti Tūwharetōa as the owner of the Taupō lake bed;
- The Department understands and is well integrated and aligned with the aspirations of other fish and game councils and fisheries managers (including the Lake Rotoaira Trust), the angling community, and the Taupō District and Waikato Regional Councils, and recognises the importance of power generation in New Zealand;
- As the Taupō Fishery manager, the Department has the confidence of its key partner, anglers, stakeholders and the support of the wider community; and
- Management of the Fishery is financially sustainable.

To be successful the Review needs to identify a number of opportunities that are tangible and deliverable. The opportunities need to be developed and described to a level where an obvious outcome or implementation process is identifiable to guide their achievement.

Actively engaging with partners, stakeholders and the wider community was a crucial part of ensuring that this Report would be relevant to those parties and, importantly, to secure a greater chance of buy-in to the opportunities identified.

1.3 The Process

In order to achieve the objectivet of the Review, the Department has engaged widely to hear the views of anglers, the tourism and economic sector, local authorities, other fisheries managers (Fish and Game and the Lake Rotoaira Trust), and from the Crown's partner in the Fishery, Ngāti Tūwharetoa.

The majority of the work was done by a multi-disciplinary working group consisting of representatives of the Department, Fish and Game, the Taupō Fishery Advisory Committee and the Tūwharetoa Māori Trust Board. This Working Group and the wider project was facilitated by Henry Weston, an independent consultant. The Working Group was responsible for pulling together and assessing the information gained through the wider consultation process, as well as adding their own views based on their own extensive experience.

The ideas and thoughts developed throughout the Review were tested on a Peer Review Group. This Peer Review Group consisted of representatives of Lake Rotoaira Trust, Tūwharetoa Māori Trust Board, the Taupō District Council and tourism and fishing representatives.

The Review process adopted a 'toolbox' approach to engaging anglers and the wider community. Anglers (those who currently fish, those who used to fish, and those who might fish) were identified in the Terms of Reference as the primary customers of fishery management. The methods used, to included media releases, developing a purpose built website (www.doc.govt.nz/Taupō fishery), getting information out on fishing websites, social media, and a public survey.

Public Survey

A large part of the engagement was done through an online public survey that asked a range of questions relating to all facets of the Taupō Fishery. This survey received 742 responses, and was also used to provide vital information to inform the economic impact assessment carried out by APR Consultants.

A full summary and analysis of the survey responses can be found in *Appendix 1 – Survey Analysis*. Comments and findings are also reflected throughout this Report.

This survey provided a useful snapshot of users of the Fishery (and others) and should be repeated periodically.

Public Workshops

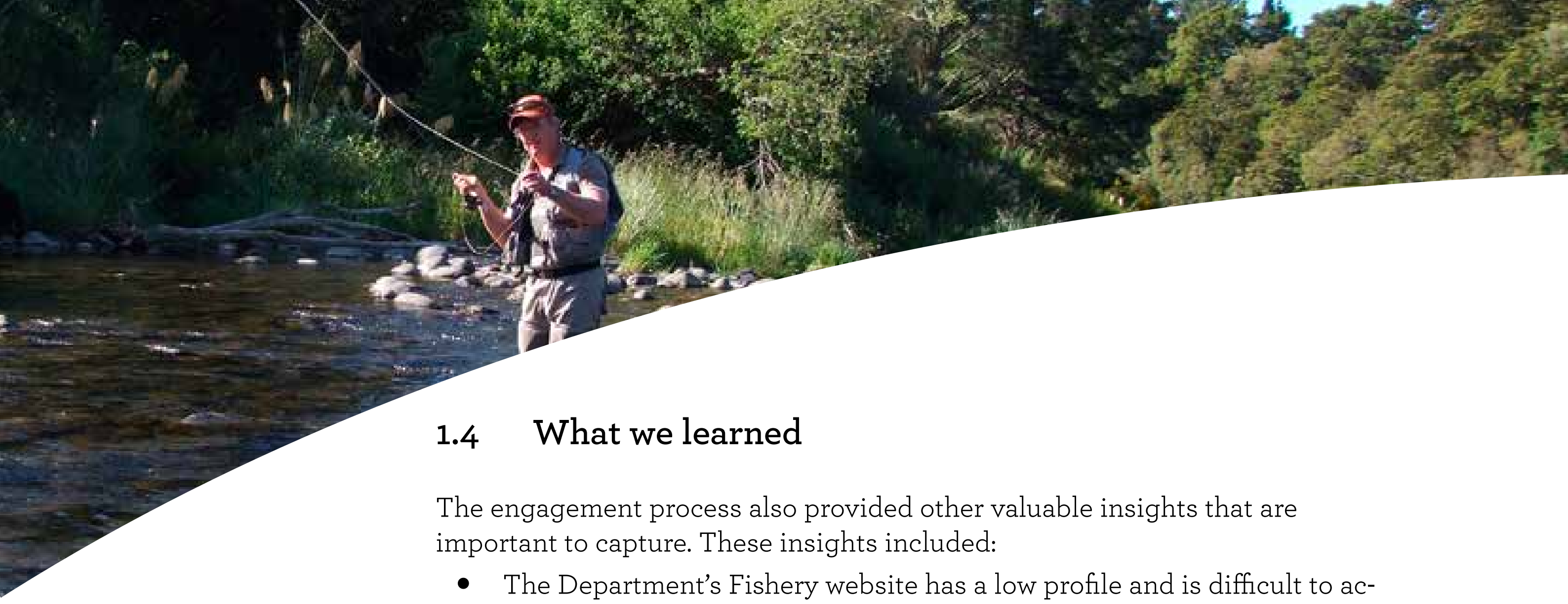
In order to complement the survey and other more focused discussions, two public workshops were held, one each in Tūrangi and Taupō. These workshops were reasonably well attended (with about 15 attending the Tūrangi workshop and 30 attending the Taupō workshop). They provided the local community with an opportunity to be directly involved in the review process. As well as being important for the process as a whole, an additional benefit that emerged from these workshops was the discussion and interaction between the participants and staff from the Department who were present. The workshops served to confirm much of what was learned through the survey, as well as being useful forums to test specific opportunities.

In addition, members of the Working Group met with the Taupō Fishery Advisory Committee, representatives of the Lake Rotoaira Trust, local fishing guides, local business owners, representatives of the Tūwharetoa Māori Trust Board, and staff from the Department. The Review Team also presented twice to Taupō District Council, at the start of the project, and near the completion, to test the thinking and direction.

All of these interactions provided valuable information and direction to inform the development of the range of opportunities that are contained in this report.

Economic Impact Assessment

During the establishment of the project, there was a lot of discussion around the actual value of the Taupō Fishery to the local economy. In 1983 an Economic Impact Assessment was undertaken by Deryck Shaw which valued the Fishery at $10,779,662 with the provision of 244 jobs. It was decided very early on in the process that an update of this assessment would provide some valuable information on the current value of the Taupō Fishery, and assist in identifying future opportunities. Deryck Shaw, now of APR Consultants, was commissioned to undertake this assessment, which is discussed further in *Section 3B.2.5 Economics* of this report.



1.4 What we learned

The engagement process also provided other valuable insights that are important to capture. These insights included:

- The Department's Fishery website has a low profile and is difficult to access;
- Anglers are very active online, and there are a range of websites related to fishing shops, local accommodation providers and blog sites that are currently the 'go to' sites for local fishing information;
- There is no way to easily contact licence-holders electronically as email addresses are not collected; and
- There are a number of parallel projects occurring with Fish and Game, but there is a distinct lack of knowledge or resource sharing between the two organisations.

In summary, the engagement process proved effective in obtaining a wide range of information from the full range of stakeholders and partners associated with the Fishery. Fundamentally what it illustrated is the value of the Department continuing to develop strong relationships with all those who have an interest in the Fishery.

The views expressed in the report will not satisfy all participants, particularly those who just want the fishing to be better. But fundamentally, taking up the opportunities that have been identified will, over time, significantly lift the management of the Fishery in all respects, and in particular its contribution and connection to the wider region.

PART TWO: CURRENT MANAGEMENT REGIME

This Part of the Report provides background information on the history and ecology of the Taupō Trout Fishery, and on its administration over the years and the 1990 Conservation Act reforms that establish the current legal basis for the management of sports fish in New Zealand. It also sets out the views obtained through the public survey about the Taupō Fishery.

2.1 Understanding the basic history and ecology of the Taupō Trout Fishery

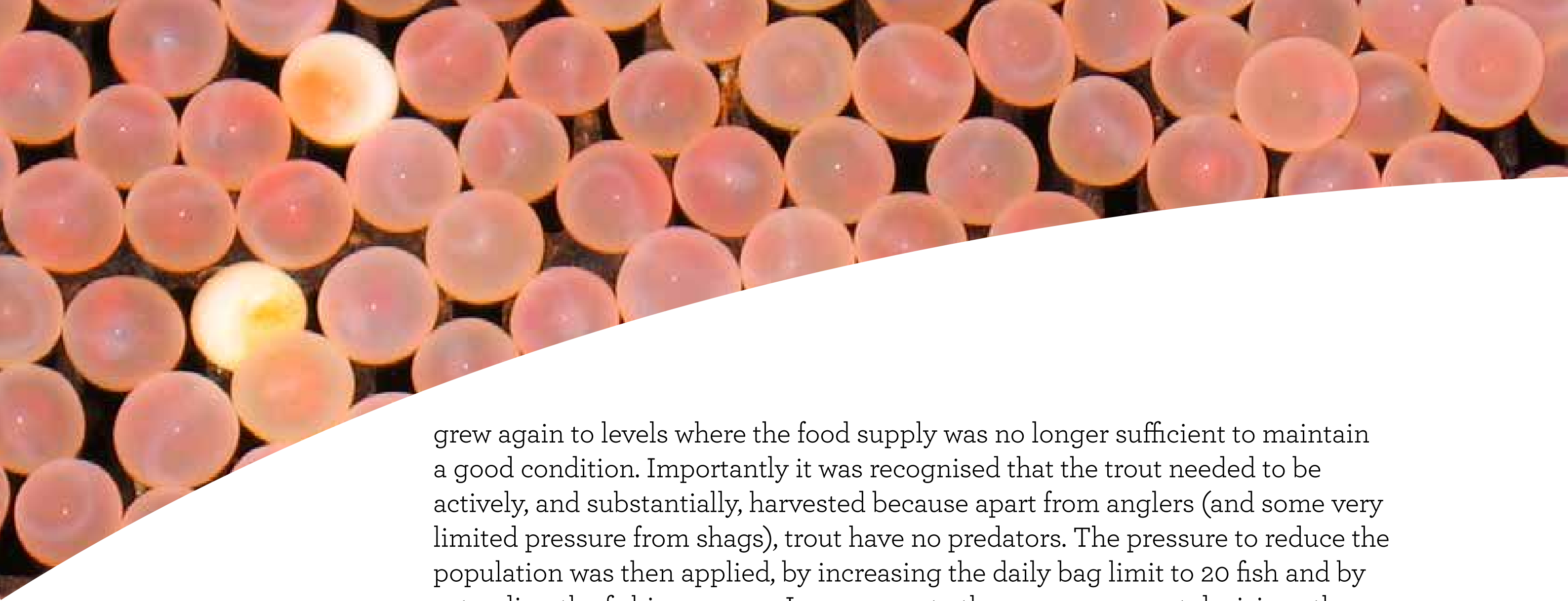
2.1.1 The History

Trout were introduced to LakeTaupō late in the 19th century, with initial liberations of brown trout, followed soon after by liberations of rainbow trout. The trout were of a mixed genetic pool, primarily originating from coastal and inland central California.

Initially food sources were plentiful and the trout thrived mainly preying on the indigenous kōaro that was the only substantial fish population present in the Lake. However, by the 1920s, the growing trout population had depleted this food supply and the condition of the trout plummeted. This indicated that kōaro, which is a non-pelagic species, simply could not sustain a large population of trout. An extensive netting operation was carried out to remove large numbers of trout from the lake (to reduce pressure on the food source), but this created only a temporary rebound in the condition of the trout population.

In the 1930s and 1940s smelt (another indigenous species) were introduced to LakeTaupō to bolster the food source for trout. There had earlier been some successful introductions of smelt to the Rotorua lakes. The condition of trout in LakeTaupō again rebounded, with smelt a more resilient food source being able to support a heavy predation by trout.

In the 1940s to the early 1960s trout numbers increased significantly, probably as a result of low fishing pressure in the war years, and after. Angler complaints that the standard of fishing in the lake was declining resulted in an investigation of the state of the Taupō Fishery. It was determined that the standard method of examining angler catches and diaries were not adequate to answer basic questions about the Fishery. In the early 1950s traps were established to answer these questions. The conclusion at that time was that the angling pressure was too low to control the trout population growth. Consequently the population



grew again to levels where the food supply was no longer sufficient to maintain a good condition. Importantly it was recognised that the trout needed to be actively, and substantially, harvested because apart from anglers (and some very limited pressure from shags), trout have no predators. The pressure to reduce the population was then applied, by increasing the daily bag limit to 20 fish and by extending the fishing season. In response to these management decisions the condition of the fish started to pick-up again.

Exceptional data is available on the evolution of the average weight of rainbow trout caught in Taupō , stretching back from 1905 to the present time (Fig. 1). Up until the 1960s, the data is based on angler diaries, reports, books and interviews. Since then, there has also been an extensive programme of operating fish traps in the Waihukahuka, Tokaanu and more recently in the Waipā streams to monitor the size, number and condition of trout, post-spawning survival, sex-ratio, stock-recruitment, incidence of shag worm infection, etc. Unlike anglers' reports this information/researchis based on hard data, and provides an unbiased diagnosis of the overall health of the Fishery. This data also provides a mechanism to verify the measurable outcome of the management decisions taken during a certainperiod.

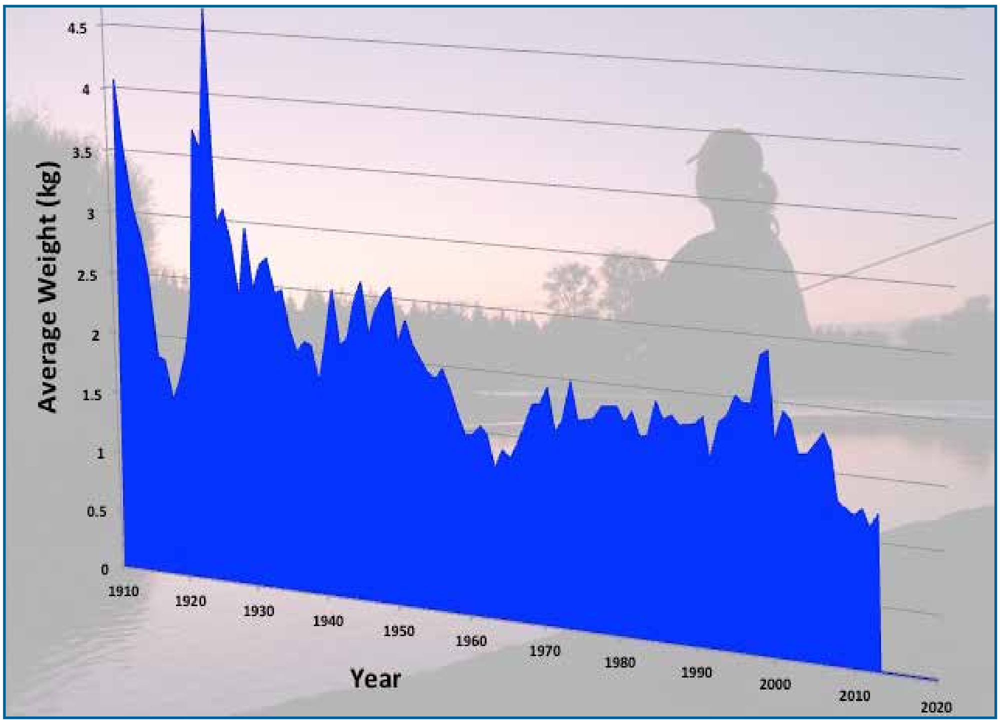


Fig. 1 Evolution of the average weight of rainbow trout caught in Taupō.
Note that in the early years of the Fishery, much of the fishing pressure was on the rivers, targeting mature fish returning to spawn. As many fish caught in the lake have not achieved their maximum size (size at maturity) it is expected that the fish would be on average smaller now with considerably more lake fishing.

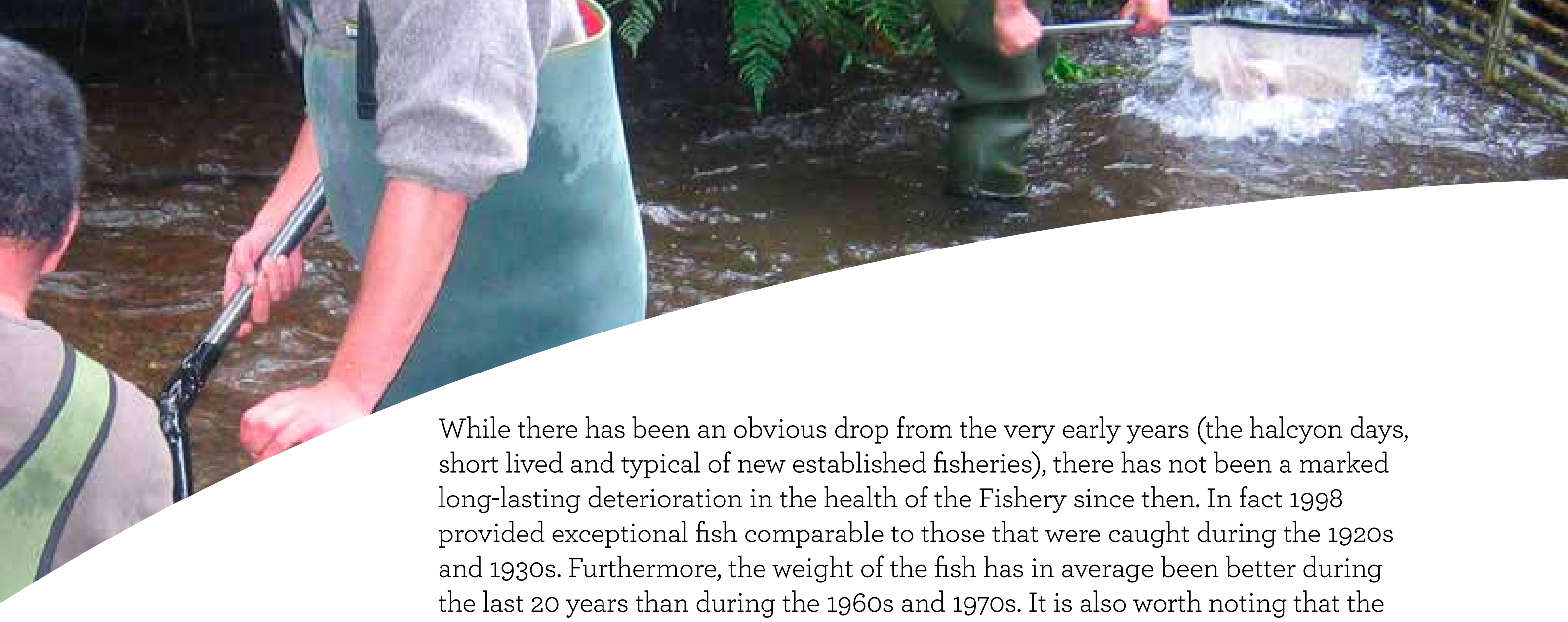
This graph shows that in broad terms the state of the trout fishery can substantially fluctuate over time. As is the case with farming, this is generally related to the abundance of the fish and the availability of the food. When the optimal levels are passed, food supply will become short and condition will deteriorate. Many factors influence this, with the last significant event in 2005/2006 – coming just after the highest number of trout were trapped in the Waipā Stream. In the winter of 2005 the physico-chemical processes within Lake Taupō were severely disrupted. The lake didn't 'mix' and about half of the total amount of nutrients remained unavailable and essentially locked within the deepest parts of the lake. The food chain was severely affected and consequently drove the trout population down both in numbers and fish quality, partly justifying the purpose of this review.

However, some early signs of recovery were already apparent from 2008 onwards. Much of this recovery was not visible to most anglers, but the results of the fish trapping monitoring work showed a timid but perceptible recovery. The recovery was noticeable not through an increase in the average size and condition, but instead through an increase in the proportion of good fish trapped. This recovery was consistent but remained surprisingly slow until spring 2012 when it suddenly exploded, resulting in the highest escapement counts recorded in the main spawning tributaries of Lake Taupō since 2000.

The recovery has been accelerated by a combination of environmental conditions in the lake that were optimal for both the survival of juveniles and the growth of adult trout in Lake Taupō . The conditions for juvenile survival, although not fully understood, were certainly stimulated by an unusually high abundance of zooplankton during spring 2012. Zooplankton is a very valuable food source for juvenile trout; it is easier to catch than smelt and it is very nutritious. When conditions are not suitable the zooplankton can bury themselves in the sediment and are therefore unavailable to predators like smelt and juvenile trout. Conversely when conditions are right zooplankton will thrive. This boom in zooplankton was also enhanced by a lower abundance of smelt that also relieved the predation pressure on the zooplankton.

The graph (Fig. 1) shows that good years and bad years are like in any other natural systems. A feature of the Taupō Fishery is changing environmental factors such as volcanic eruptions, major floods and food availability. .

The capability of the Taupō Fishery to respond to and exploit favourable environmental conditions, like in 2012 for example, attests to the overall resilience and health of the Fishery. Similarly when environmental conditions are not optimal the Fishery will also respond in the opposite way, as it did between 2005 and 2006. For the last 150 million years (although obviously for a shorter period in New Zealand) hanging environmental conditions have been the reality for salmonid populations and these species are, if in good health, equipped to cope.



While there has been an obvious drop from the very early years (the halcyon days, short lived and typical of new established fisheries), there has not been a marked long-lasting deterioration in the health of the Fishery since then. In fact 1998 provided exceptional fish comparable to those that were caught during the 1920s and 1930s. Furthermore, the weight of the fish has in average been better during the last 20 years than during the 1960s and 1970s. It is also worth noting that the data obtained from the trapping, which started in the 1950s, reflects the whole population passing through the fish trap, and not just the average weight of fish caught and kept by anglers.

While often described as a wild fishery, Taupō waters have been stocked a number of times over the years – frequently in the early years, less so in recent years (although it is worth noting that even since 1980 there have been about 60 releases – mostly experimental rather than anything else).

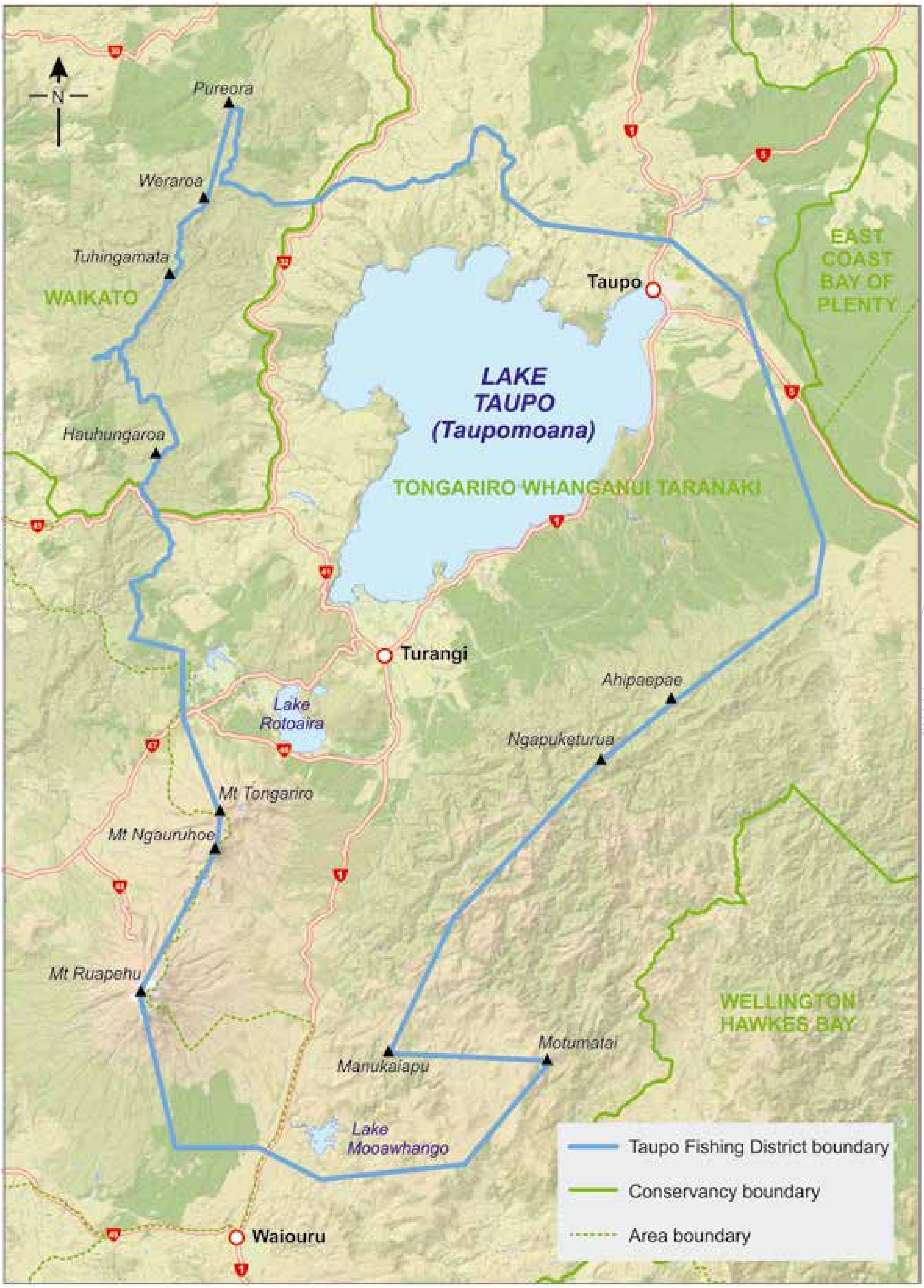
Significant risks to the Fishery include Didymo (which can be managed through education and compliance initiatives) and the potential for a significant eruption (which cannot be managed).

2.1.2 The Ecology

The Taupō Fishery is essentially a lake-based fishery, but one where mature trout leave the lake and swim up the rivers to spawn. Each female lays about 2-3000 or more eggs in the gravel, and the male trout then fertilises the eggs. The Tongariro River and its tributaries probably account for between 30 and 50% of all trout spawning. The evidence suggests that there are a sufficient number of fish that continue to spawn to guarantee a perennial fishery, and that is still the case even though around 25-30% of the fish going up the Tongariro River to spawn are caught.

Some rainbow trout die from the rigours of spawning, but a substantial proportion survive and return to the lake to recover their condition and spawn again the following year. As a consequence of juvenile mortality, and under the current harvest rate, about 10% of all females need to spawn more than once to at least keep the population stable. Some Taupō trout have been recorded spawning up to four times in their lives in the Waipātt Stream; in Lake Otamangakau they can spawn six or even seven times. Rainbow trout generally reach their maximum size by the time of first spawning when the majority are about three years old. Even when they do make it back to the lake, they rarely grow larger as they have to recover the approximately 25% of weight invested in spawning. Brown trout tend to live longer, to spawn more times, and to grow bigger. They are also far more difficult to catch, making them less vulnerable to over-harvesting than rainbow trout.

The young fish spend anywhere between hatching and 18 months of their life in the rivers before migrating to Lake Taupō. Fry, the very young hatchlings, have



Map 1 – Taupō Sports Fishing District

been found in the lake but it is not totally clear if they contribute to the adult recruitment.

Smelt is the primary food source for the juvenile and adult trout – although trout are also somewhat opportunistic feeders and will eat a variety of material when it is available or super abundant (green beetle, cicadas, zooplankton). The smelt in Taupō provide an excellent food source for growing trout quickly to about 2 kgs, but are not so good for producing very large trout. The smelt in Taupō are small (<6cm) and poor in energy content and breed only once a year – in contrast to other places such as Rotorua where they can breed 2-3 times a year and grow larger than 10cm.

The old adage always was that “the river sets the number, the lake sets the condition” but this is now considered to be erroneous. The evidence strongly suggests that the lake is the real engine for the Fishery, including dictating the number of trout returning to spawn. Conditions in the lake will determine the health of the Fishery in any given period. This means understanding the dynamics of the lake ecosystem is the key research priority for effectively managing the Fishery.

The basic food chain in the lake is relatively simple – in essence the trout eat the smelt, the smelt eat the zooplankton, and zooplankton eat the phytoplankton. But it is accepted that there are many gaps in the knowledge of the interactions between the different trophic levels – particularly at the levels of zooplankton and phytoplankton. Even smelt are a difficult species to monitor effectively for obvious reasons (they are a small fish, it is a large lake, and they are a transient species). There is, however, some evidence that the chlorophyll abundance – the primary indicator phytoplankton levels – is stabilising and may trend down in future in response to the reduction of nutrients input in the lake. This may mean that the overall productivity of the lake may change over time.

2.2 Administration of the Taupō Fishery

Map 1 shows the full legal extent of the Taupō Fishing District as it exists today. The boundaries of the fishing District are largely within the Tongariro-Whanganui-Taranaki Conservancy (Taupō-nui-a-Tia and Ruapehu Areas) but also include catchments in the Pureora Forest Park within the Waikato Conservancy.

2.2.1 History

In the very early years, the Taupō Fishery was administered by the Auckland Acclimatisation Society, but administration was taken over by the Crown in 1905 through its Department of Tourist and Health Resorts.

From the early days, the Crown considered trout to be owned (and therefore managed) by the Crown, but access to the Taupō Fishery along rivers and the shores of the lake was primarily over private land owned by Ngāti Tūwharetoa. Essentially this meant that if a fishery was to develop in those early years, it had to be in partnership. Accordingly, the Crown and Ngāti Tūwharetoa negotiated an agreement that involved Ngāti Tūwharetoa providing access to anglers over their land in return for 200 annual fishing licences and the payment of an annuity. A concurrence role in setting the terms and conditions of fishing licences generally was later added. These arrangements are recorded in the Maori Land Amendment and Maori Land Claims Adjustment Act 1926. It not only provides the basis for securing ongoing angler access to the Taupō Fishery, but also the basis for the Crown/Ngāti Tūwharetoa partnership and joint decision-making in the management of the Taupō Fishery.

In relation to the Ngāti Tūwharetoa partnership, it is also important to recognise that prior to trout being introduced into Lake Taupō, there were relatively few indigenous species present in the lake, but they were present in great numbers and formed an important part of the Ngāti Tūwharetoa economy and diet. It was a major issue for Ngāti Tūwharetoa when trout were released into the lake without their agreement, and the populations of indigenous fish collapsed. The effect on kōaro has proved permanent and it cannot sustain any significant fishing today. Over time, trout replaced the indigenous fish in diets and provided a critical source of protein for NgātiTūwharetoa. As a result, trout are now a key part of the Ngāti Tūwharetoa culture, still providing a vital source of food and protein, as well as being a key element of their manaakitanga (hosting responsibilities).

Through until 1990, the Crown continued to administer the Taupō Fishery (through a combination of the Marine Department, Internal Affairs and the Wildlife Service within Internal Affairs), while in the remainder of the country regionally-based acclimatisation societies exercised local control over sports fish and game management[1].

2.2.2 The 1990 Reforms

In 1990, a Government review saw the introduction of a new, integrated regime for managing sports fish and game in New Zealand. Acclimatisation societies became twelve regional fish and game councils and, along with the national New Zealand Fish and Game Council, operate under the collective brand name of Fish and Game. Their collective role is to oversee the effective management of sports fish and game resources, and to work co-operatively in the interests of anglers and hunters[2]. Regionally-based Fish and Game Councils consist of members elected by licence-holders to administer the sports fish and game resource in their interests.

The Taupō Fishery operates under broadly the same legal regime that applies to the rest of the country, but with two important differences. The first of these is that the Crown (not a regionally-based fish and game council) carried on with its administration and

1 An interesting snapshot of the history of sports fish and game management can be found in 'Working for Wildlife – A history of the New Zealand Wildlife Service' by Ross Galbreath (Bridget Williams Books, 1993).

2 New Zealand Fish and Game website – 'Fish and Game Structure'.

management of the Taupō Fishery. This exception was made for the Taupō Fishery because of concerns raised by Ngāti Tūwharetoa that its relationship with the Crown could be undermined if a regional fish and game council was to manage the Taupō Fishery. The second is that there is a long-standing Crown partnership with Ngāti Tūwharetoa with legal obligations that flow from it – and in particular those set out in the 1926 Maori Land Claims and Maori Land Adjustment Act, and the 2007 Deed of Settlement between the Crown and Ngāti Tūwharetoa.

The result is thatthe 1926 Maori Land Claims and Maori Land Adjustment Act need to be read alongside the Conservation Act 1987, and together they form the basis for fixing forms and classes of fishing license and the fees payable for licences in concurrence with Ngāti Tūwharetoa.

In order to carry out the Department's role, the Director-General of Conservation (referred to generally in this report under the broader umbrella of 'the Department') was given the legal powers and functions of the newly established fish and game councils[3], and essentially operates under the same legal framework as Fish and Game[4].

In order to carry out the Department's role, the Director-General of Conservation (referred to generally in this report under the broader umbrella of 'the Department') was given the legal powers and functions of the newly established fish and game councils, and essentially operates under the same legal framework as Fish and Game.

An aspect important to understand is that while the Department was established in 1987 to carry out a range of functions focused mainly on the preservation and protection of natural resources, the Director-General's role and functions in relation to the Taupō Fishery are quite different to those of the wider Department, although there are obvious overlaps and complementary features[5].

2.3 What the Survey told us?

The survey was effective in gathering the views of some users of the Taupō Fishery, including both locals and visiting trout fishers. Responses were also received from a small numbers of non-fishers, and from trout fishers who did not currently fish in the Taupō region. Their responses provided useful information on reasons why these groups may not be using the Fishery. However, it is important to note that the survey responses were primarily from those who currently fish in the Taupō area, and in most cases, fish on a regular basis. Based on licence sales we know that a large proportion of anglers hold short term-licences, but the survey did not appear to effectively capture that group. The interpretation of the

3 Section 53(4) of the Conservation Act 1987.

4 There are some limited modifications to ensure that the Director-General remains directly answerable to the Minister of Conservation. He has no direct links through to the New Zealand Fish and Game Council as is the case with regional fish and game councils.t

5 Section 6(ab) of the Conservation Act For example, one of the functions of the Department (as opposed to the Director-General for the Taupō Fishery) is 'to preserve so far as is practicable all indigenous freshwater fisheries, and protect recreational freshwater fisheries and freshwater fish habitats'

survey responses is only correct for those that chose to respond and, therefore, is biased to an unknown extent. While there is a risk in putting too much emphasis on information collected only from those that chose to respond (simply because it may not represent the views of the population more generally), the survey did provide invaluable information from a wide range of interested people.

In relation to the governance and management of the Fishery:

There was a high level of awareness that Ngāti Tūwharetoa had a partnership role in the management of the Fishery and the area's lakes and rivers, although there was less understanding of specific details. Just under half of trout fishers believed erroneously that local Māori received a contribution from directly from licence fees. Most respondents were aware that Ngāti Tūwharetoa owned the beds of Lake Taupō and various tributaries.

Knowledge of the Taupō Fishery Advisory Committee was very low, with only 26% of trout fishers stating that they were aware of what it was. Few respondents were able to provide specific details. There is clearly a need for greater promotion of TFAC and its functions.

Levels of public engagement with management of the Fishery appeared to be low. Only 18% of respondents felt that they had had opportunities in the past to be involved in the management of the Fishery, and only a third of respondents had expressed their views to the Department, generally opportunistically when rangers were encountered. More could be done to improve engagement with fishery users, although it would be useful to assess the level of interest among users, as many come from outside the region.

In relation to factors that may be impacting on participation rates:

For non-fishers, lack of knowledge and a need for someone to teach them how to fish were the most commonly mentioned barriers to starting fishing

in the region. Responses suggested that affordable, well targeted programmes to introduce people to fishing in the region would potentially help grow participation. Clubs and commercial operators are the obvious partners in addressing this and other identified barriers, such as lack of a boat, fishing gear or people to go with. Interestingly, a lack of interest in fishing did not come through in the survey as a significant barrier however this is likely to reflect the distribution method for the survey and self-selection (with disinterested people not filling in the survey).

Negative perceptions about the quality of the Fishery were a barrier for almost a third of trout fishers who did not fish in the region, and were by far the most common issue mentioned by current users of the Fishery. There is a clear perception that fishing is not as good as it used to be (and fish survey

information supports this over the last five years, although there is now evidence of an upswing occurring). This was in terms of the size, quality and quantity of fish and of the timing of runs.

The cost and the need for a separate licence to the Fish & Game Licence was of concern to both current and potential users, particularly in light of concerns about the quality of the Fishery. Some respondents questioned whether a separate licence for the Taupō Fishery was worth paying for, and these concerns may be reduced if perceptions about the quality of the Fishery were addressed. Some concerns could be addressed by providing a discount to holders of a Fish and Game Ficence, and this opportunity could be investigated.

Comments about the quality of the Fishery and the licence system need to be balanced with the fact that positive views about the Fishery were not sought in this survey. It is possible that more balanced feedback would have been received if this had been the case.

In relation to communication:

Finally information collected on respondents' current and preferred methods of receiving information from the Department relating to the Taupō Fishery shows that the Target Taupō magazine is highly valued by trout fishers. Target Taupō was easily the most common source of information on the Fishery used by trout fishers with approximately 40% using it. However it must be recognised that the Target Taupō mailing list was the only email list that the Department had to disseminate the survey, and that as Target Taupō was an option for selection it was an easy choice. The Target Taupō was the preferred method of gaining information in future for more than half of trout fishers surveyed, although the most preferred channel was email.

And general comments:

Question 27 was an open-ended question with participants invited to write down any additional comments that they had. This was an important question to pick up some of the key observations that the participants had for the Fishery. 405 respondents provided comments to the question "do you have any further comments or thoughts about how you would like to see the Taupō Fishery managed in the future?"

The majority of answers received were to do with respondents' opinions of fishery management, with 29.2% of respondents providing comments related to fishery management. These comments have been summarised below. The major management issues were the Fishery having declined and this needing to be rectified (6.5% of respondents), followed by releasing trout (6.3%), lack of food in Lake Taupō (6.1%) and suggestions on best management priorities (5.6%). Other major comment groupings concerned the responsibilities of the Department/

Fish and Game (13.1% of respondents), regulations/enforcement/rangers (8.3% of respondents), research/monitoring (7.8% of respondents), fixing/modifying rivers/ power companies/river flows (7.2%), funding/costs (6.7%), fishing limits/closures (6.6%) iwi issues (5.6%) and communication with anglers (5.6%).

Comments coded to categories:

This survey has provided a useful snapshot of users of the Fishery, and it is worthwhile running similar surveys in the future.

	Number	Percent
Fishery management	212	29.2%
DOC/Fish and Game	95	13.1%
Regulations/enforcement/rangers	60	8.3%
Research/monitoring	57	7.8%
Fixing/modifying/cleaning rivers/effects of works/power companies/river flows	52	7.2%
Funding/cost	49	6.7%
Fishing limits/closures/compulsory catch and release	48	6.6%
Iwi	41	5.6%
Communication with anglers/community	41	5.6%
Fishing licenses	39	5.4%
Pest management	38	5.2%
Access tracks/available for all	36	5.0%
Education/maps/information	23	3.2%
General positive comments about fishery	20	2.8%
Target Taupō	14	1.9%
Encourage children to fish	12	1.7%
Commercial guides	9	1.2%
Promotion	9	1.2%
Pollution/rubbish	8	1.1%
Comments relating to survey	7	1.0%
Not feeling safe fishing	6	0.8%
Worms/parasites in trout	6	0.8%
Farm trout/sell trout	4	0.6%
Other	17	2.3%
	727	

Note: Not additive as respondents comments could be coded into multiple categories

Note: These coded categories are made up out of comments provided by 405 individuals

PART THREE: FINDINGS AND OPPORTUNITIES

This section of the Report is broken down into two parts:

Part A – the Administration of the Fishery - focuses on the overall direction of the Fishery; and the governance and management structures and processes.

Part B – Managing, Maintaining and Enhancing the Sports Fish Resource - focuses on the management of the resource (the trout), the engagement with anglers, and the relationships more generally with partners, stakeholders, and the wider community.

Under each heading, we provide the detail of what we learned about the current state, reveal what we heard in the course of the Review Process, and outline our conclusions and the opportunities that we believe are open to the Department and others to pursue.

3A (A) – Administration of the Fishery

This part is broken down into three areas: the overall goal and direction of the Fishery, governance and statutory decision-making; and management structures and processes.

3A.1 Establishing a Clear Goal and Direction

The first issue in this Part is based around the importance of establishing a clear, overarching goal for managing the Taupō Fishery. It is considered that this will deliver significant benefits, and will assist considerably in both organising and delivering the work required. More particularly, it will assist fishery managers to establish the management direction, set objectives and priorities, drive organisational structure, set annual budgets, create targets, and provide the necessary framework for reporting on progress against the goal.

What we heard

What we heard in the course of the review process was that while there is a range of objectives for managing the Fishery (mainly contained in the current sports fish management plan), there is no obvious overall goal. This seems to have led the Department to focus on the achievement of single objectives, and it helps drive a perception that the Department has been too focused on the biological (fish) to the exclusion of the social (the people - primarily iwi, the anglers, licence-holders and, the wider community). A common thread amongst submitters is that the Department needs to be doing more to maximise opportunities for participation in

the Fishery in a way that does not compromise the sustainability of the resource.

The need to establish a goal is consistent with the FAO Technical Guidelines for Responsible Fisheries, which identifies that successful recreational fisheries management requires clear identification of goals, and that these goals are highly dependent on societal values.

What we concluded

As noted above, if the Fishery is to deliver 'maximum value' the key challenge of fisheries management is to focus more on the interaction between the social and the biological components. In the case of the Taupō Fishery, this is likely to mean a shift of resources from the 'biological' to the 'social', with estimates suggesting that up to 70% of available resources are currently spent on the 'biological'. Given declining participation rates and a sense of disconnection between anglers and the Department, there needs to be increased emphasis on the social aspects of fishery management (communication, encouraging participation, promotion and working with others). Put bluntly, if participation rates continue to decline, management will suffer from considerably reduced funding.

More specifically, the goal needs to reflect the two critical legal requirements placed on the Department (and fish and game councils generally) to[6]:

- manage, maintain and enhance the sports fish resource; and
- do so [that is, manage, maintain and enhance] in the recreational interests of anglers.

The goal should also capture the critical components of the Department's wider strategic direction and community-focused aspirations:

- New Zealanders gaining environmental, social, cultural, and economic benefits from healthy ecosystems and recreation opportunities
- The importance of working effectively with iwi, licence-holders, businesses and the wider community to achieve the best results.

The Department should adopt an overarching goal for the Taupō Fishery that aims to maximise the value it delivers to partners, stakeholders and the wider community. The Department needs to recognise the multi-dimensional and multi-disciplinary nature of fishery management and focus on three key elements – managing and enhancing the sports fish resource; working effectively with anglers and increasing participation in fishing; and developing strong partnerships with Ngāti Tūwharetoa and the wider community to optimise the environmental, social and economic benefits. Critically, if the management of the Fishery 'gets it right' and the result is increasing angler satisfaction and participation in fishing, then the Fishery as a whole will benefit through more available resources for long-term management.

6 Note section 26Q of the Conservation Act 1987 that establishes the functions of fish and game councils.

1. Establish a clear goal for the management of the Taupō Fishery that focuses on maximising the full value (in economic, environmental, social and cultural terms) that the Fishery can deliver.
2. Align the management of the Taupō Fishery to the new goal by:
   a. Setting meaningful objectives and management targets;
   b. Aligning the staffing structure and budget allocations; and
   c. Report progress against these targets.

3A.2 Governance and statutory decision-making

In relation to governance and statutory decision-making over sports fish throughout New Zealand, the two key processes are:

- The preparation and approval of a sports fish management plan (this is the plan that sets the long-term objectives for the management of sports fish and must have regard to the sustainability of the resource, the impact of management on other natural resources and users, and include provisions as may be necessary to maximise recreational opportunities for anglers)[7]; and
- Statutory decision-making around licencing – establishing the forms and classes of fishing licences, their scope and effect, and the fixing of fees.

In all areas, other than the Taupō Fishing District, decision-making processes are contained solely in the Conservation Act and involve the Minister of Conservation making decisions through regulations or the approval of angler notices on the recommendation of the New Zealand Fish and Game Council.

In the Taupō Fishing District, however, the decision-making processes are more complex for two reasons. First, the Director-General undertakes the functions of a Fish and Game Council in terms of managing the Fishery (but with some modifications) and, second, the agreements entered into by the Crown with Ngāti Tūwharetoa add a co-governance dimension to decisions made by the Minister of Conservation. In addition, by virtue of s 4 of the Conservation Act, any statutory decisions of the Minister of Conservation in relation to the Taupō Fishery must be made with full regard for Ngāti Tūwharetoa's interests and views.

Agreements with Ngāti Tūwharetoa

In its management of the Taupō Fishery the Department must meet the Crown's obligations under the 1926 Māori Land Claims and Māori Land Adjustment Act and the 2007 Deed of Settlement. It needs to ensure that the tino rangātiratanga and kaitiakitanga of Ngāti Tūwharetoa over Taupō-nui-a-tia and the fisheries within the Ngāti Tūwharetoa rohe is recognised and acknowledged.

7 Section 17L of the Conservation Act 1987

In broad terms, and as noted earlier, the agreements between the Crown and Ngāti Tūwharetoa (in respect of Lake Taupō) are captured in the 1926 Māori Land Claims and Māori Land Adjustment Act and the 2007 Deed of Settlement with the Crown.

Under the 1926 Act, these agreements include:

- A reserved right for Ngāti Tūwharetoa members to take indigenous fish from Lake Taupō;
- An agreement for the general public to a right of way not exceeding 20m in width around the margin of Lake Taupō;
- An agreement that licence-holders may also have a right of way not exceeding 20m in width along the banks of the beds of rivers and streams that are vested in the Crown;
- Ngāti Tūwharetoa entitlement to up to 200 fishing licences free of charge; and
- Licence fees, classes of licences, and the scope and effect of particular licences for fishing may only be set with the concurrence of the Tūwharetoa Māori Trust Board.

A specific provision in the 1926 Act stipulates that where there is a conflict in any respect between the general regulations under the Fisheries Act 1908 (the prevailing legislation of the time) and the special regulations made in accordance with the 1926 Act then the provisions of the special regulations should prevail.

Under the 2007 Deed of Settlement (signed to clarify and replace the 1992 Deed between the Crown and Ngāti Tūwharetoa and, in respect of Lake Taupō), it was agreed (in relation to the Taupō Fishery) that:

- The Crown would pay a capital sum of $9.865 million to Ngāti Tūwharetoa; and
- The Crown would make an annual payment of $1.5 million to Ngāti Tūwharetoa.

It is important to note that the $1.5 million annual payment is paid out of a separate Government appropriation, and is not taken out of the revenue received from licence-holders. Revenue from licence fees is used to fund the management of the Taupō Fishery.

In addition to the annual payment of $1.5 million, Ngāti Tūwharetoa is entitled to a further sum of half any surplus revenue after the Crown has recovered its costs in relation to fishing and boating. This infers that the Taupō Fishery could reasonably be considered a potential source of additional income for the Iwi, specifically in the situation where revenue exceeds the actual cost of managing the Fishery. However, if Crown revenue from anglers and boaters for the preceding year falls

below $1.5 million, Ngāti Tūwharetoa would receive a figure of $1.5 million less half of the actual shortfall.

What we heard

What we heard in the review process was that the existing agreements with Ngāti Tūwharetoa provide the Iwi with a level of joint decision-making and ultimately some input into governance. In fact, in relation to key aspects of statutory decision-making (namely fixing the forms and classes of licences, the scope and effect of licences, and the fees), joint decision-making between the Minister of Conservation and Ngāti Tūwharetoa is clearly prescribed.

However, what we also heard was that the Conservation Act does not explicitly recognise the long-standing agreements between the Crown and Ngāti Tūwharetoa in respect of the Taupō Fishery, meaning that the 1926 Act, the 2007 Deed of Settlement, and the Conservation Act need to be read alongside each other to make sense of the Taupō Fishery.

What we also heard was that the Ngāti Tūwharetoa role had been largely reactive to date (described by one as the Iwi having a 'passive landlord relationship'), and that they saw the real potential for a more active relationship that could see greater engagement and involvement of their people in the Fishery at all levels. The Fishery is clearly seen as a key priority and activity for the tribe, and the potential was identified for this to be seen as a world-leading co-managed fishery (with associated branding and better understanding generally of Ngāti Tūwharetoa values and connections etc).

Of concern to Ngāti Tūwharetoa is the absence of a formal joint decision-making role in relation to the sports fish management plan, (though we understand from the Department that concurrence was effectively sought at the time the first plan was approved). It is not explicitly clear whether a concurrence role could reasonably be inferred from reading the Conservation Act, the 1926 Act and the Deed of Settlement together.

We also heard that there are few, if any, established links between Ngāti Tūwharetoa and the Taupō Fishery Advisory Committee, potentially meaning important information is not being considered by Ngāti Tūwharetoa in meeting its concurrence obligations and contributing to the lack of public understanding of Ngāti Tūwharetoa's role in relation to the Taupō Fishery.

What we concluded

As noted earlier, and from a legal perspective, the Taupō Fishery is distinctly different from other freshwater sport fisheries in New Zealand. The differences are primarily attributable to the agreements between the Crown and Ngāti Tūwharetoa and the ownership of the lake and river beds. To some degree, the need to 'fit' the Conservation Act, the 1926 Act, and the 2007 Deed together to make sense of the decision-making processes adds a layer of complexity that needs better recognition and more clarity. The establishment of an agreed joint decision-making process between Ngāti Tūwharetoa and the Minister of Conservation essentially setting out how the concurrence role will be exercised should be considered.

We also believe consideration needs to be given to formalising a concurrence role for Ngāti Tūwharetoa alongside the Minister of Conservation in relation to the approval of the sports fish management plan, as they already have in relation to the fixing of forms and classes of fishing license and fees payable for licences. In any event, agreed engagement processes between the Ngāti Tūwharetoa and the Director-General in terms of developing the sports fish management plan should be developed. Formalising (or adopting) a specific concurrence role is likely to require a change to the Conservation Act 1987.

Finally, we believe that establishing effective links between the governance (and statutory decision-making) layers and the management structures and processes is critical for strong integrated management.

The Opportunities

1. a. Establish a shared decision-making role for Ngāti Tūwharetoa for approving the sports fish management plan through a legislative change, and/or establish agreed engagement processes for the preparation and approval of the sports fish management plan;
2. Agree on processes that give better effect to the existing shared decision-making (concurrence) role in relation to fixing of forms and classes of fishing licenses and fees for licenses; and
3. Develop stronger links between Ngāti Tūwharetoa's governance and statutory decision-making roles, and their role in the current, and any future, management structures.

3A.3 Management Structures and Processes

In looking at existing management structures and processes, we identified two key issues. The first is that those with a direct interest in the Taupō Fishery do not currently have an effective voice in management. The second is that the current levels of overheads and administrative costs applied to the Fishery appear too high, effectively (or at least potentially) reducing the resources available to apply to the Fishery itself.

Before going on to discuss those issues it is important to set out some background information on the legislative framework in so far as it relates to angler input into management, and to provide some detail of how the Department currently operates, and in particular its expenditure patterns.

3A.5 Background

Management provisions

As noted earlier, the Director-General of Conservation has all the powers of a fish and game council. His/her legal role is to administer the Taupō Fishery under the sports fish and game provisions of the Conservation Act 1987.

Importantly, s/he is required to:
(1) ..... manage, maintain, and enhance the sports fish and game resource <u>in the recreational interests of anglers and hunters</u> (emphasis added)[8];

In order to achieve this, the Act stipulates a number of functions including:

- Assessing and monitoring sports fish and the success and satisfaction of users;
- Maintaining and improving the sports fish resource (including maintaining and improving access);
- Promoting recreation and keeping anglers informed on matters affecting their interests; and
- Representing the interests and aspirations of anglers in the statutory planning process, formulating and adopting annual operational plans, and, in relation to planning, advocating the interests of the New Zealand Fish and Game Council, including its interest in habitats.

As previously discussed in the rest of the country, elected regional fish and game councils were established in the 1990 changes to the Conservation Act. They were set up to manage sports fish and game in their respective regions. A different mechanism was chosen for the Taupō Fishery in light of the longstanding Crown/

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8 Section 26Q of the Conservation Act 1987

Ngāti Tūwharetoa relationship.

In Taupō, the Taupō Fishery Advisory Committee (TFAC) was established under the Taupō Fishery Regulations to provide input into the management of the Fishery. Its functions (principally advisory) are prescribed, as is its membership.Its functions are:

a. to advocate Taupo sport fishing interests;
b. to facilitate communication between the Department and anglers;
c. to keep anglers informed on matters affecting their interests;
d. to foster ethical standards of angling behaviour:; (e) to consider and advise the Department on freshwater and sport fishing matters within the Taupo District;
e. to make any representations that it sees fit to the Minister, or to the Department or any other government agency or other organisation, on matters affecting the Taupo Fishery, including national and regional policy statements, management strategies, and management plans;
f. to liaise with the New Zealand Fish and Game Council on matters of mutual interest relating to sports fish.
g. Membership consists of eight members of specified groups (primarily angling and boating clubs), and one member to represent the interests of each of Ngāti Tūwharetoa, the Department, the national angling interests, and the New Zealand Fish and Game Council.

3A.5 Understanding the Current Management Effort

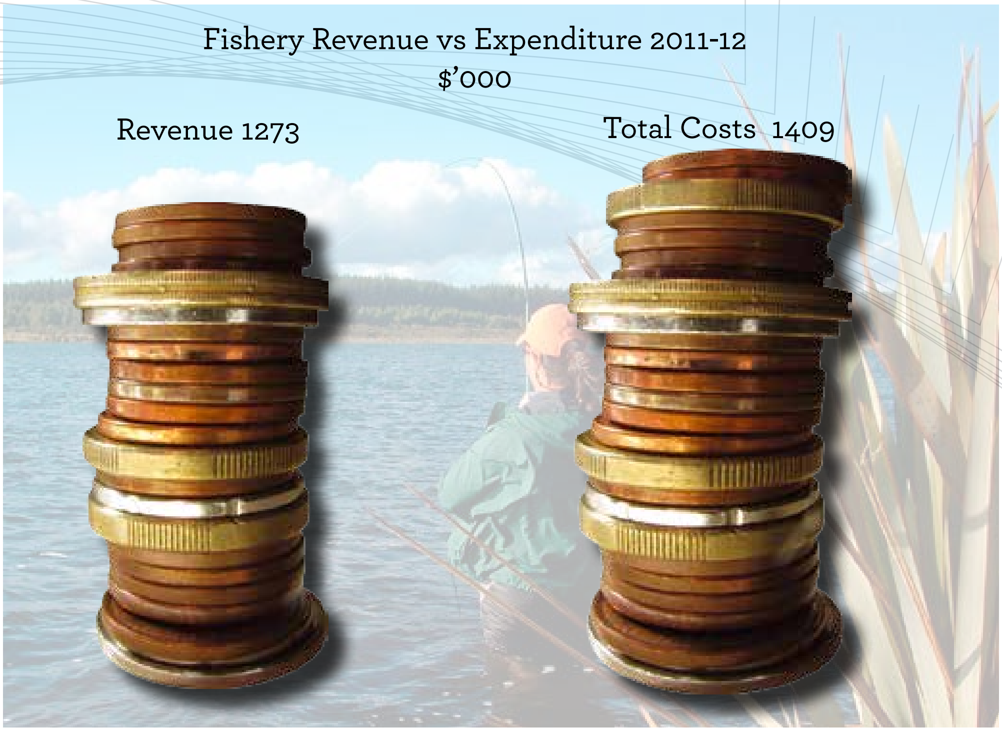
The Department's Taupō-nui-a-tia Area Office currently manages the Taupō Fishery, as part of the wider Tongariro/Whanganui/Taranaki Conservancy. The Area Office is also responsible for the management of a significant area of public conservation lands, including approximately one third of the Tongariro National Park and the Kaimanawa Forest Park.

Unlike the majority of the Department's operations, funded through an annual appropriation from Parliament, the Taupō Fishery must be funded by revenue derived from fishing licence sales. Currently, setting the licence fees requires an assessment of the costs that are attributable to the management of the Fishery, and then establishing the level of fees required to recover those costs.

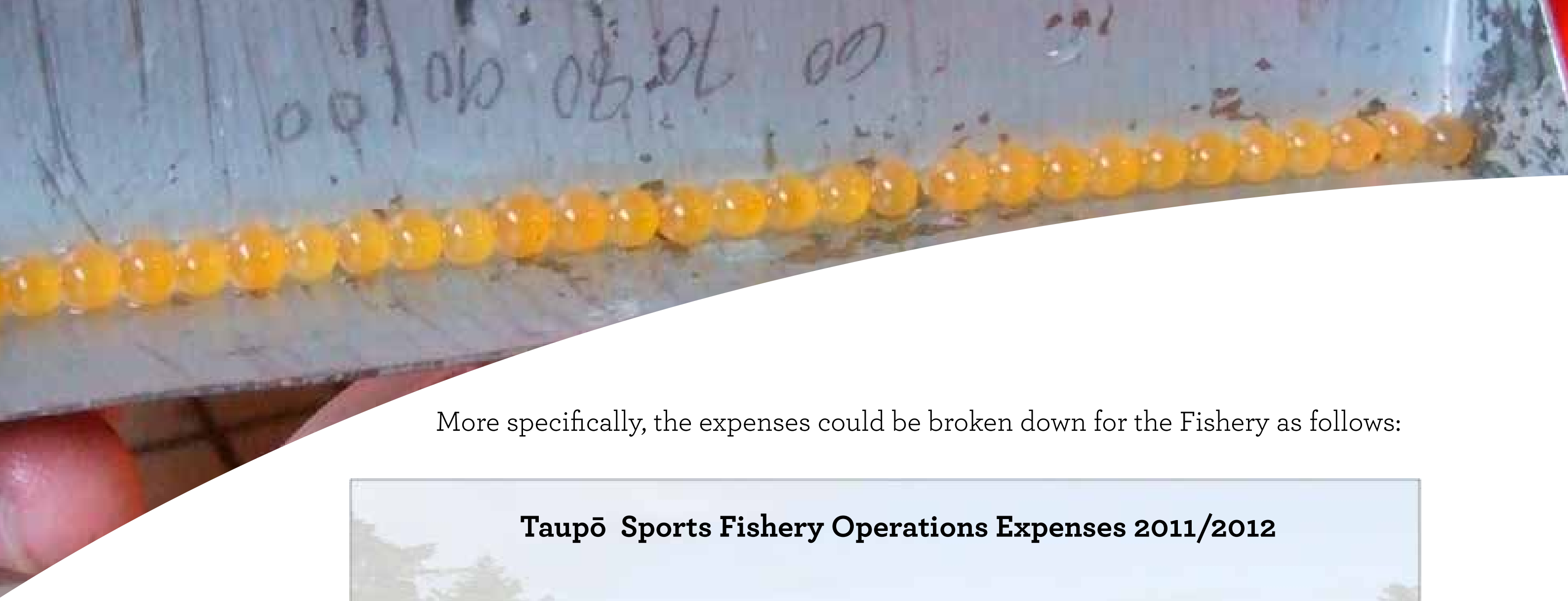
Staff

An Area Manager is responsible for the overall running of the Taupō-nui-a-tia Area. He is supported by a team of six Programme Managers and thirty-eight staff covering the full range of the Area's functions. The Taupō Fishery has some dedicated positions - fishery scientist (1), a field operations team (5), under a Programme Manager (1), and a 'hatchery' ranger (1). Other positions such as finance and administrative support, licence administration, community relations, visitor asset management (tracks, carparks etc) and Iwi liaison are all shared across the whole Area. All up, the fishery component has approximately 11.75 full-time equivalent staff.

Budget



The revenue from the 2011/2012 financial year was $1,272,791. The expenditure could be broken down broadly into approximately half on staff costs ($729,633), and half on 'operating' costs ($678,931). This equates to a 10% deficit for the 2011/2012 year that had to be 'made up' from elsewhere in the Department's budget.



More specifically, the expenses could be broken down for the Fishery as follows:

Notes:

1. The bulk of the licence expenditure listed is on commissions paid to agents selling licences on the Department's behalf.
2. Fishery Monitoring does not include the Fish Traps.
3. Fishery administration includes indirect costs and hours such as boats, fuel, rates, vehicles, leave and maintenance etc.

What we heard

What we heard were two main messages – first that there is currently little effective input of the Tūwharetoa Maori Trust Board (on behalf of Ngāti Tūwharetoa), anglers and others into the management of the Taupō Fishery, and second that administration costs need to be reviewedat to see if more money can be released for fishery management.

What we heard was that outside of their formal concurrence role, the Tūwharetoa Maori Trust Board does not feel they have an effective role in influencing the management of the Fishery. Among anglers, we heard there was a low level of awareness or knowledge of the TFAC that was established to provide a user voice into management. One of the obvious results of this is that while TFAC relies on feedback from anglers in order to be effective, that feedback has not been forthcoming.

What we also heard was that neither TFAC members nor the Department view the advisory mechanism as working effectively at present. TFAC does not operate in the same way as fish and game councils (who have a clear role and set the management priorities in their respective regions on behalf of licence-holders), mainly because its functions are purely advisory. Comments on its functions included ‘it is advised, not advisory’, and ‘it doesn’t seem to have any teeth’.

We also heard comments that TFAC’s membership (prescribed by regulation) does not represent anglers generally (with a strong emphasis given to local angling and boating clubs as opposed to visitors or independent anglers); and that Ngāti Tūwharetoa, despite having a dedicated place on TFAC, has not attended meetings for over a decade. This is, broadly, because they have not seen value in the position.

Finally, but importantly, there do not appear to be any structured links between TFAC and the governance and statutory decision-making processes.

We heard concern from anglers that they did not have a good picture of where their licence fees were being spent, and concern that the Department’s processes for allocating administrative costs (primarily the capital charge on the Crown’s assets, depreciation, rent, computers and the like) were not transparent. Comments were made that the administrative costs appeared high.

What we concluded

Our clear conclusion is that there is an important opportunity to rethink the structures that manage the Taupō Fishery as a matter of priority, and that new arrangements have the potential to deliver better results.

In looking at the existing management structures, we identified three key drivers that need better recognition. The first of these is the role of Ngāti Tūwharetoa in the Fishery, and how their ownership of the lakebed (and much of the surrounding land), and various agreements with the Crown are being implemented at the management level (as opposed to the governance and statutory decision-making level). The second is the anglers and the need to enhance their level of participation in fishery management. Because the success of the Fishery depends on their licence fees (and ultimately their satisfaction), they need to be engaged and able to provide input into what works for them as anglers. The third is the wider community who rely on and benefit from the Fishery. Our conclusion is that the structures and processes that are currently in place neither reflect the significance of these three drivers, nor provide adequate means to hear, understand and align these different complementary interests.

While both Ngāti Tūwharetoa and angler voices need to better inform the management of the Fishery, given the Department’s broader recognition

that engagement with others is critical to achieving both the best results for conservation and for New Zealand's future more generally, there is also arguably a good basis to involve the wider community more effectively in the management of the Taupō Fishery.

The advisory mechanisms that currently provide for user input into fishery management are focused primarily at the operational management level. We see the potential for a new management structure to be developed that has shared membership between Ngāti Tūwharetoa, licence-holders and (potentially) representatives of the wider community. It could have an operational decision-making role (such as allocating annual budgets or approving annual work plans as is the case with fish and game councils) or it could be advisory (as is the case with TFAC). Regardless of the option chosen, in the short-term, the Department should work closely with TFAC to ensure it is working as effectively as possible given the constraints that have been identified.

Administrative costs appear high – currently constituting up to 40% of the overall budget. The current restructuring proposals for the Department may provide an opening to review how these costs are currently apportioned to the Fishery. We think there is likely to be an opportunity to free up some of this money and apply it to operational management (and preferably into growing participation in the Fishery).

1. Work with Ngāti Tūwharetoa and licence-holders either to refine or develop new management structures and processes for the management of the Taupō Fishery;
2. Consider the development of a new advisory structure with shared membership between Ngāti Tūwharetoa, licence-holders, and the wider community (including the business sector) through a regulatory change; and
3. Work with the Taupō Fishery Advisory Committee in the short-term to ensure it is supported to provide an effective angler voice in the management of the Taupō Fishery; and
4. Relook at existing administrative and overhead charges and identify where savings can be made and applied to the operational management of the Taupō Fishery.

3B.1 Information and Tools to Assist with Managing, Maintaining and Enhancing the Sports Fish Resource

Effectively managing, maintaining and enhancing the sports fish resource provides the basis for the Taupō Fishery as a whole. It is the fundamental factor in angler satisfaction and drives confidence in management.

In the course of the review process, four key areas of opportunity were consistently raised in relation to the management of the sports fish:

- science and monitoring;
- the nature of management interventions;
- the role of the trout hatchery; and
- compliance and law enforcement.

Together, these things comprise the bulk of the current 'fish' management focus.

3B.1.1 Science and Monitoring

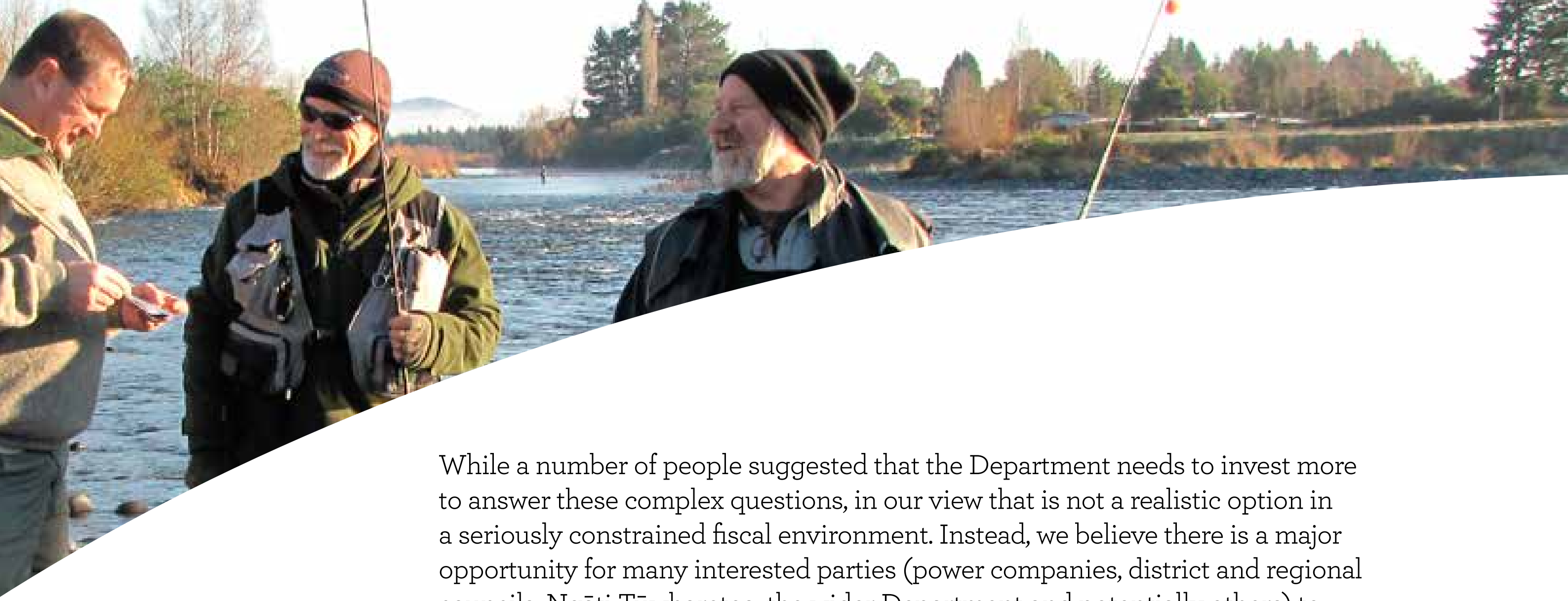
What we heard

A number of respondents to the survey made comments about science (research) and monitoring. It was also a common theme in workshop discussions, and in discussions with individuals with a strong interest in the Taupō Fishery.

A range of views were heard with a significant number wanting the Department to carry out more research into the reasons for the downturns in the Fishery, and more particularly into the ecology of the lake as a whole. A number also identified the need to undertake more research into the genetics of the fish stock, and questioned whether further introductions might be needed to increase the genetic diversity. In relation to monitoring (essentially the fish trap work and angler surveys) some felt it needed to be sustained or increased, others felt that enough was known and there must be other, less resource-intensive, ways of obtaining the information that was necessary to carry out management. The comment was made that the work in this broad area 'must be the servant of management'.

What we concluded

There are two quite distinct issues at play here. The first is in relation to the Department's broader science role. It is apparent that the big questions here focus on the lake environment as a whole (recognised as the engine room of the Fishery), including the low levels of understanding about the interactions between the different trophic levels and particularly at the zooplankton and phytoplankton levels, and about how other initiatives and activities are impacting on the lake (for example, power generation, pest fish, nutrient removal etc).



While a number of people suggested that the Department needs to invest more to answer these complex questions, in our view that is not a realistic option in a seriously constrained fiscal environment. Instead, we believe there is a major opportunity for many interested parties (power companies, district and regional councils, Ngāti Tūwharetoa, the wider Department and potentially others) to work collaboratively to develop shared science and research priorities for the lake environment. In time, options for a more collaborative structure for advancing those priorities should also be considered – with the Waikato University/Bay of Plenty Regional Council Chair in Lakes Management and Restoration being a model that could be examined further.

The second issue is in relation to the monitoring function of the Department (broadly that is understanding the state of the fish), we recognise that the comprehensive data set of information on the state of the Fishery dating back more than 100 years is an enviable resource for a fishery manager to have. For obvious reasons, it is also clear to us that effective management depends on good information.

However, in relation to the monitoring, we also found that, while we could not make a judgement on the quantity or quality of the work undertaken, we could clearly identify that there are no obvious processes to ensure that the information collected is used to communicate effectively with anglers (telling them the story), or indeed that it is used to drive management interventions, or to monitor the effectiveness of interventions carried out. There is an important opportunity to correct this situation.

3B.1.2 Management Interventions - Regulating Anglers

The Conservation Act 1987 provides fish and game councils with the means and processes for regulating angler behaviour, primarily through the use of regulations and angler notices.

The Freshwater Fisheries Regulations 1983 are used to regulate angling in all areas of the country except for the Taupō Fishing District. The Taupō Fishery Regulations 2004 regulate angling in the Taupō Fishery. There are separate regulations again that govern the Lake Rotoaira Fishery.

The Freshwater Fisheries Regulations and the Taupō Fishery Regulations are somewhat different, sometimes for obvious reasons (focused on the specific locality), sometimes not. In broad terms, the Taupō Fishery Regulations set out the detailed conditions under which licence-holders may fish, and contain the provisions that establish the role, functions and membership of the Taupō Fishery Advisory Committee. Regulations dictating the conditions under which licence-holders may fish (the 'scope and effect' of licences) require the concurrence of Ngāti Tūwharetoa by virtue of the 1926 Act.

The Freshwater Fisheries Regulations do not contain the detailed conditions around fishing. Instead, angler notices are used to establish the conditions under which a licence-holder may fish for sports fish[9]. Angler notices are a flexible mechanism approved by the Minister of Conservation and published in the New Zealand Gazette. The 1926 Act means that Ministerial approval for angler notices in Taupō would also require concurrence of.Ngāti Tūwharetoa.

The Department does not currently use angler notices to modify fisher behaviour in the Taupō Fishery. Fish and Game, however, successfully use angler notices to regulate licenced anglers (as opposed to unlicensed anglers who are in breach of the Conservation Act by virtue of being unlicensed).

What we heard

What we heard was the difficulty facing the Department in implementing any changes around angler management. The processes for amending the Taupō Fishery Regulations are cumbersome, expensive and time-consuming – and can take up to three years to complete. We heard a strong message that the Department should be looking to emulate the processes used by fish and game councils (and established in the Conservation Act 1987 for this purpose) by adopting the more flexible Angler Notices as the key driver of change. To do this, the current regulations would need to be amended mainly by stripping out the 'day to day' management aspects. Interestingly, we heard clear messages that regardless of the particular action undertaken, the Department should be prepared to intervene more actively and monitor the outcomes of those actions.

What we concluded

Angler management (adjusting bag and size limits, implementing closures and catch and release policies and such like) is considered to be an effective tool for manipulating the trout population. In general terms, we believe the Department should be prepared to implement some more regular changes in this regard – effectively applying more adaptive management approaches (essentially learning by doing). However, the current process of implementing what should be relatively straightforward changes through regulatory change is unnecessarily complex, time-consuming and expensive. We see no obvious reason why the Department should not use angler notices to implement changes

9 4) An Anglers Notice shall set out the conditions under which a current licence holder may fish for sports fish in the area to which the notice relates, being conditions relating to—

- (a) the size and limit bag for any species of sports fish:
- (b) any open or closed season in any specified waters in the area, and the sports fish in respect of which they are open or closed:
- (c) any requirements, restrictions, or prohibitions on fishing tackle, methods, or the use of any gear, equipment, or device:
- (d) the hours of fishing:
- (e) the handling, treatment, or disposal of any sports fish.

in fishing rules, instead of making changes through amendments to the Taupō Fishery Regulations.

3B.1.3 Management Interventions – some options

What we heard

What we heard in relation to management interventions was a number of ideas about actions that the Department should be taking to improve the Fishery – ranging from more concerted stocking of the lake, removal of catfish, changes to bag and size limits and the like.

What we concluded

On the specifics, we found little evidence that actively stocking Lake Taupō will be effective generally, but especially when the issue is more likely to be reduced food (ironically, there are potentially too many fish in the system at present).

In relation to catfish, while the Department's science currently indicates that they have little or no impact on trout, anglers generally do not accept this viewpoint. Putting aside the communication issues that undoubtedly contribute to this divergence of views, we believe there should be an acceptance that catfish could be considered to be a conservation (rather than fishery) issue. They clearly have a negative impact on the native kōura populations, which are an important taonga species for Ngāti Tūwharetoa, and they are not a major food source for trout. Catfish also potentially have a negative impact on the wider lake ecosystem as well as on people's perceptions. There is an opportunity to take some proactive steps to reduce the population, and potentially even enable some form of commercial harvest (regulated under the Fisheries Act).

3B.1.4 The Role of the Hatchery

What we heard

What we heard in relation to the trout hatchery, as part of the National Trout Centre (which is discussed further in Section 1.1.2) were questions about its role, and (as noted above) in particular whether it should be used more actively to stock the lake with fish. We found that the hatchery's purpose is generally narrower than this, and anyway, a long-term strategy of actively stocking the lake is unlikely to be effective. As an example, in the 1960s, upwards of 100,000 fish were released into the lake, but made no discernible difference to fish numbers. While the option should not be permanently discounted, there is little evidence at present that active stocking would be an effective intervention.

Four key roles for the hatchery were identified in the course of the review. The first is as an insurance policy should a catastrophic event hit the Fishery, secondly it is a useful backup to the Eastern Fish and Game Hatchery, thirdly it fulfils a research role, and lastly it stocks the childrens' fishing pool. The hatchery facility is also poised to be used as a whio 'hardening' facility in the near future.

What we concluded

As a fish management tool the hatchery appears currently to have only limited value. The roles that were identified are useful but not particularly significant in the overall management scheme, and there would be the ability simply to 'turn off' the facility and bring it back on stream should the need arise in the future.

However, counter to that, is that the resources currently spent on the hatchery are not large. And, as part of the wider advocacy and education around the Taupō Fishery and freshwater environments generally, the Tongariro National Trout Centre is an emerging jewel which has significant potential for freshwater advocacy and increasing participation rates in the Fishery. It may be that a functioning hatchery should continue to form part of that wider story. Because a commitment has already been made by the Department to examine options for the optimal use of the whole site, our view is that any decisions on the future of the hatchery function should be parked for now.

3B.1.5 Compliance

What we heard

What we heard in relation to compliance (that is, licence-checking and ensuring anglers are complying with the Taupō Fishery Regulations) were several recurring themes. The first of these is that anglers generally want to see more rangers present on the lake and rivers. There were consistent views expressed that there was not enough face to face contact with anglers. When questioned on this point, what seemed to be expressed was that visible rangers represented a sign that their licence money was being well spent. In contrast, others said that there is 'too much compliance and not enough fun'.

The second theme is around concerns expressed that a number of compliance issues were created through Ngāti Tūwharetoa needing to 'work around' the regulations to ensure that they could fulfil their hosting obligations at hui and tangi. It is not clear that the mechanism in the 1926 legislation that provided Ngāti Tūwharetoa with up to 200 free licences annually for this purpose is as effective as it could be. It was pointed out to the review that although trout are not an indigenous fish, they displaced the previous food source for Ngāti Tūwharetoa, and for a long time now they have been both an essential part of the diet and a signature part Ngāti Tūwharetoa's manaakitanga.

Lastly, in relation to compliance in a broader sense, concerns were expressed around vehicle security at popular fishing spots, prompting a number to say it discouraged them from fishing.

What we concluded

The level of effort expended on compliance seems high relative to incidents of non-compliance. Eastern Fish and Game have targets for compliance which are worked towards, and it is felt that something similar could be established in the Taupō Fishery. Any such targets should be linked to the goal of the Fishery to ensure that the effort expended is relative to the overall management of the Fishery. We also note that unlike other prosecutions taken by the Department, the fines imposed from any prosecutions in relation to the Taupō Fishery go back into the management of the Fishery, not into the Crown bank account (this is consistent with fish and game councils).

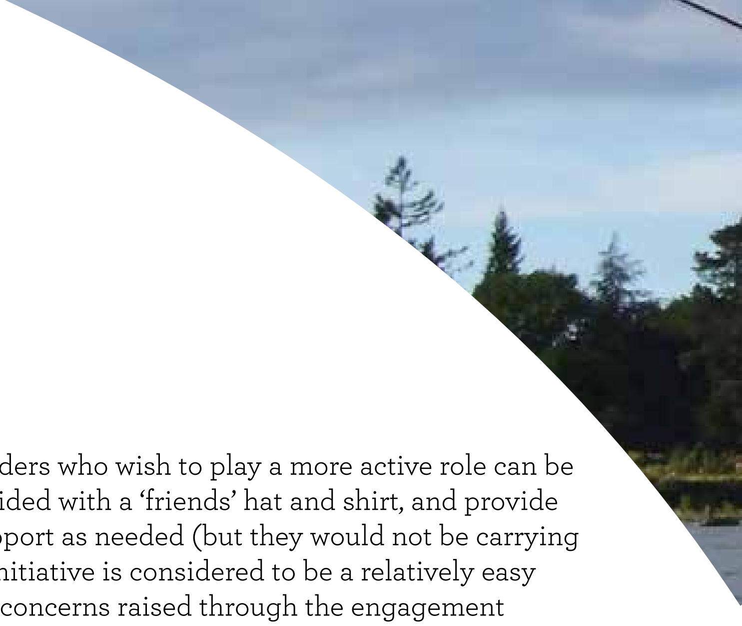
Our view is that the compliance (ranger presence) function presents a clear opportunity generally to change the 'strategy' to one of shared ownership and responsibility with Ngāti Tūwharetoa and anglers generally.

We consider that the Department should revisit the concept of 'honorary (warranted) rangers' to establish a more visible presence with anglers. Fish and game regions have now adopted a general approach of having up to ten honorary rangers per region, with the idea of increasing the sense of angler ownership in the management of fisheries, and to have a greater presence on the ground. There is some resistance to this as it involves a considerable investment in training, health and safety, equipping, and generally managing these rangers, and this resource would clearly have to be found from within existing baselines. There is also some indication that the Department feels it has deliberately moved away from this approach. However we believe it needs to be closely looked at as part of a shift from an approach where the Department is seen to do it all, to a regime where responsibilities are shared.

We also note that there is a potential for some resource savings (and possible revenue generation) if the Department instituted an infringement notice system for dealing with more minor instances of non-compliance with the Regulations. This would operate like a parking fine, system, avoiding the need for expensive prosecutions and also the stigma of criminal convictions for minor breaches. It would require legislative change to implement.

Working closely with Ngāti Tūwharetoa on this approach would also be a means of providing training and skill development to benefit its people and enable them to play a more active role in fishery management over time. This fits well with the Department's long term strategy of increasing the opportunities for partners to deliver more recreational opportunities, and growing conservation skills through training programmes.

The concept of a less formal 'ambassador' or 'friends of the Taupō Fishery' should also be explored. This again is a concept, perhaps not dissimilar to airport ambassadors, that has been adopted by the Eastern Fish and Game



region at least. Those licence-holders who wish to play a more active role can be on a communication list, be provided with a 'friends' hat and shirt, and provide anglers with information and support as needed (but they would not be carrying out a compliance role). Such an initiative is considered to be a relatively easy response to address a number of concerns raised through the engagement process relating to compliance and visibility.

We believe the time may also have come for Ngāti Tūwharetoa to re-evaluate the effectiveness of the mechanism that allows them to carry out their hosting responsibilities and provide trout at hui and tangi. One suggestion that has been made is that licences should be provided providing licences to marae (rather than individuals); an approach more in line with the processes adopted in customary fishing regulations (such as those that now apply to the Waikato River) that allow for more active management by iwi of customary fishing.Ultimately, though, this is a matter for Ngāti Tūwharetoa to consider.

1. Work with other organisations – power companies, district and regional councils, Ngāti Tūwharetoa, and Fish and Game – to develop a shared science and research strategy for Lake Taupō.Consider the establishment of a collaborative structure to deliver
2. the science and research priorities for Lake Taupō.
3. Establish clear processes to ensure that science and monitoring information is used effectively to:
    a. Take a more active role in 'intervening' in the Fishery;
    b. Monitor the effectiveness of those interventions; and Communicate with anglers.
4. Amend the current Taupō Fishery Regulations to enable the use of Angler Notices as the key mechanism for regulating angler impacts on the Fishery.
5. Consider initiating a pilot programme to reduce the number of catfish in Lake Taupō.
6. Initiate the planned review of the entire Tongariro National Trout Centre site and examine the role of the hatchery in that wider context.
7. Encourage greater 'ownership' and responsibility for fishery management among Ngāti Tūwharetoa and licence-holders generally, and in particular:
    a. Re-engage a network of honorary rangers;
    b. Investigate the use of infringement notices for minor breaches of fishing regulations;
    c. Establish a network of 'ambassadors' or 'Friends of the Taupō Fishery.'

3B.2 Working with Anglers and Increasing Participation

There were clear messages in the review process around the need for the Department to focus more on understanding the needs of anglers (past, present, and potential), to invest more effort into building support for the Fishery, and to lift participation rates in fishing. At this time, and because the Fishery is currently managed on a cost-recovery basis, increasing participation rates of anglers is essential to achieving the overarching management goal for the Fishery. Participant growth in the Fishery is also important to the local economy.

The messages are consistent with the current management focus on maximising recreational opportunities for anglers, and the broader strategic focus of the Department to see more people actively engaging in recreation.

The focus of the discussions was that the Department should be actively removing existing barriers (perceived or otherwise) to participation, and be doing more to actively engage with the community and promote the Fishery. A major theme was the importance of looking at more innovative options for introducing children to fishing.

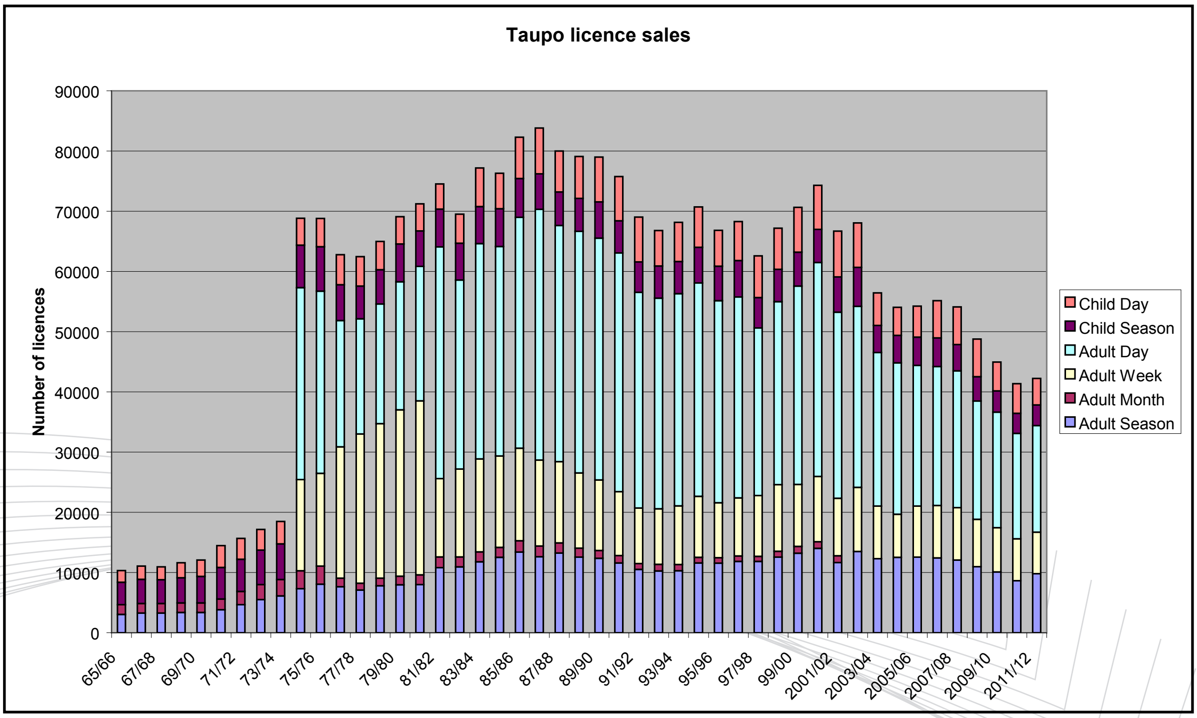
One participant said the Department must look at ways to make fishing *'easy to think of, easy to purchase, and easy to do'.*

In order to make sense of this, we first need to understand current rates of participation and the trends, and the benefit of the Fishery to the local economy.

3B.2.1 Levels of Participation

Total Taupō fishing licence sales decreased from 54,086 to 41,363 (-23.5%), between the 2007/08 and 2011/12 seasons. Behind this movement was a decrease in sales in excess of 20% for every type of licence over the five year period. Adult Season Licence sales declined the most of all licence types, with an average annual growth rate of negative 8%. This was a decrease from 12,065 licences sold in 2007/08 to 8,650 in the 2011/12 season.

These movements continue a general downward trend in Taupō fishing licence sales over the past 24 years, since sales peaked at over 82,000 in the 1987/88 season.



After major decreases in sales in the 2008/09 and 2010/11 seasons, the downward trend appears to be slowing. After a 10.5% decrease in total sales in the 2010/11 season, 2011/12 saw only a marginally negative 2.1% growth in total licence sales. Adult Season licence sales were the primary driver behind the movement. Child Season and Adult 24 Hour licences declined marginally. Child 24 Hour licences and Adult Week licences both increased in sales volume for the first time in four years.

Given the past participation rates it appears clear that there is considerable capacity for more anglers within the Fishery without the risk of over-crowding.

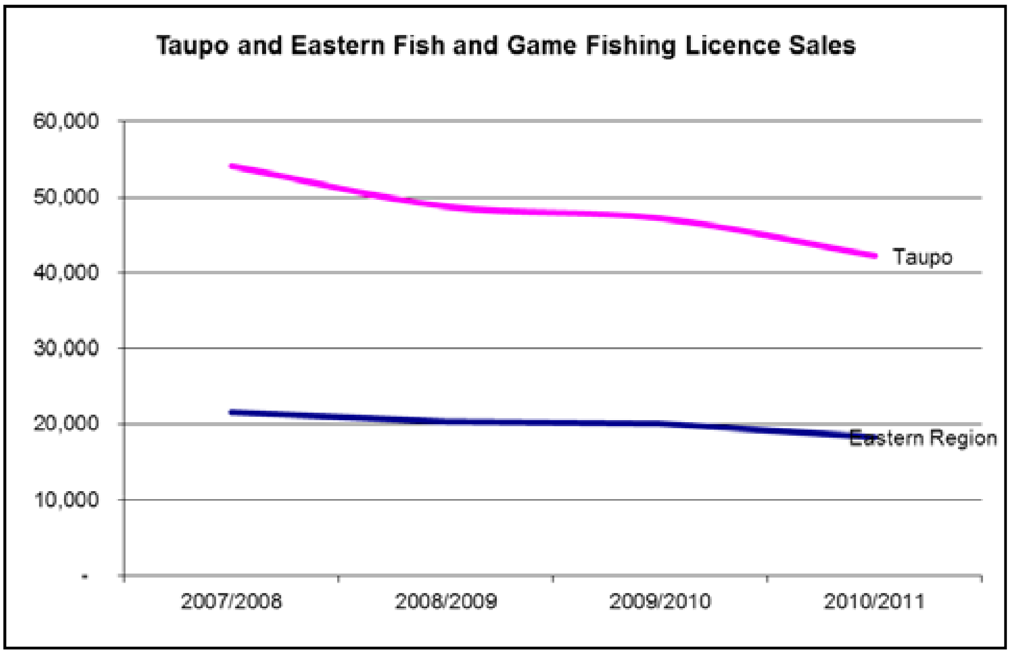
3B.2.2 How does this compare with the rest of New Zealand?

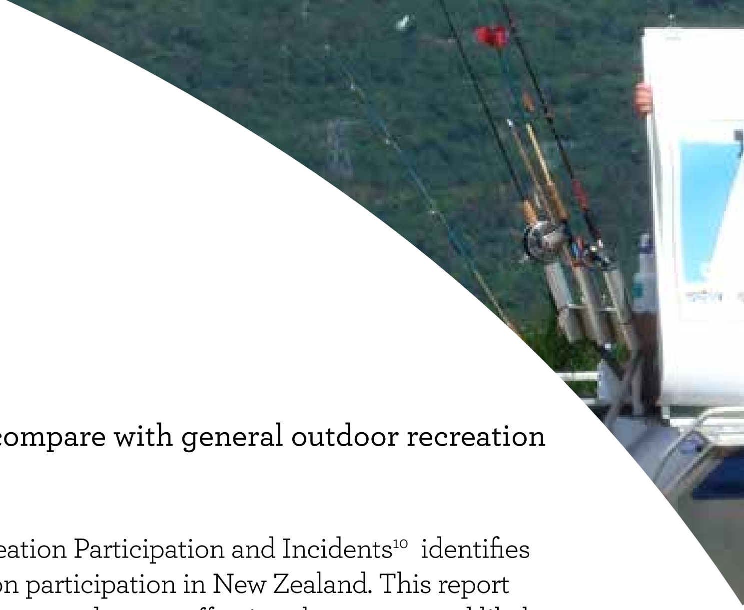
Certain regions of New Zealand cater better to recreational trout fishing than others. This was reflected in the licence sales by region as presented in the NIWA National Anglers Survey 2007/08 (Unwin, 2009). The Eastern, North Canterbury, and Otago Regions all registered over 10,000 Adult Weekly (AWS) and Family Licence sales for the year, with the Eastern and Otago regions also registering substantial "Part Season" licence sales. The Taupō Fishery, although not included in the same study, nor managed by Fish and Game, was shown to sell quantities of fishing licences well in excess of those reported by any other individual Fish and Game region.

Total licence sales for the Taupō Fishing District were 54,116 for the 2007/08 season, whereas Fish and Game licence sales for the rest of the country were only 97,215 (Unwin, 2009). Adult Season licences accounted for around 12,065 (22%) of the total Taupō Fishery licence sales. The Otago Fish and Game Region was the closest to Taupō when comparing total AWS licence sales, with total Otago Adult Season sales reaching 6,743 (35.7%) of the total. Eastern Region, despite selling fewer than half of the amount of Adult Season licences as Taupō, made a very similar percentage of its' total sales from Adult Season licences (that is, compare Eastern Region Fish and Game 24.9% with Taupō 22.3%). It is important to note, however when making any such comparison that the types of licences do differ, that is there are no family licences in the Taupō region. This makes direct comparisons difficult, and this needs to be kept in mind when assessing participation rates within Taupō and Fish and Game regions.

Adult 24 Hour licences are where Taupō greatly outsells any other region, with 22,732 sales recorded in the 2007/08 season. Fish and Game Adult 24 Hour licence sales only reached around 27,317 for the rest of the country. Eastern Region, despite selling fewer than half of the amount of Adult 24 Hour licences as Taupō, made a very similar percentage of its total sales from Adult 24 Hour licences (Eastern Region 46.7% and Taupō 42.0%). Overall, Adult 24 Hour licences declined for both the Eastern Region and Taupō fisheries over recent seasons.

When comparing Taupō and Eastern Fish and Game licence sales on the graph below it can be seen that both areas are experiencing a decline in the number of sales. However, the rate of decline in the Taupō Fishery is greater with a -21.9% reduction as opposed to a -15.3% reduction for Eastern Fish and Game.





3B.2.3 How does this compare with general outdoor recreation participation?

The 2009, report on Outdoor Recreation Participation and Incidents[10] identifies general trends in outdoor recreation participation in New Zealand. This report identifies that the "overall population trends most affecting the current and likely future outdoor recreation participation and activity patterns appear most related to:

- Progressive aging of the population, especially in much of rural and regional New Zealand;
- Increasing urbanization of the overall New Zealand population;
- Increasing concentration of population in and around Auckland;
- Increasing ethnic mix, especially focused in and around Auckland;
- Increasing urban and ethnically diverse population of youth, especially focused on the Auckland region;
- A consistent under-representation in active outdoor recreation among the young, non European ethnic groups, and urban residents; and
- Increasing preference for more passive home-based activities, and if interested in more active outdoor activities, being most involved in those able to be done closer to home and in a shorter time.

Those sectors of society least inclined towards active outdoor recreation or less easily able to participate in it appear to be those where most population growth is projected"

Specifically to fishing the report identifies that:

> "In its land-based freshwater form, fishing appears to have a slowly declining participation level. License-based fishing participation appears to remain strong but new recruitment may not be sufficient to sustain this in the medium to long term. This is compounded by wider population trends away from areas with freshwater fishing opportunities. By contrast saltwater fishing in the shore-based and marine settings may be more stable or increasing due to the increasing ethnic mix. These points are based on informed-subjective conclusions drawn from viewing the variety of information compiled for this report. New information may alter these conclusions. It is considered that under current conditions freshwater fishing participation levels are likely to slowly decline in relative terms in the medium to long term"

The findings of this report seem consistent with the results of the public survey where 69% of respondents were aged 50+ and 91% were male. Of those fishers

10 Outdoor Recreation Participation and Incidents in New Zealand. A scoping study relating incidents to participation levels. Author: Dignan & Cessford, Date: Nov 2009 , Produced by the New Zealand Mountain Safety Council.

that did not live in the Taupō District (21%), 20% were from Auckland and 18% were from Wellington region. Whilst it is noted that there is a distinct lack of information on short-stay fishers, it is felt that this older angling population is an exiting population and is not being replenished by younger fishers. This is broadly consistent with national trends, although recent Roy Morgan research indicates that the average freshwater angler is over 35, European, male and lives in the South Island.

3B.2.4 A glimpse into a Washington Fishery

While this study did not include a comparison with global trends, a comparative assessment was undertaken with the Washington Fishery, through a report 'Increasing Freshwater Fishing Participation and Fishing License Sales in Washington State: A Marketing Plan for the Washington Department of Fish and Wildlife'. A full copy of a summary undertaken by David Conley can be found in Appendix III to this Report.

In summary, we know that nationally there is a decline in the rate of fishing, but this decline is more pronounced in Taupō. This decline mirrors a decline in outdoor recreation participation trends nationally, and has very similar drivers. There is a general lack of information on those that fish in the Taupō Sports Fishery. From types of licence's sold, we know some very basic information, but little in the way of detailed demographics. We can tell from national, and international trends as well as our public survey, what the general participation trends are in Taupō , but there is a definitive need to understand better who fishs in Taupō .

3B.2.5 Economics

An Economic Impact Assessment was undertaken by APR Consultants as a part of this Review. The Assessment was based on data collected through the public survey, information that was publicly available, and some interviews. While there are some limitations with the information available, the Assessment provides a critical new baseline on which to base the value of the Taupō Fishery to the Taupō Region.

Expenditure made by Taupō residents' would have been spent in the Region anyway, therefore Taupō residents' expenditure was excluded from impact estimates. The overwhelming majority (87%) of the survey's raw data was associated with respondents who currently possess season licences or had purchased one in the past. Only season licence expenditure data was scaled up to the population level as the majority of respondents' purchased this type of licence. Impact estimates associated with other licence type segments' expenditure[11] were not included in the report's analysis, as the sample sizes

11 Cross-tabulated for respondent origin and motivation for travelling to Taupō (ie, data that excluded Taupō -based respondents and those whose sole or main motivation for traveling to Taupō was to undertake activities other than fishing.)

associated with these groups were too small to enable the calculation of meaningful estimates.

Survey-based estimates of adult season and week licences total economic impacts were $23 million (total output), $9 million (total value added) and 239 FTEs (jobs created or sustained). Impact estimates made using theoretical assumptions about visitors' expenditure were made on the basis of providing a relatively conservative indication of licence impacts that were not covered by the surveys' responses. A conservative estimate of total impact associated with the visitors (including those who held Child and Adult 24 hour licences) spending in Taupō attributable to the Taupō fisheries was **$29 million (total output), $11 million (total value added) and 294 FTEs (jobs created or sustained).** This is broken down in the table below.

Summary of impact estimates

Type of estimate	Impact type	Total output (million)	Total value added (million)	Total FTEs	% of total impact
Based on DOC survey data (n= 261)	Adult season (sole or main reason for visiting Taupō was fishing)	$17.90	$7.10	182.5	62.2%
Based on DOC survey data (n=30)	Adult week (sole or main reason for visiting Taupō was fishing)	$5.50	$2.20	56.6	19.3%
Sub-total – survey based estimates		**$23.4**	**$9.3**	**239.1**	**81.5%**
Based on assumptions about visitor expenditure	Adult 24-hour	$1.70	$0.70	17.5	6.0%
Based on assumptions about visitor expenditure	Child 24-hour	$0.14	$0.06	1.4	0.5%
Based on assumptions about visitor expenditure	Adult season (fishing was not the primary reason for visiting Taupō)	$2.30	$0.90	23.5	8.0%
Based on assumptions about visitor expenditure	Adult week (fishing was not the primary reason for visiting Taupō)	$1.20	$0.50	12.1	4.1%
Total (million or FTEs)		**$29**	**$11**	**294**	**100.0%**

Notes:

1. Child Season impact was included within the adult season impact as respondents were asked to report spending of their entire group/family.
2. Adult and Week season impact estimates assumed one license per family/group/ individual who visited Taupō. This implies that the majority of those who came to Taupō to undertake fishing came on their own, rather than as a family or group of friends.
3. Adult 24-hour, Child 24-hour, Adult Season (where fishing was not the primary reason for visiting Taupō) and Adult Week (where fishing was not primary reason for visiting Taupō) estimates assumed that on average one non-fishing person accompanied the person who fished on their visit to Taupō.

The best estimates are those made for season licence holders. In other words, the survey's data enabled partial estimates of Taupō fishing visitors' impact, rather than undervaluing the fisheries per se. Conservative assumptions were made in order to generate a more complete estimate of Taupō visitors' economic impact attributable to fishing. **Overall, it is reasonable to assert that the Taupō Fishery supports nearly 300 jobs, creates at least $29 million in business turnover, and adds $11 million to the size of the economy.**

Deryck Shaw's economic impact assessment of the Taupō Fishery's impact in the year ended June 1983 estimated the total output (ie, total turnover) to be $10.8 million and 244 FTEs. Between 1983 and 2012 annual CPI inflation has averaged approximately 4.2% p.a. Taking into account GST increases, an inflation adjusted impact would be at least $30 million. Methodological differences between the 2012 and 1983 impact estimates in terms of data gathering (web-survey and theoretical estimates compared to postal survey and person-to-person surveying) as well as the fact that money should be conceptualised and understood within relative price structures, expected quality of life and consumer paradigms (in different epochs), seems to imply that the two estimates are not directly comparable. What we can observe is that the two estimates are of a similar quantum.

3B.2.6 Visitor Activity

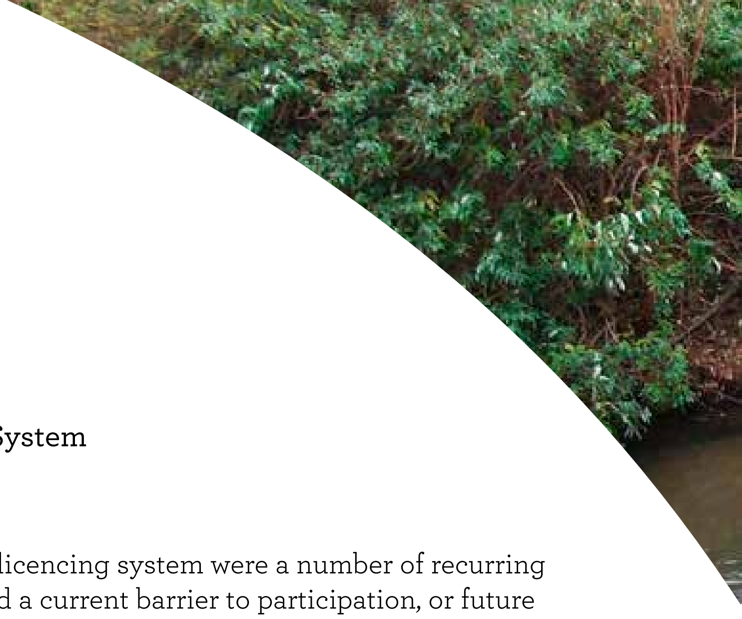
Overall, visitor arrival statistics for Taupō have declined slightly, falling 5.4% between 2000 and 2010. This was in contrast to New Zealand where guest arrivals grew by 22.6% during the same period.

Total Taupō fishing licence sales decreased from 54,086 to 41,363 (ie, -23.5%), between the 2007/08 and 2011/12 seasons continuing a general downward trend in Taupō trout fishing licence sales over the past 24 years, since sales peaked at over 82,000 in the 1987/88 season.

The results of the Department's survey showed that 66% of respondents' primary reason for visiting Taupō was for fishing (note that the majority of respondents (86.9%) were Adult Whole Season licence holders and as such, this may be expected). A total of 83% of the survey respondents were aged over 40 years. The two largest groups surveyed were those aged between 50 and 59 (26%) and those aged between 60 and 69 years (28%). A total of 88% of respondents were male, while 12% were female. The findings showed that visitors undertook many activities while in Taupō, not only fishing. These included mountain biking and other recreational activities.

Four key areas of opportunity were identified in the course of the review:

1. the licencing system;
2. destination management;
3. communication; and
4. regulations.



3B.2.7 The Licensing System

What we heard

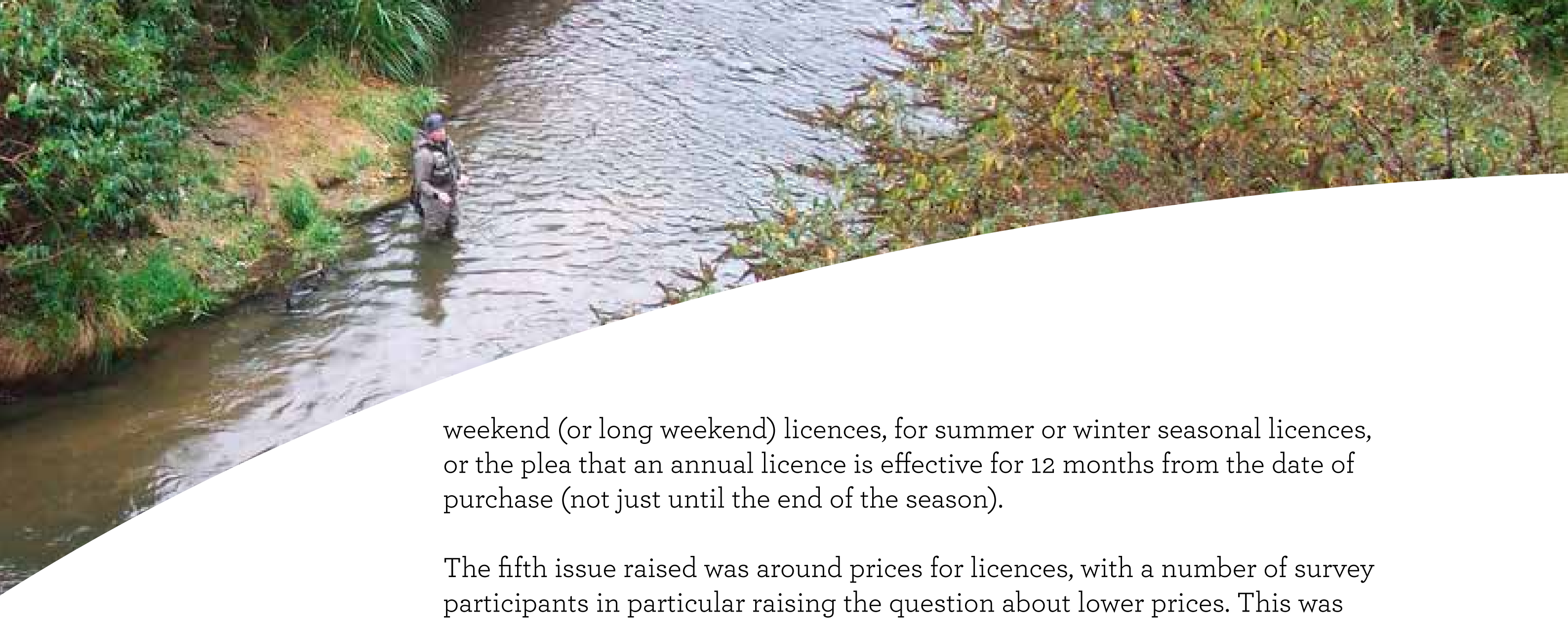
What we heard in relation to the licencing system were a number of recurring issues, all of which either revealed a current barrier to participation, or future opportunities that should be considered.

The first issue was frustration about the paper-based system of licencing and the inability of anglers (current and potential) to access a licence 'on-line'. A number of problems came to the fore. Retailers generally are asked to pre-pay for booklets of licences. In tight economic times, the tendency has been to order the minimum amount, meaning that they often run out, and consequently licences are not available for anglers at those outlets. Very few details are collected from anglers who purchase the licences. For example, email addresses are not collected. This has made follow-up and communication very difficult, and has meant there is no reliable database of either current or past anglers. Lastly is the convenience factor. Anglers want to be able to purchase licences using current technology, either through their computers or via smartphone.

The second issue was about anglers having to obtain two fishing licences if they wanted to fish both the Taupō Fishery and elsewhere in the country. The current system requires one fishing licence covering all of New Zealand regions except for Taupō, and one licence for the Taupō Fishery. One angler went as far as saying a national licence option "would be the single most positive outcome of this review process". Another said, *"Come on, guys. It can't be that hard to negotiate! A licence for the rest of the country, plus a similarly priced licence for Taupō is a barrier to a lot of kiwis"*. And another pleaded for a national licence *"so that I could also stop and fish for an hour or two when passing through to Wellington or go out for the day from Auckland or stop when touring around – when the cost and hassle of obtaining different day (or week) licences is just too expensive."*

The third issue was the identification of what was seen as a gap in the current categories of fishing licences, that is a Family Licence option. Fish and Game do have the option of a Family Licence, and in the Eastern Region, it is the second most popular licence option (just behind the Adult Season Licence). One respondent said *"introduce a family licence. With 4 kids, I have to choose who will get a licence for the year as I cannot afford 4 licences when they might only want to go fishing once or twice during the course of the year. My wife doesn't even get a look in!"* And another, *"A family licence option will go a long way in encouraging parents to teach and get children involved in fishing (fish and game has this option for that very reason why not DOC!??)."*

The fourth issue was about limited options and inflexible licence time periods. The most commonly stated opportunities were around developing options for



weekend (or long weekend) licences, for summer or winter seasonal licences, or the plea that an annual licence is effective for 12 months from the date of purchase (not just until the end of the season).

The fifth issue raised was around prices for licences, with a number of survey participants in particular raising the question about lower prices. This was sometimes raised in the context of a poor fishing experience – *"has become an expense I am no longer willing to pay, particularly given the poor state of the Fishery (it's no longer value for money)."*

The sixth issue was the request to consider developing a more effective mechanism for charter boat operators to licence their customers. The concept of a 'boat licence' has been raised as a means to cover those situations of multiple people on a boat, but sharing only a few rods.

The seventh issue was more in the nature of questions about the option of differential pricing for non-New Zealanders, an option that is being actively pursued with the Minister of Conservation by Fish and Game New Zealand (but not currently supported by the Department). In the course of the Review, Ngāti Tūwharetoa also indicated that this is an issue that they would like to see considered further.

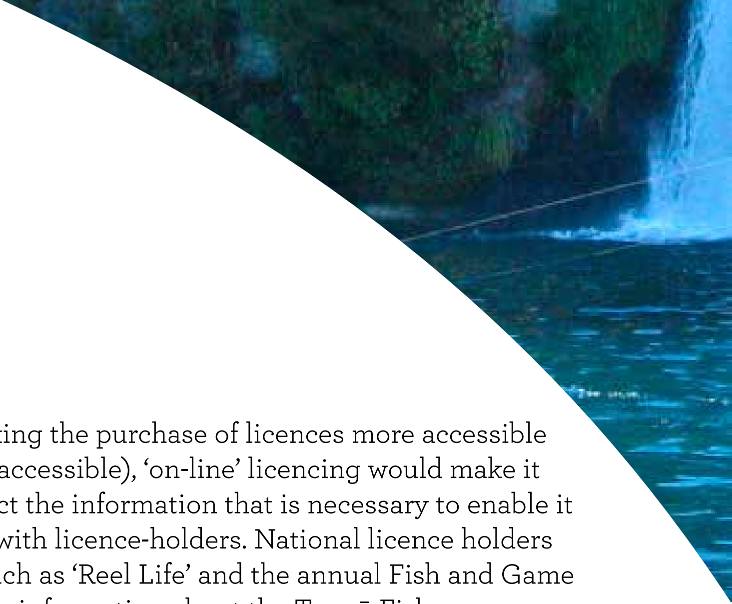
Finally, we identified confusion and misinterpretation of what happened to licence fees. Many people mistakenly believe that half (or at least some) of their licence fee is paid directly to Ngāti Tūwharetoa. Some expressed concern about this, and hoped that their licence fees could instead be applied to the management of the Fishery (which is exactly what does happen).

What we concluded

What we found was that these concerns were strongly and consistently felt and were seen as having an obvious (and detrimental) impact on participation rates.

By and large we agree with many of these concerns (expressed in the course of the Review) and believe that a more responsive and flexible system of licencing is needed. Discussions with representatives of Ngāti Tūwharetoa – the key partner in fixing the forms and classes of licence - suggest that they also, are supportive of change in this area, and see expanding participation rates as good for the Fishery.

The move to on-line licencing is already underway. It is in line with the Government's initiative to improve the public's access to information and services. Fish and Game are also in the process of redeveloping their on-line licencing, and we see an obvious opportunity for close collaboration in this. We would go as far as to say that the scenario of the Department and Fish and Game establishing separate platforms for selling fishing licences is one that



should be avoided. As well as making the purchase of licences more accessible (including hopefully smartphone accessible), 'on-line' licencing would make it easier for the Department to collect the information that is necessary to enable it to communicate more effectively with licence-holders. National licence holders are also sent online newsletters such as 'Reel Life' and the annual Fish and Game magazine, these could now include information about the Taupō Fishery.

We also strongly believe that the Department and Fish and Game must work together (and with Ngati Tuwharetoa in recognition of its concurrence role) to develop a national licence option for anglers. Any elements of parochialism that might exist should be put to one side in the interests of the shared goal of making it more appealing for anglers to fish in New Zealand as a whole. Sorting out the detail of pricing and the appropriate split, while important, should be secondary to that. At the very least national licences should be enabled, trialled and evaluated as a priority.

We also consider that there should be more flexible licencing options generally, and preferably this should be applied consistently across the country with Fish and Game (unless good reasons for difference exist). Top of the list should be the Family Licence option, but we also consider that weekend (or long weekend) options should be explored, as well as a twelve month (not whole season) licence. Issues associated with the optimal licence cost will also need to be worked through to ensure that participation and revenue are maximised. A twelve month licence would also enable the 'flattening' out of the annual budget as income is collected in a more constant manner throughout the year.

It became apparent in the course of the Review that little work had been done on understanding the impact of price on participation, and what the optimal pricing regime should be for licences. This is an area that needs some expertise applied to it, with the work preferably carried out in conjunction with Fish and Game.

This is another area where regulatory amendments will be required to bring about these changes. The objective of amendments should be to make the changes all at once, and to enable a more flexible process of changing the categories of licences to emerge.

We believe the option of a boat licence for commercial operators is a concept that deserves further exploration. It ties in with the Department's commitment to build productive business partnerships that deliver conservation gains, and to increase business partners' satisfaction with the Department – as well as improving access to recreational opportunities.

Lastly, we consider there is a need for better communication about how the licence fees are used. Educating users that the money is in fact used to enhance the Fishery can be a selling point in itself.

3B.2.8 Communication

What we heard

What we heard in relation to communication was that there are significant opportunities to enhance the relationship between the Department and anglers primarily.

The survey results indicated low levels of understanding of many aspects of the Fishery, and low levels of engagement by anglers with the management of the Fishery. We fully expect that these two factors are related. The survey also indicated that the Target Taupō magazine is highly valued by trout fishers, and was in fact their preferred method for gaining information in the future, although email was identified as the most preferred channel.

However, in the course of the review we also received considerable comment that the Target Taupō magazine was expensive to produce and consumed a significant part of the overall communications budget, but that it catered only to the 'converted', that it did little to encourage new people to fish, and that it had 'outlived its usefulness'. A strong message was that the Department needed to place its focus on more regular, more timely, and less formal means of communicating.

We heard that the Department's communication tends to be reactive (for example responding to complaints or issues) rather than proactive. The Department's 'YouTube' video – 'Lake O on the Fly' was positively referred to several times, though comment was made about the lack of follow-up to that video. Comment was also made about the very active websites and blogs run by others – a number of them Sporting Life, Tongariro River Motel and Fish'n'Hunt receive many thousands of visitors per month, and these were seen as providing significant opportunities for the Department to engage more proactively with these sites and users.

The option of developing a smartphone APP was also raised a number of times. People asked that such an APP should have the ability to purchase licences, as well as providing 'how to' type videos, and to information on weather, fishing spots, blogs etc.

Criticisms were made about the Department's Fishery website. Broadly the comments can be interpreted as 'difficult to find', 'not intuitive when you do find it', and 'in need of something different'.

More specific comment was received on the financial aspects of the Fishery management. There was a clear lack of understanding about how the licence fees are apportioned generally (to fisheries management), and also how they

are apportioned more specifically (what work is being done, why, and how much does it cost). Comment was made that the annual reporting process undertaken by Fish and Game appeared more transparent.

What we concluded

We are clear that effective communication is critical to the management of the Taupō Fishery. Not only will it potentially improve participation rates, but it will also build the Department's understanding of the interests and motivations of anglers. It should also build a more common understanding of the issues affecting the Fishery, encourage informed debate, and encourage more involvement of others in management generally.

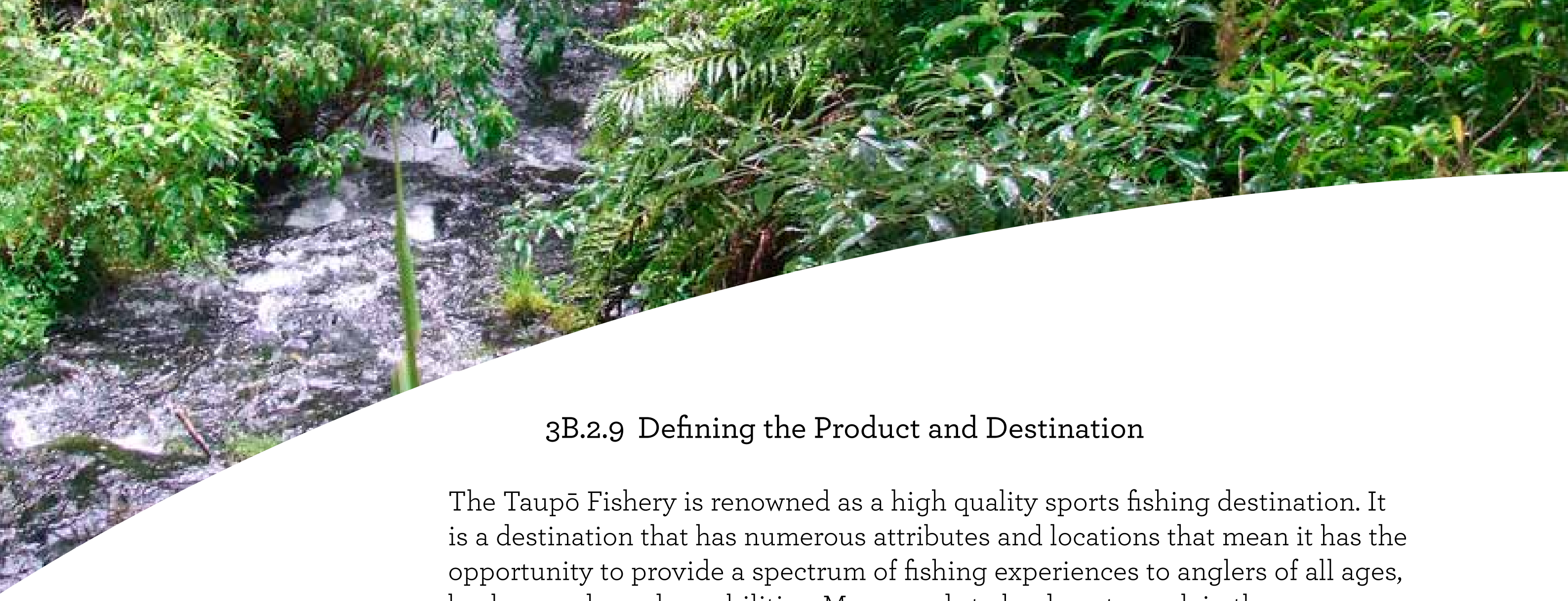
We consider that there needs to be a comprehensive review of the communications strategy more generally, and (probably) more resources invested in it. The lack of a licence-holder database must be addressed, and use of email communication should be the norm.

With limited resources available for communication we are unconvinced that Target Taupō is the best communication vehicle, although we accept that there may be other ways to produce it or fund it. More importantly we believe, if it is to continue, its purpose needs to be clarified, aligned to the broader goal of fishery management, and its effectiveness monitored.

The Department is already working on developing a smartphone App. We are confident it will contain the range of functionality sought by participants in this review.

In broad terms, we support the view that the Department should be focusing on more regular, more timely, and less formal communication. A stand-alone Taupō Fishery website should be considered with better linkages to Fish and Game New Zealand (the option of the Taupō Fishery being linked to the monthly Reel Life publication should be discussed), a more relaxed approach to using social media tools (Facebook, YouTube, blogs) should be adopted, and the Department should be doing more to support existing websites with good information. Essentially, a broad toolbox approach is recommended.

We consider that the Department should review at its financial reporting in respect of the Fishery, and commit to providing clear reports back to licence-holders (in a similar way to Fish and Game, or similarly to the way it already does for Ngāti Tūwharetoa). The rationale for clearer reporting is simply the license fees paid for by anglers', at this time, funds the management of the Fishery.



3B.2.9 Defining the Product and Destination

The Taupō Fishery is renowned as a high quality sports fishing destination. It is a destination that has numerous attributes and locations that mean it has the opportunity to provide a spectrum of fishing experiences to anglers of all ages, backgrounds, and capabilities. More needs to be done to explain the range of opportunities that either exist, or could be developed so that the fishing opportunity will be more attractive to a wider range of people.

What we heard

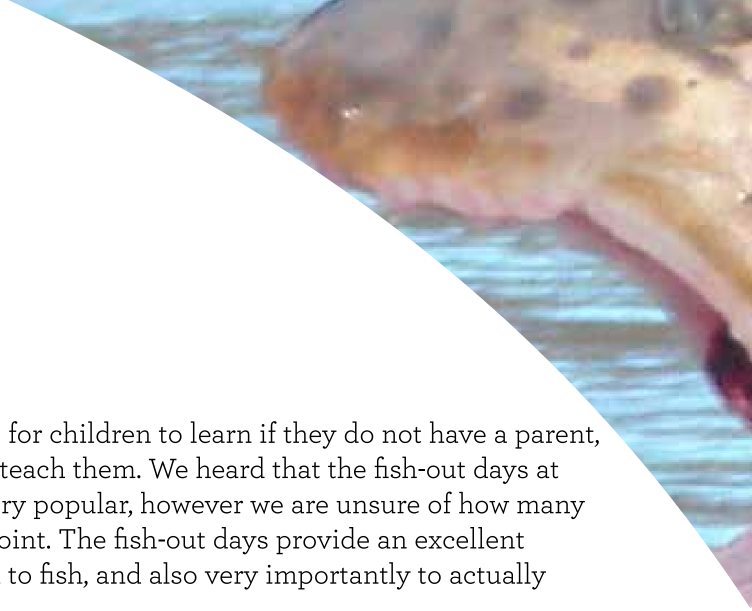
During the engagement process we heard very strongly about some specific aspects of the Fishery. The Tongariro River features very highly with the more experienced anglers, and is referred to as 'The River' in many survey responses, indicating the level of prestige which this part of the Fishery is held. Of the lake and other areas in the Fishery, less was heard. There appears to be a lack of understanding of the range of fishing opportunities and where opportunities for children, tourists, the mobility-challenged etc can best be accessed.

What we concluded

In order to grow, the Fishery needs to be able to provide a rich range of experiences from experienced fly fishers, boaties, trophy fishers, families, children, back-packers and other tourists, older less mobile anglers, and other visitors. Some suggested looking at pond fishing as a potential opportunity for short-stop – predominantly Asian – visitors. . Better defining (and in some cases creating) the destination will involve identifying the range of experiences that are being provided and how this is supported by management and marketing of the Fishery.

A better understanding of what the 'Taupō Fishery' is, and the communication of this to the anglers (past, current, and potential) will have benefits by not only increasing the number of participants in the Fishery and how and where anglers participate, but also in respect to the management and marketing of the Fishery. Such a definition exercise needs to be done in a collaborative manner with stakeholders and partners.

We heard through the survey and in discussion with parties that the Fishery proved difficult to access for both the young and the older anglers. The latter was a physical issue where it was identified that there were not enough places where people are able to drive up to fishing areas. For children the barriers to participation are less related to physical infrastructure, and more in relation to the act of fishing itself. We heard through the survey, and through the wider engagement process, that for children learning to fly fish is expensive (when compared to spin fishing), hard to master, and time-consuming to learn. In



some cases, there is little chance for children to learn if they do not have a parent, grandparent or someone else to teach them. We heard that the fish-out days at the National Trout Centre are very popular, however we are unsure of how many kids carry on fishing after that point. The fish-out days provide an excellent opportunity for children to learn to fish, and also very importantly to actually catch fish.

There is opportunity to identify, and sometimes create, sub-destinations within the Fishery that will provide for more specific and unique experiences. Through the engagement process we head that there is potential to look at the Tongariro River, the National Trout Centre, Lake Kuratau and Lake Rotoaira as important components of the Fishery. It has been identified that these areas have their own issues that will need to be supported and developed. The opportunities associated with these areas have been identified as follows:

The Tongariro River: The importance of 'The River' to the Taupō Fishery and to fly fishing enthusiasts came through very strongly through the engagement process. It has an international reputation for fly fishing in particular, and plays an important role in the spawning process for trout. Opportunities have also been identified on the headwaters for the river, and the potential to stock these areas to sustain and enhance the wilderness or backcountry fishing experience.

The engagement process raised numerous comments about the competing uses and modifications associated with the river (electricity generation, flood protection etc) and the effects that these are perceived to be having on access and the fishing experience on the river. Research has indicated that there has been a reduction in the number of fishing pools over the last 20 years meaning fewer areas for anglers to access the Fishery.

The question of whether or not at least parts of the river should be opened up to spin fishing has also been raised through the engagement process. In public forums this has met with mixed reactions, with some saying it will increase participation rates as a positive initiative, and others suggesting it will destroy the fishing experience. A hybrid approach was also raised as to whether there are specific pools (such as the Major Jones pool) or parts of the lower river that could be opened up to a wider range of anglers.

There are a large number of groups and entities with an interest in the river including local hapu, the Tūwharetoa Māori Trust Board, the Advocates of the Tongariro River, Waikato Regional Council, Genesis Energy, anglers as well as walkers, cyclists and the wider Tūrangi community. The Tongariro National Trout Centre is also an important visitor and advocacy centre adjacent to the Tongariro River that plays an important part in the Taupō Fishery.

The future management of the river would benefit from a collaborative and

strategic planning process that brings all of the groups around the table to define and implement a shared vision for the river. It is understood that there has already been multi-agency discussion on the development of a strategic plan for the river, and this work should be advanced.

The Tongariro National Trout Centre: the hatchery is one component of the Tongariro National Trout Centre (TNTC). We heard through the engagement process that the TNTC is a great visitor attraction to raise the profile of the Fishery and fresh water advocacy. It has the potential to be a more important and active part of the Fishery and encourage greater participation. For a lot of non-fishers and visitors the TNTC is the 'gateway' to the Taupō Fishery.

As mentioned above, the kids' 'Fish Out' days are very popular, and there is definite potential to expand these to occur on a daily basis and make them available to all visitors, not just children. This will have the effect of increasing the participation and awareness in fishing at the TNTC, and provide another more accessible avenue into the wider fishery for more people. It is acknowledged that a separate review process is being undertaken for the TNTC, and the opportunities identified through this review should be factored into that process. There is also the need for more structured follow-up in relation to those children who participate in fishing at the TNTC (for example, how many children actually go on to purchase a fishing licence?)

Lake Rotoaira: Through the engagement process it was identified that significant opportunity exists in the Lake Rotoaira area. Such opportunity is not limited to the Fishery but by its connection to other adjacent areas, including Lake Otamangakau. There is a desire by the Lake Rotoaira Trust and associated hapu to explore a range of opportunities associated with the lake and adjacent conservation areas.

Lake Kuratau: Lake Kuratau has been identified as a potential family fishing destination with opportunities for lake-edge and boat fishing. There are large amounts of good-sized fish in the lake and currently low angler rates, meaning that the fishing opportunities are plentiful. One of the main barriers to participation that currently exists is the lack of lakeshore access, meaning that boat (dinghy) fishing options predominate. There is opportunity to work closely with King Country Energy, who own the lake, and surrounding landowners to look at improving access and infrastructure to develop the area into a more family-friendly fishing destination.

3B.2.10 It's too hard

What we heard

What we also heard was that a considerable barrier to participation is a lack of understanding or knowledge of how to fish. In the minds of some, an over-emphasis on tradition is a barrier to participation.

Two key elements were identified in responding to this. The first is that responses to the survey suggested that affordable, well-targeted programmes to introduce people to fishing in the region would potentially help grow participation. A number of people suggested workshops and training (being able to go out with knowledgeable people), packages would encourage beginners.

The second response is to relax the regulations that currently restrict access to many fishing spots unless you are a fly-fisher. What we heard was that these restrictions are an obvious barrier to children starting fishing – not only because fly fishing is a difficult art for anyone under the age of about 13, but also because it is expensive, and because children want to fish with family or a parent, and often fly fishing is a barrier for them as well. As noted above, there was some strong resistance to opening up some areas to other methods of fishing, particularly in places along the Tongariro River. Some went further and expressed the view that spin fishing should not be allowed anywhere. But there was also strong recognition that most people want to see children (and others) out fishing and enjoying themselves.

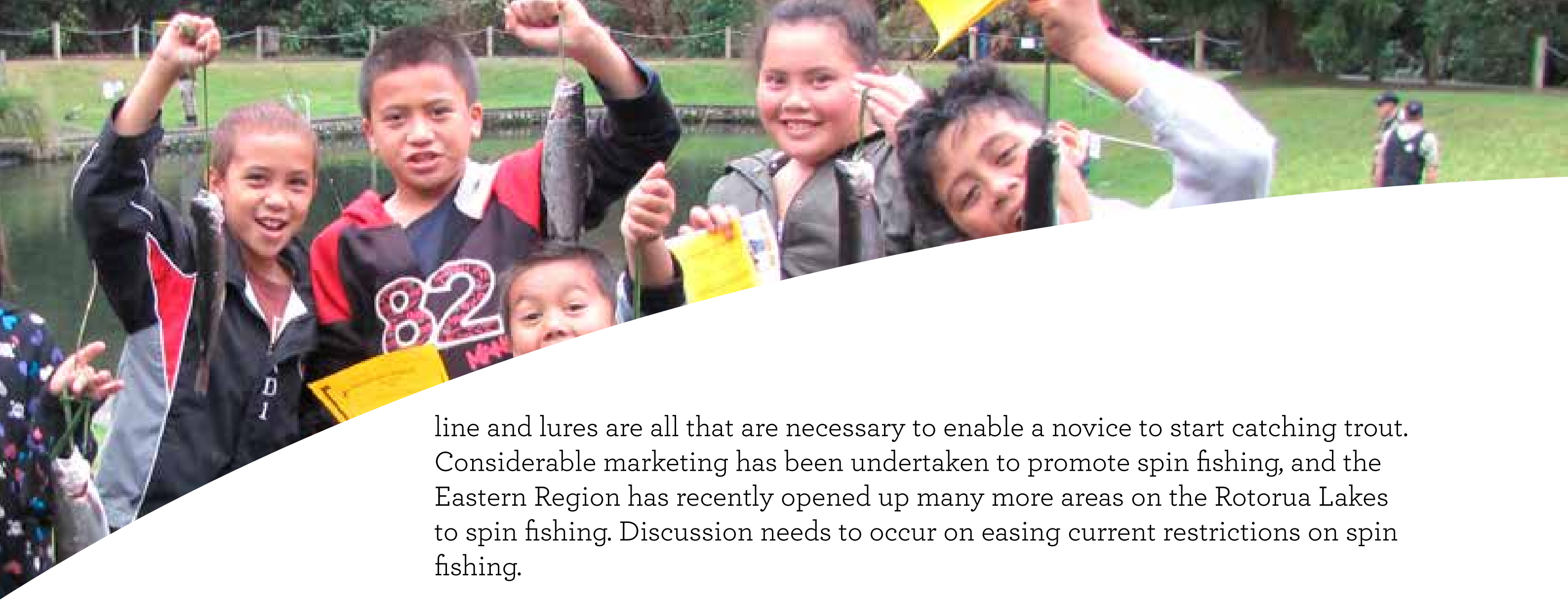
One response, consistent with others, identified that *"regulations should also be minimal, you only need to have a size and number taken. It does not matter how the fish are caught. A new fisherman will happily use less skilled methods than an experienced one. The main thing is for people to enjoy themselves"*.

What we concluded

Aspects relating to improving participation rates have already been covered under the licencing, communication and destinations sections. The focus here is on more specific opportunities around 'making it easier'.

There is a good opportunity for the Department to work with others to provide more introductory courses in fishing, either through clubs or as a commercial opportunity. This could be seen as part of a shift that should see the Department develop a more outward-looking focus.

We believe that the Department should seriously consider loosening up the current regulations to make it easier to fish in more places. Fish and Game New Zealand has identified spin fishing in particular as being an ideal way to start trout fishing, because the skills are easily mastered, and a basic kit of rod, reel,



line and lures are all that are necessary to enable a novice to start catching trout. Considerable marketing has been undertaken to promote spin fishing, and the Eastern Region has recently opened up many more areas on the Rotorua Lakes to spin fishing. Discussion needs to occur on easing current restrictions on spin fishing.

Our conclusion is that the Department should follow the lead of Fish and Game, and while recognising the legitimate interests of the more traditional anglers, progressively open more areas in the Taupō Fishery to spin fishing. This requires an inclusive process to develop policies to guide these decisions.

Working with Anglers and Increasing Participation - Opportunities

1. In relation to the licencing system:
    a. Put in place an on-line system in close collaboration with Fish and Game;
    b. Develop a national licence option;
    c. Offer a fuller range of licence options, with the priority being a family licence, weekend licence, and a 12 month licence;
    d. Undertake work on pricing to understand impact of price on participation and what the optimal pricing regime may be; and
    e. Consider ways to support charter boat operators in the development of a boat licence concept.
    f. More actively promote the fact that licence fees pay for fishery management.
2. In relation to the destination product:
    a. Define and brand the full extent of the Taupō Fishery;
    b. Develop and implement a marketing and communications plan to raise the profile of the fishery nationally and internationally; and
    c. Initiate the development of a collective vision and a strategic plan for the Tongariro River to address the competing demands on the river and surrounding land.
3. In relation to improving access to the Fishery:
    a. Expand opportunities to learn to fish for all people, including expanding the kids 'fish-out' days to a daily occurrence for all visitors (not just children)
    b. Support the establishment of learn to fish classes by clubs and/or commercial operators; and
    c. Work with others to develop a policy-driven approach to enabling more spin fishing opportunities in the Fishery.
4. In relation to communication:
    a. Develop a new communications strategy, including reconsidering the role of the Target Taupō publication;
    b. Adopt regular, timely and less formal communication, including better use of social media and more active engagement with and support for existing sites;
    c. Review the Department's website and explore the benefits of a standalone Taupō Fishery site; and
    d. Develop clear financial reporting to licence-holders;

3B.3 Developing Strong Relationships

The Department as a whole has identified that while resources available for conservation work (read fisheries in this context) are constrained by an ongoing tight fiscal environment, the value of its contribution to 'brand New Zealand' is increasingly recognised. There is potential to draw on the increasing environmental awareness of consumers, businesses and communities to sustain and grow their contribution. In addition, the Department's relationships with iwi, business and with other agencies of both central and local government are critical to achieving the best results given the interconnected responsibilities and aims, and the tight fiscal environment.

Responses in the course of the review can best be summed up by one person's comment that the Department *"needs to adopt the philosophy of partnering"*. The importance of developing the partnerships with NgātiTūwharetoa and licence-holders (anglers more generally), have already been highlighted throughout this report. Other key parties were identified as Fish and Game, the Lake Rotoaira Trust and the wider tourism and business sector.

It is worth reiterating that the commitment to work more closely with the Department was strongly evident from almost all those who participated in the review – suggesting there is a genuine basis for a changed approach.

3B.3.1 Fish and Game

What we heard

A number of comments about Fish and Game were received throughout the review process, and a significant number of respondents touched on issues around this relationship. Some questioned why the Department was responsible for the management of the Fishery in the first place: *"In many ways it would seem more appropriate that the Fishery be managed by fish and game which manages the rest of the country's fisheries, rather than duplicate the management resources for a relatively small (but significant) fishery"*. And again, *"it should be part of Fish and Game management structure. There is no reason to treat them separately"*.

A number of comments were made about the inconsistencies in licence categories (including frustration that they appeared to be going in opposite ways on the issue of differential pricing for international visitors), the different communication and reporting styles between the Department and Fish and Game, and of course about the lack of an integrated national licence.

What we also heard was that while operational relationships (between rangers) are positive, particularly with Eastern Region staff, there is little evidence of shared planning or strategic collaboration at a management level, and the relationship at a national level appears unnecessarily disconnected.

What we concluded

We see considerable opportunity in this area. When the new fish and game structure was established in 1990, the intent was to create a more integrated system for managing these resources in New Zealand. Although the Director-General (on behalf of the Crown) retained the management role for the Taupō Fishery, s/he was given the job of carrying out the functions of a fish and game council. The crucial difference is not about function, but form. That is, while Fish and Game Councils operate under the national umbrella of Fish and Game, the Director-General retains his/her direct link to the Minister of Conservation.

The New Zealand Fish and Game Council has a specific function to participate with the Director-General and others in the development of a research programme promoting the management of sports fish and game[12]. Part of its role is *"to represent nationally the interests of anglers and hunters"* (sec 26B) – making the need for strong links with the Taupō Fishery, essential.

We observed a fishery team that was neither an integrated part of the wider Department, nor an integrated part of Fish and Game. In a sense it is, at present, the worst of both worlds. There is in fact a genuine opportunity to turn the Department's management into a 'best of both worlds' scenario.

We can see that there are advantages in being part of a larger Department with complementary functions; principally economies of scale, the ability for cross-over and support from visitor asset managers and financial analysts (there is more ability to manage budgetary 'unders and overs' in the context of a larger departmental budget), and in areas such as pest fish and broader environmental management.

We can also see clear advantages in being a part of an integrated New Zealand-wide system of managing sports fish. While there is a sense that a 'competitive' model has been adopted up until now, we would argue that the time is right for a more collaborative and complementary approach. Some obvious steps should be considered – a shared on-line platform for selling fishing licences, more shared marketing and promotion of New Zealand as a fishing destination, shared research (note, for example, the Department 'holds' a world-renowned fishery scientist with the potential of leading and contributing to research and strategy development across New Zealand), more consistent approaches to licences, and shared communication. At another level, small steps could be taken such as recognising the Taupō Fishery manager as a part of New Zealand's network of sports fish managers, holding more regular business planning meetings, particularly with the Eastern Region where shared priorities could be identified, and adopting a more strategic approach to engagement (again identifying shared priorities etc) at a national level between the New Zealand Fish and Game Council and the Department's Director-General and the Regional Conservator.

12 Section s26C(1)(c) of the Conservation Act 1987

We recognise that there will be differences and at times some inter-regional ‘competition’ is not unhealthy, but by and large we live in a small country with common goals and a largely integrated system for managing sports fish. More steps need to be taken to demonstrate this to the angling public.

3B.3.2 Lake Rotoaira Trust

What we heard

Lake Rotoaira forms part of the overall Taupō fishing district and the Taupō fishing licence covers fishing in Lake Rotoaira. However, a separate access permit is required from the Lake Rotoaira Trust.

What we heard is that there are significant opportunities for the Trust (including its beneficiaries), the Department, and anglers by developing this relationship. It was described as *“the unpolished jewel of the Taupō Fishery”*.

It was clear that the relationship between the Department and the Trust had at times been rocky, but also that it is steadily improving. A representative of the Trust expressed the view that the critical first step for the Trust is to clearly formulate its own aspirations for its land and its people. Fundamentally we were told that the Trust wants to see its people and communities heavily engaged with, and obtaining social, economic and environmental benefits from, the Fishery. The potential for weekend ‘packages’, incorporating marae visits, fishing and the Tongariro Alpine Crossing was highlighted.

We were also told that when the Trust was clearer on its aspirations, it was keen to work with the Department. Views that were expressed included the idea of developing a shared plan, more emphasis on upskilling local people to run the fishery (monitoring traps, compliance etc), more structured engagement between the Department and the Trust at all levels (not just at a staff level), and generally having Lake Rotoaira seen as an integral part of the Taupō Fishery.

Ideas were also raised about exploring different ways of managing the licencing and access (the requirement for a separate access permit was seen as a barrier by some).

What we concluded

We recognise the significant potential of Lake Rotoaira to enrich the Taupō fishing experience. The ideas put forward by the Trust are supported, and it is understood that because we are dealing with private land and a large number of owners, as well as others with a strong interest in the Lake, the ideas will take time to develop.Where the Department can support this thinking it should.

Where the Department can support this thinking it should.

3B.3.3 Tourism and commercial sector

What we heard

What we heard in the course of the review were comments about the role the Department should be playing in wider promotion and marketing initiatives. Some felt the Department needed to develop its own internal marketing expertise; others felt it needed to work more closely with those already engaged in that business. Views were generally expressed that the Department had been too introverted, and had paid less attention to engaging in the promotion of fishing and encouraging participation than it should have.

The destination marketers (primarily Destination Great Lake Taupō), fishing guides and retailers all expressed the view that the Department's commitment to look at how the Fishery can best be managed for the benefit of all was very positive. Ideas were offered, including the Department funding others to market the Fishery on its behalf and incentivising them based on increased licence sales.

What we concluded

What we concluded was that the Department should focus its efforts on being a more effective partner with others in the areas of supporting business and marketing and promotion. The fundamental role of the Department should be in doing what it can to ensure that the 'product' is a good one – healthy fish stock, reduced barriers to participation, a wider range of visitor experiences, and better communication. Then it should focus its efforts on positioning itself to be a more effective partner and supporting and facilitating others to promote and market the Fishery.

Given the decline in visitor arrivals generally, there is benefit in working more closely with Destination Great Lake Taupō and other marketing agencies to better promote the Fishery as an effective and beneficial part of the destination.

The Department's wider strategic focus of supporting business is seen as a positive in this area. Working with the tourism and commercial sector in relation to Fishery management should be a priority of the new commercial business unit in Wellington and the business development manager locally.

Developing Strong Partnerships - Opportunities

1. Promote a significantly stronger alignment with the Fish and Game structure, including, where appropriate, shared strategy, research and infrastructure; shared processes, and more consistent regulations;
2. Support the Lake Rotoaira Trust in developing its vision for Lake Rotoaira;
3. Work collaboratively with Destination Great Lake Taupō and the wider tourism and commercial sector to explore more innovative ways of working together to promote and market the Taupō Fishery and the wider region.

Appendix I – Survey Analysis

Introduction

This section of the report summarises the results of an online survey of 738 individuals with an interest in the Taupō Trout Fishery carried out in late 2012. Questions have focussed on three main areas.

First, respondents' views have been sought on measures that could be undertaken to encourage new people to start fishing in the Taupō region or for existing fishers to do so more often.

Second, public understanding of the management regime for the fishery and its lakes and rivers has been assessed. This has included aspects such as the roles of local iwi Tūwharetoa and the Taupō Fishery Advisory Committee (TFAC), the ownership of the bed of Lake Taupō and its tributaries and the purpose of the licence fees paid by users of the fishery.

Finally information has been collected on the current and preferred methods of receiving information from DOC / relating to the Taupō fishery.

Other questions in the survey relate to demographics, visit characteristics and preferences for fishing methods and licences.

Methods

The survey questionnaire (see Appendix 1) was developed by local Department of Conservation staff with advice from national office staff and APR Consultants, and made available for respondents to fill in online through www.surveymonkey.com. A link to the survey was distributed through a variety of online methods targeting both fishers and non fishers. Due to the fact that the Department does not collect address information from licence holders, it was not possible to simply contact current and ex licence holders. Instead a link to the survey was sent to current subscribers to the Target Taupō magazine, and to other individuals and partner organisations who could spread the link through their own networks. These included Destination Great Lake Taupō, Taupō District Council, Enterprise Great Lake Taupō, Fish and Game, Ruapehu Alpine Lifts, Tourism Resource Consultants, Local MPs, DOC staff and the Tūwharetoa Māori Trust Board. The link was also sent to key fishing websites and popular blog sites and a number of media releases were published in local papers. The survey ran between September 24th and December 12th 2012.

Results & discussion

A total of seven hundred and thirty eight individuals responded to the survey. Overall the survey was effective at gathering the views of both locals and visitors to the area. Non visitors, who perhaps lacked a direct interest in fishing or who had little or no connection to Taupō, did not respond to the survey in significant numbers. The overall survey sample comprised.

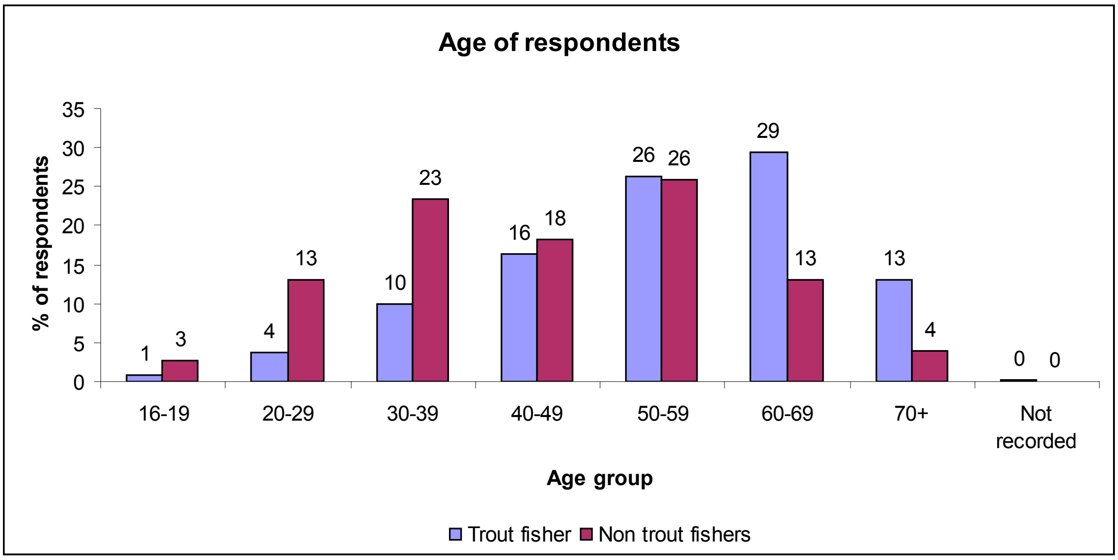
- 170 Taupō residents
- 563 visitors (including 123 owners of holiday homes)
- 2 respondents who had never visited Taupō
- 3 respondents who could not be categorised

Further analysis has been carried out based on whether respondents were trout fishers (n = 655) or non trout fishers (n = 77) based on question 7 in the survey. Six respondents did not complete enough questions to be categorised.

The analysis below excludes questions relating to visitor spend (Q 17) and respondents' final comments on how they would like to see the Taupō Fishery managed in the future (Q 27). Analysis of these questions has been provided separately by APR consultants. Comments provided in response to open ended questions are listed at the back of the report.

Demographics

Age



The responses from trout fishers were heavily skewed towards those in older age groups. Sixty nine percent of respondents were aged 50+.

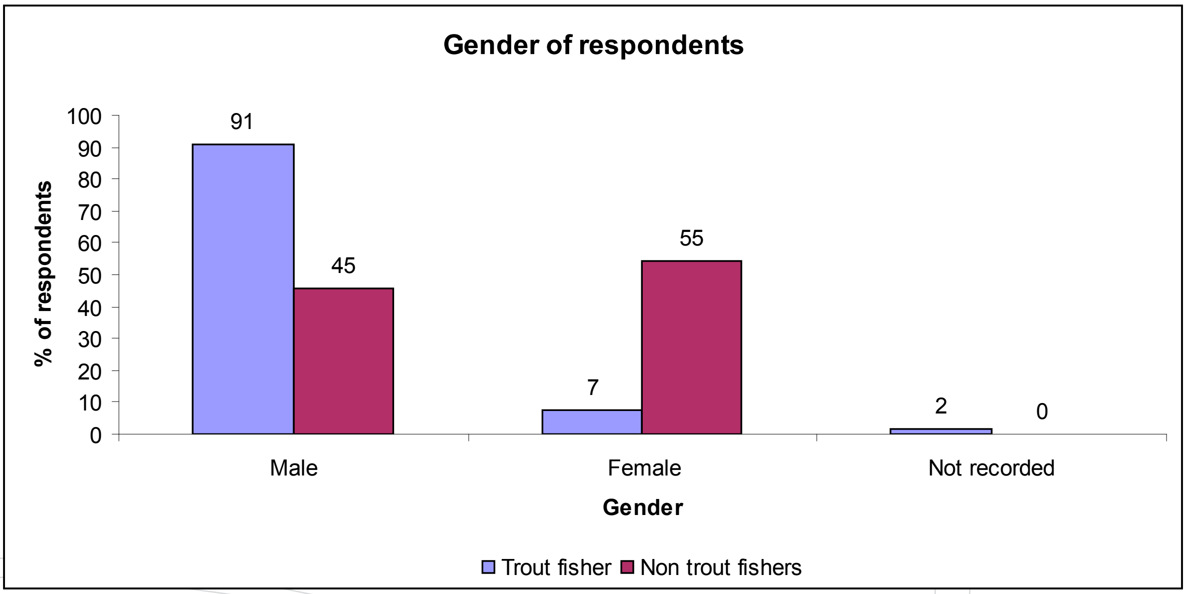
Interestingly national statistics for fishing do not show this pattern. National survey data provided by Roy Morgan Research[1] shows that only 46% of New Zealanders who participated in freshwater fishing in 2011 were aged 50+. The 2007/08 SPARC Active New Zealand survey[2] showed only 30% of New Zealanders who fish (combined fresh and salt water) were in the 50+ age group. This difference may relate to differences in trout fishing compared to other fishing types, to the Taupō fishery itself or it may relate to the distribution method of the survey.

Non trout fishers in the survey tended to be younger than trout fishers with 57% of the former being aged under 50 years of age.

1 *National Trend of New Zealanders 2002 – 2011*. Report prepared for the Department of Conservation by Roy Morgan Research. May 2012.

2 *Sport and recreation profile: fishing. Findings from the 2007/08 Active New Zealand Survey* downloaded from http://www.activenzsurvey.org.nz/Documents/sport-profiles/Fishing.pdf

Gender



Ninety one percent of trout fishers who responded to the survey were male. Other surveys have shown fishing to be male dominated, although not to the same extent. The Roy Morgan National Trend of New Zealanders found that 72% of freshwater fishers were male, while 75% of fresh and saltwater fishers in the 2007/08 SPARC Active New Zealand survey were male.

The non trout fisher sample contained slightly more female (55%) than male (45%) respondents.

Ethnicity[3]

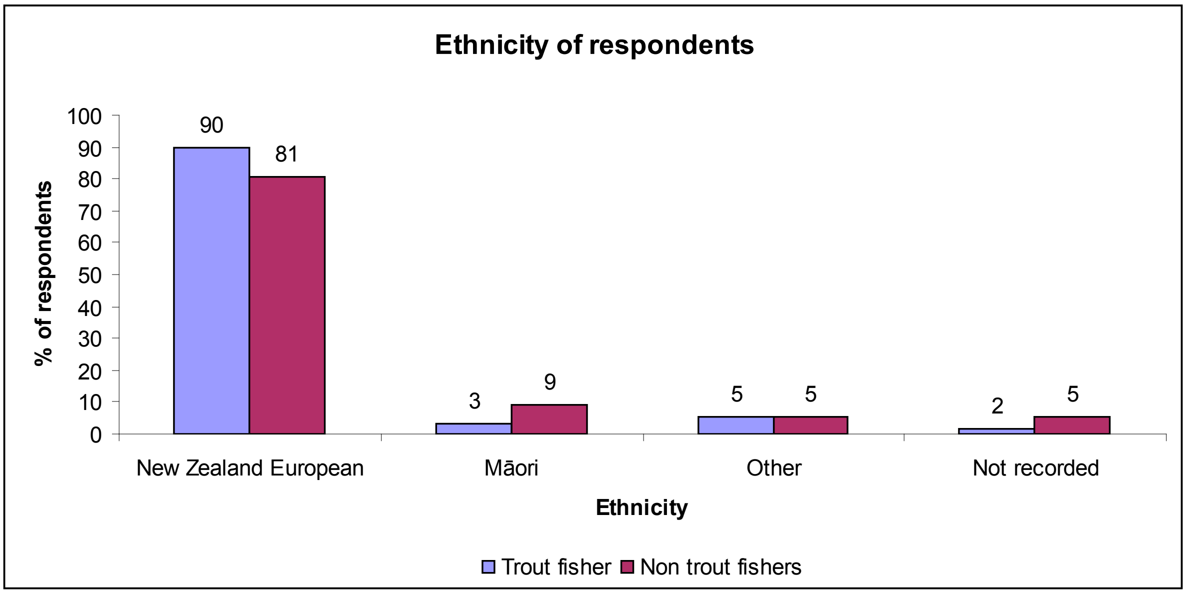
New Zealand European respondents were over-represented in both samples and all other ethnicities under-represented. Ninety percent of trout fishers and 81% of non fishers who responded were of New Zealand European ethnicity. Three percent of trout fishers and 9% of non fishers were Māori which is lower than the percentage in the wider New Zealand population. Fifteen percent of New Zealanders identified as Māori in the 2006 Census.[4]

Māori have not been significantly under represented in other surveys of participation fishing. Eleven percent of New Zealanders were regular freshwater fishers according to the Roy Morgan National Trend of New Zealanders Survey and 16% of fresh and saltwater fishers in the SPARC Active New Zealand survey identified as being Māori.

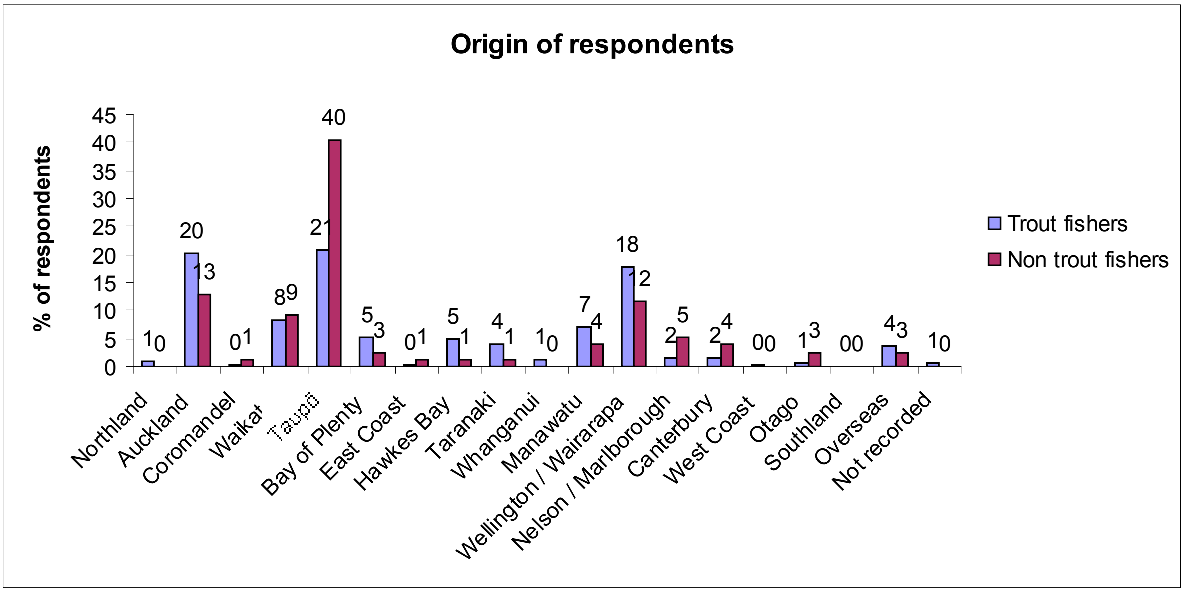
Most respondents of Māori ethnicity in the current survey identified as

3 “New Zealander” and “kiwi” have been included as New Zealand European
4 Source: www.stats.govt.nz

being Ngāti Tūwharetoa.



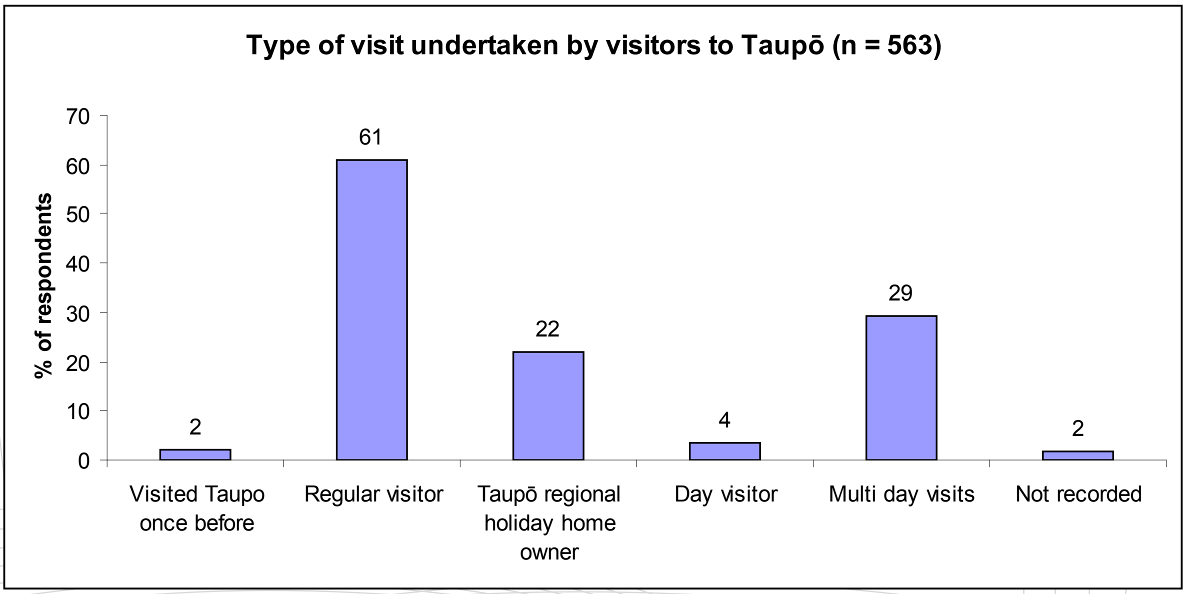
Place of residence



According to the Roy Morgan National Trend of New Zealanders, 50% of freshwater fishers live in the South Island. In this survey however, responses reflected proximity to Taupō and the main North Island population centres. The Taupō region, Auckland and Wellington / Wairarapa were the most common responses from both fishers and non fishers. Among the small number of overseas respondents to this survey (n=26), more than three quarters (77%) were from Australia.

Visitors to Taupō

Visit characteristics



Respondents who were not resident in Taupō were asked to characterise their visits in terms of both the main type of visits undertaken and the frequency. Multiple responses were possible and hence the percentages in the above graph do not add up to one hundred percent. This was not indicated on the survey form however, so many respondents would have only provided one response. Most respondents who answered this question (61%) characterised themselves as regular visitors while 22% indicated that they owned a holiday home in the region. It would be expected that individuals with an ongoing interest in the region would make up the majority of respondents to a survey such as this so the number of regular visitors, holiday home owners and also local residents is not surprising.

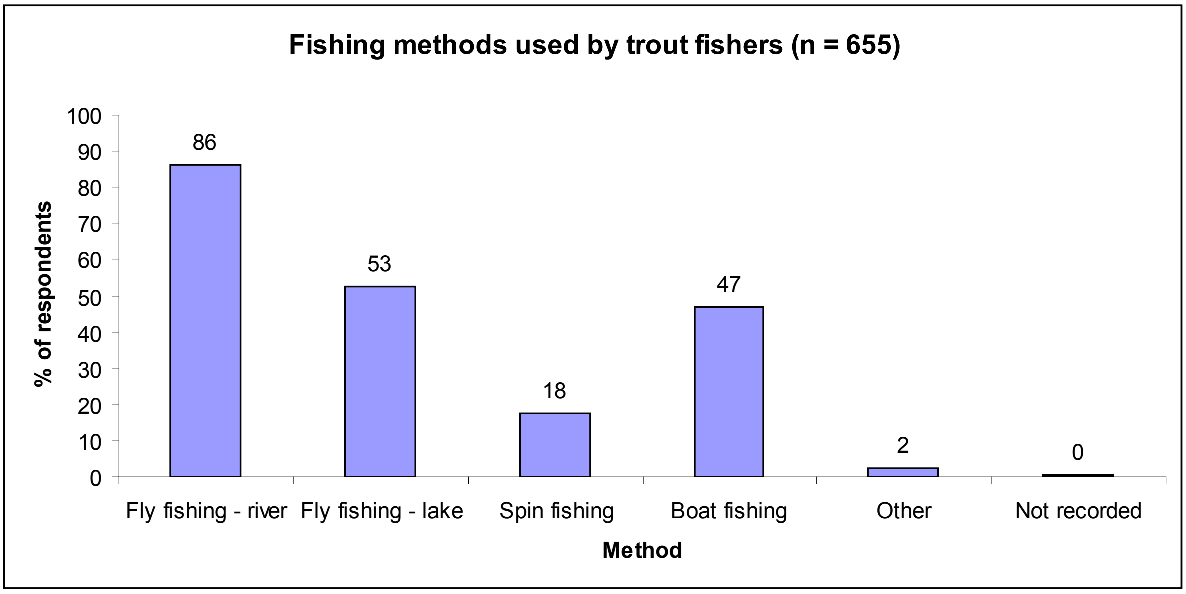
Multi day visitors were asked to indicate their length of stay and some respondents who ticked other options on the survey provided this information also. The average length of stay for respondents who answered this question was 5 days. According to the Commercial Accommodation Monitor[5] the average length of stay in the Taupō region for visitors staying in hotels, motels / apartments, backpackers and holiday parks is only 1.7 days. It is likely that fishers, who made up the vast majority of respondents to this survey, stay longer and potentially provide a greater economic boost to the region than other visitor types.

Trout fishing

A total of 655 respondents (89%) indicated that they took part in trout fishing and of these 594 (80%) said that they currently fished for trout in the Taupō region. Sixty one responses were received from trout fishers who did not fish within the region.

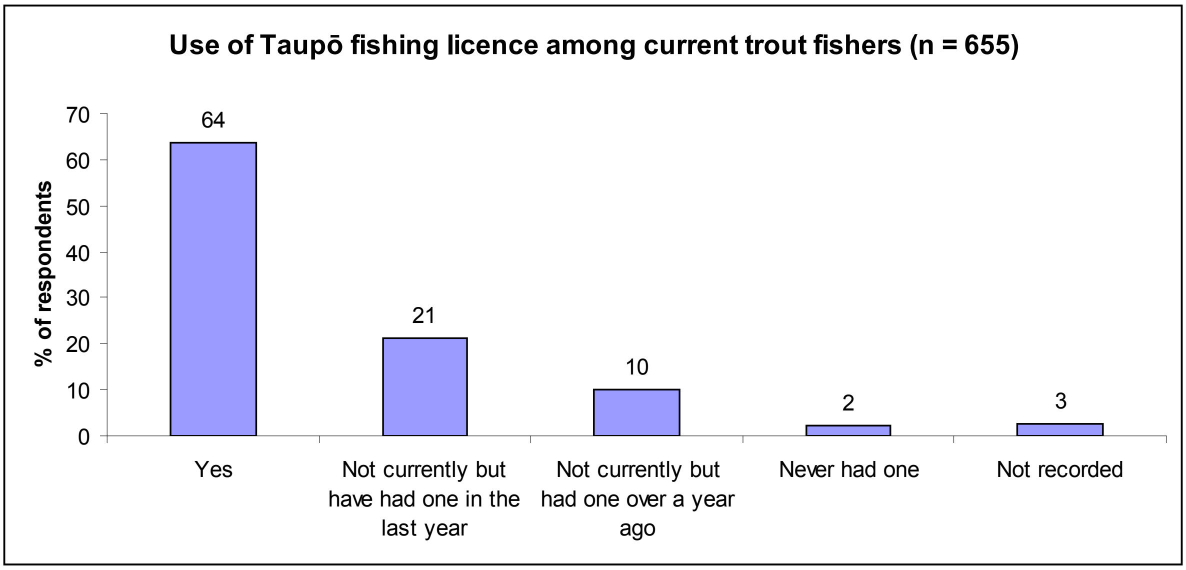
5 *Commercial Accommodation Monitor: September 2012 - Taupō*. Downloaded from http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data/commercial-accommodation-monitor-data/regional-data produced by Statistics New Zealand.

Fishing methods used



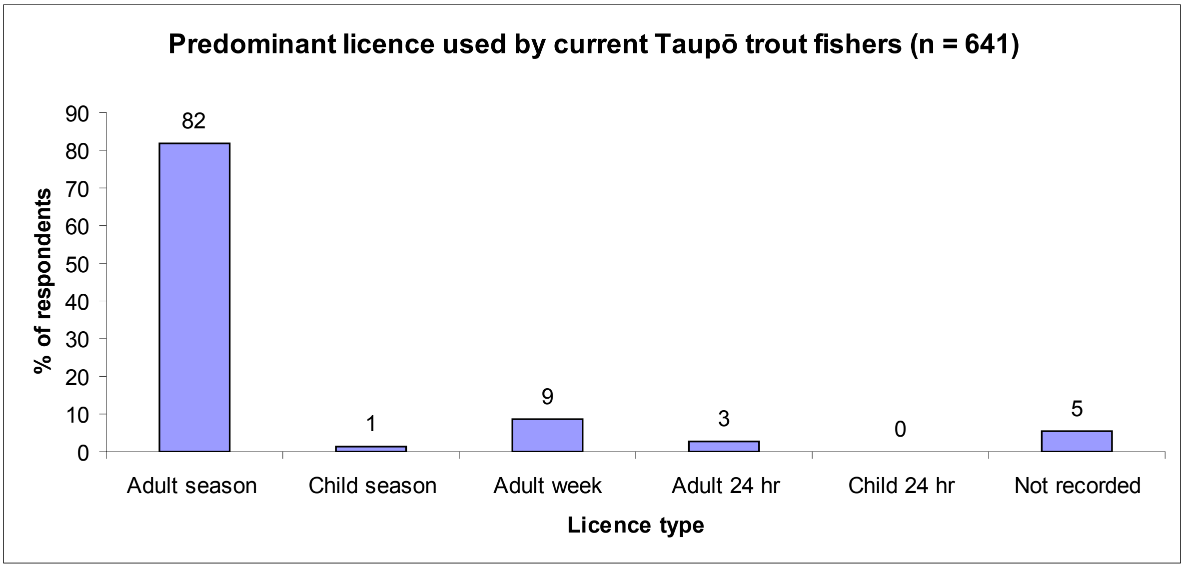
Eighty six percent of respondents who were trout fishers indicated that they engaged in river fly fishing. Lake fly fishing and boat fishing were also popular methods and were used by 53% and 47% of trout fishers respectively.

Fishing Licences



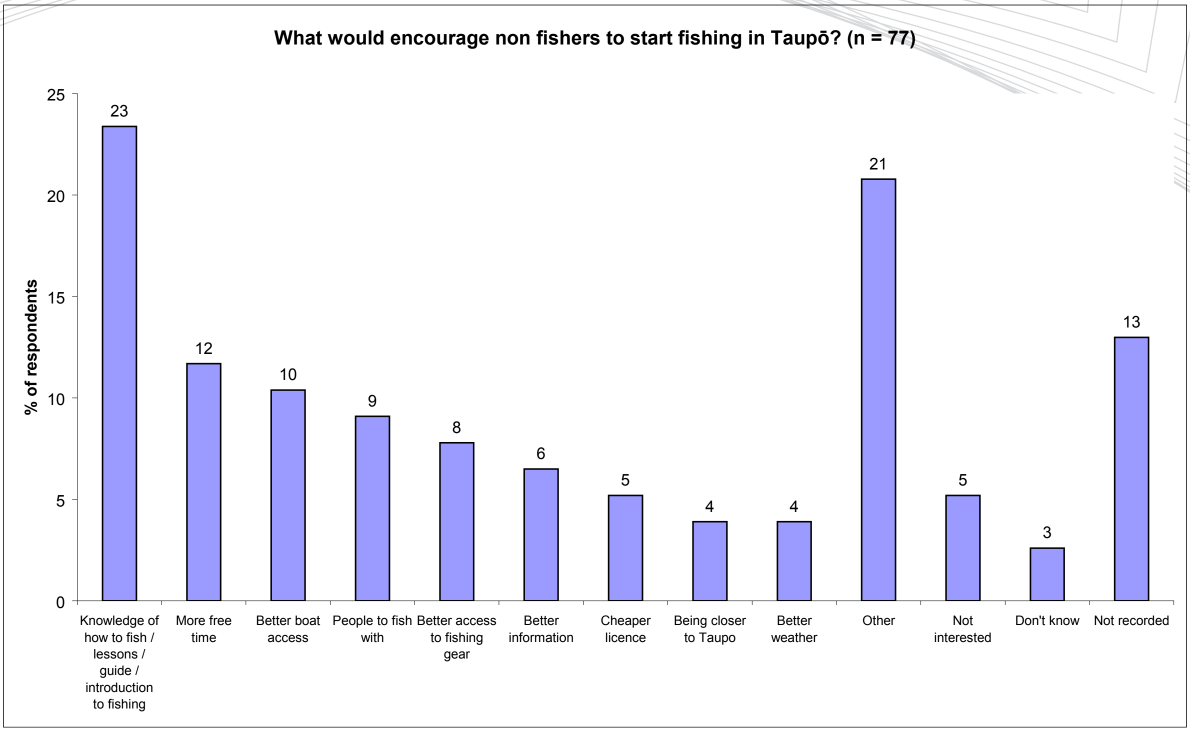
Trout fishers were asked whether they had ever had a Taupō fishing licence and, if so, what was the predominant type. Responses give some indication of the popularity of different types of licence however, any respondents who had fished in the past but who did not do so currently, would not have answered as they were directed to skip this question.

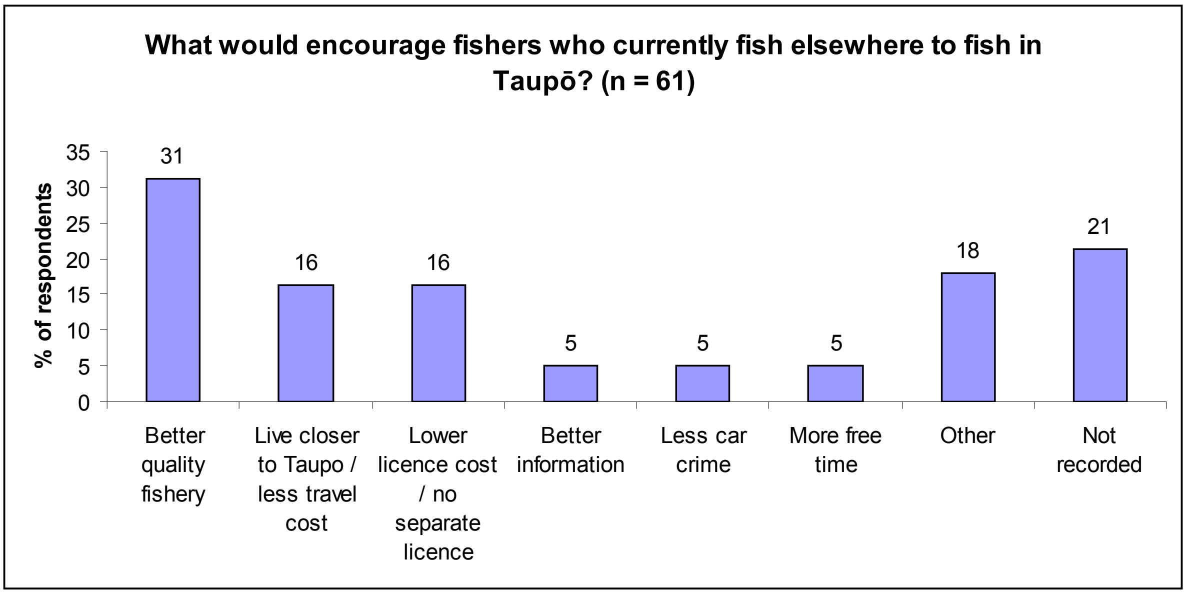
Sixty four percent of trout fishers who responded to the survey held a current licence for the Taupō fishery. A further 31% had had one in the past and just 2% had never had one.



The adult season pass was by far the most popular type of licence. Eighty one percent of current trout fishers who had held a licence (n = 641) indicated that this was the predominant type they had held.

What would encourage people to start fishing in the Taupō region?





Non fishers along with respondents who fished but did not do so in the region, were asked what would encourage them to start fishing in Taupō. Responses from these two groups have been analysed separately.

Non fishers were a diverse group of respondents. They included people who had never fished, those who had tried fishing in the past and others who had fished regularly but no longer did so. Lack of knowledge (23%) was the main barrier to non fishers starting to fish in the Taupō region. Introductory lessons, "give it a go" days and guided packages were all suggested as ways of addressing this. A number of respondents stressed that these would need to be affordable or even free e.g.

> *"Easy accessibility and understanding of rules and regulations. Free trial or give it a go days. Workshops to understand the general hows, whats, and whys to do with fishing in the area."*

> *"Lessons - I don't know how to or who to go to see to learn how to."*

> *"Have just retired to Taupō and as part of retirement want to try trout fishing. Need to arrange some training on how to fly fish properly, rules and regulations."*

Lack of time (12%), access to a boat (10%) and people to go fishing with (9%) were other common responses e.g.

> *"Don't really need encouraging, just more time. Will look to do it more once the kids are older!"*

> *"If my kids wanted to do it"*

> *"Having access to a boat so can fish on the lake"*

Active fishers who did not currently fish in the Taupō region (n = 61) gave a variety of reasons for not doing so. The quality of the fishery e.g. lack of large fish, poor catch rate was the primary reason for not fishing in the region. It was given by 31% of these respondents e.g.

> *"Improved fish quality and size, I used to fish but the results have been poor compared to years ago so I do not bother going out much now."*

"Better quality fish. The state of the fish in my opinion do not justify the price of a separate licence."

The cost of travel or distance from home was cited by 16%, however addressing this is outside the Department's control e.g.

"Proximity to home is a problem"

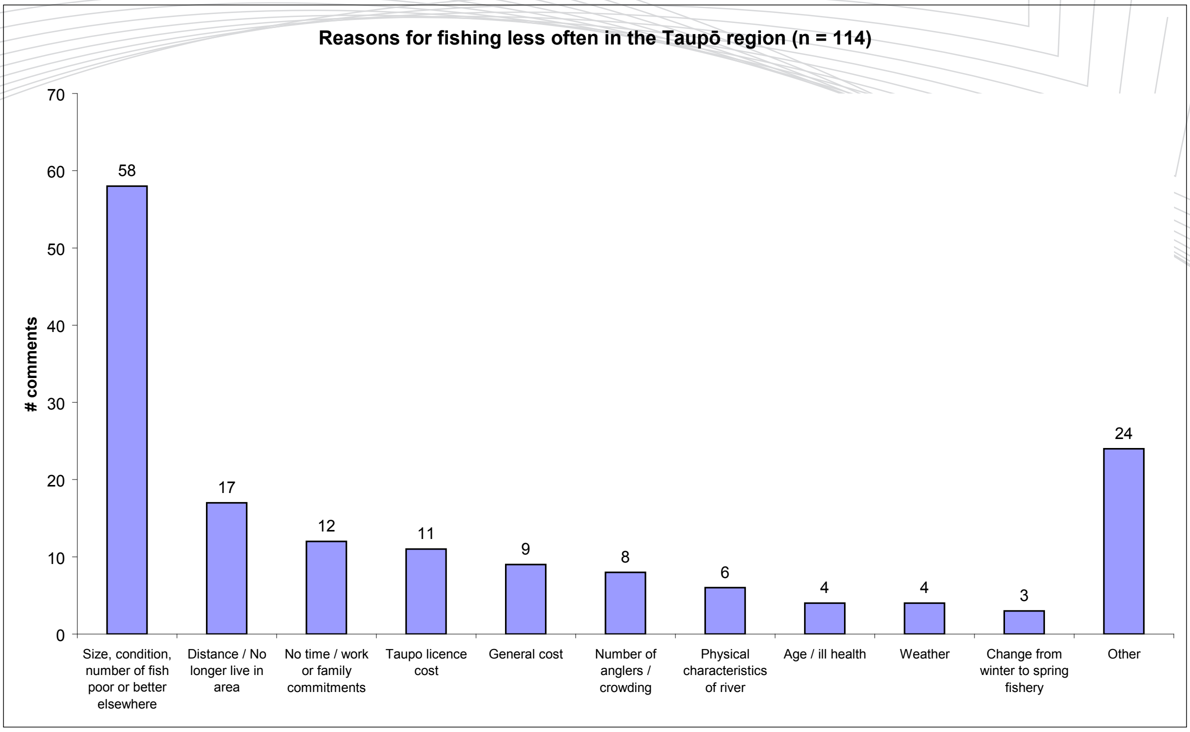
"If I moved to the North Island"

The licence fee or the need for a separate Taupō licence was also mentioned by 16% of trout fishers who did not currently fish in the region e.g.

"Not having to buy a separate licence - having to buy another licence, solely to fish the Taupō region, has become an expense I'm no longer willing to pay, particularly given the poor state of the fishery (it's no longer value for money)."

"A single national licence. Come on, guys. It can't be that hard to negotiate! A licence for the rest of the country plus a similarly priced licence for Taupō is a barrier to a lot of kiwis."

Reasons for fishing less often in the Taupō region

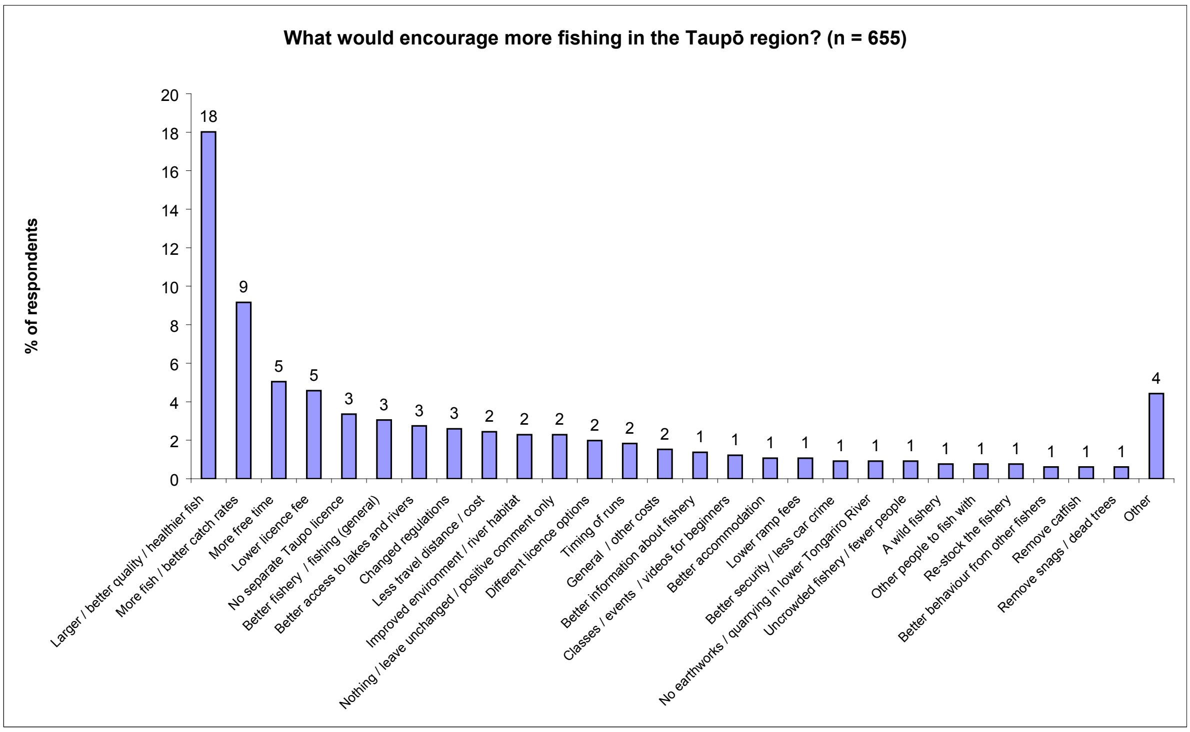


The survey asked respondents who no longer fished in the Taupō region why they had stopped. One hundred and fourteen respondents provided a comment however the results are indicative only as people who did not currently fish were directed to skip most of the questions that related to trout fishing in the region. Better information from these respondents was captured in the earlier question "what would encourage you to start fishing in the Taupō region" (see above). A number of respondents who continued to fish in the region but who were now fishing less often than they used to, also answered this question and these responses have also been included (note the graph shows the number of comments rather than the percentage of respondents).

Answers suggest that there are negative perceptions about the size, condition and quantity of trout in the fishery, especially compared to nearby fisheries (e.g. Rotorua) and respondents' past experience of the Taupō region. This was the most common cause of reduced fishing effort by a significant margin (58 comments). Typical comments include;

> *"Deterioration of fish quality has made me consider going to other places"*
>
> *"The quality of the fish in the past 7 years in specific the small size, low weight and appalling condition of the average rainbows have been very bad to say the least and the money required to pay for a licence to fish does not justify it."*
>
> *"I am still fishing but the experience is not nearly as rewarding as it was several years ago but in numbers of fish caught and the condition of those fish."*
>
> *"The fishing has definitely deteriorated. Rotorua is a much better bet now and is better scenically. The ramps are free, too."*
>
> *"I have only fished once per annum since 2005 as the fishing went off badly with fewer and smaller fish but I must say there has been a marked improvement this season, although the fish only average 45cm instead of 50cm + as before 2005."*

Current fishers views on what would encourage more fishing in the Taupō region?



Responses from all fishers about what would encourage more fishing in the Taupō region again indicated that there are negative perceptions about the quality of the fishery. Eighteen percent of fishers who responded to the survey wanted to be able to catch larger or better quality fish while 9% wanted more fish or better catch rates e.g.

> *"I am a local so have not stopped fishing in the region, however I have an extended*

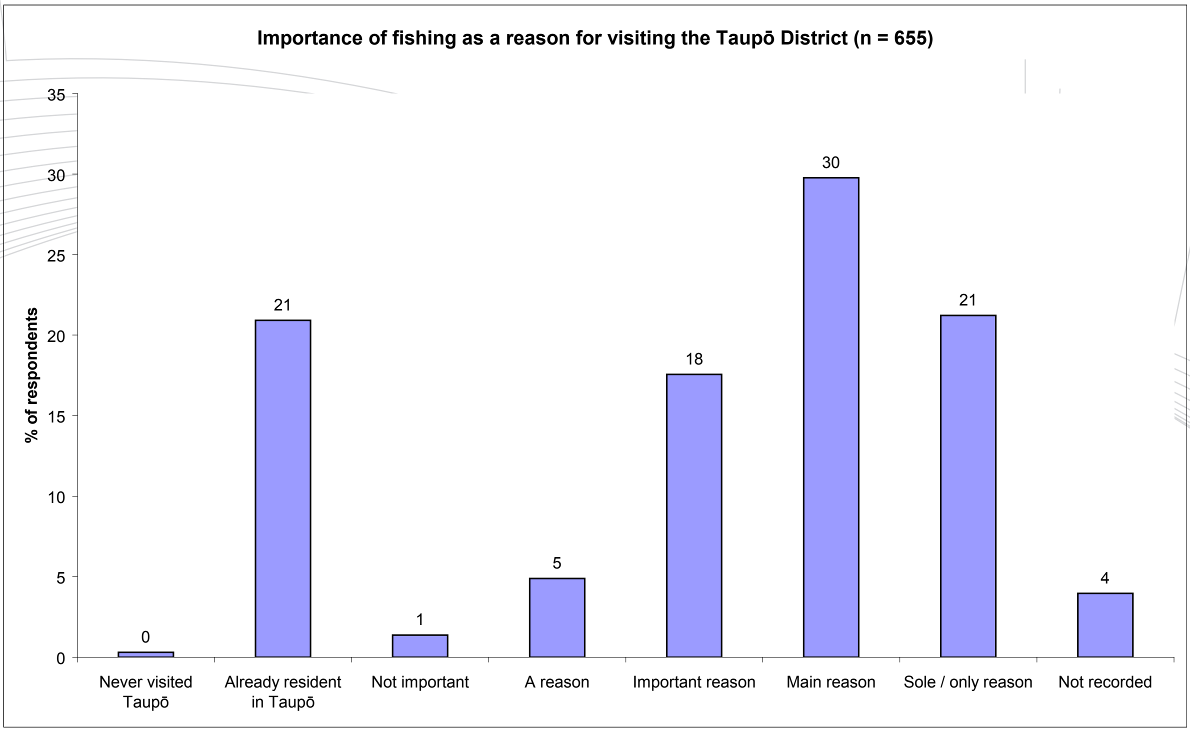
network of fishing friends who either don't fish the area anymore or who restrict their trips to Taupō to maybe once a year, and often the primary purpose of those trips is not fishing. What will bring these people back to fishing the Taupō region is improved quality of fish, both size and quality (condition factor). These fishermen will travel and spend time in the region if they have a reasonable expectation of catching a few quality fish."

"Having some decent fish to fish for... rather than endure the debilitated poor quality of fish we have had to suffer over recent years."

"If the condition of the fish was to improve, and to a lesser extent if the numbers of fish were to increase, that would encourage me to fish in Taupō and the rivers more often."

More free time and lower licence fees were each raised by 5% of respondents.

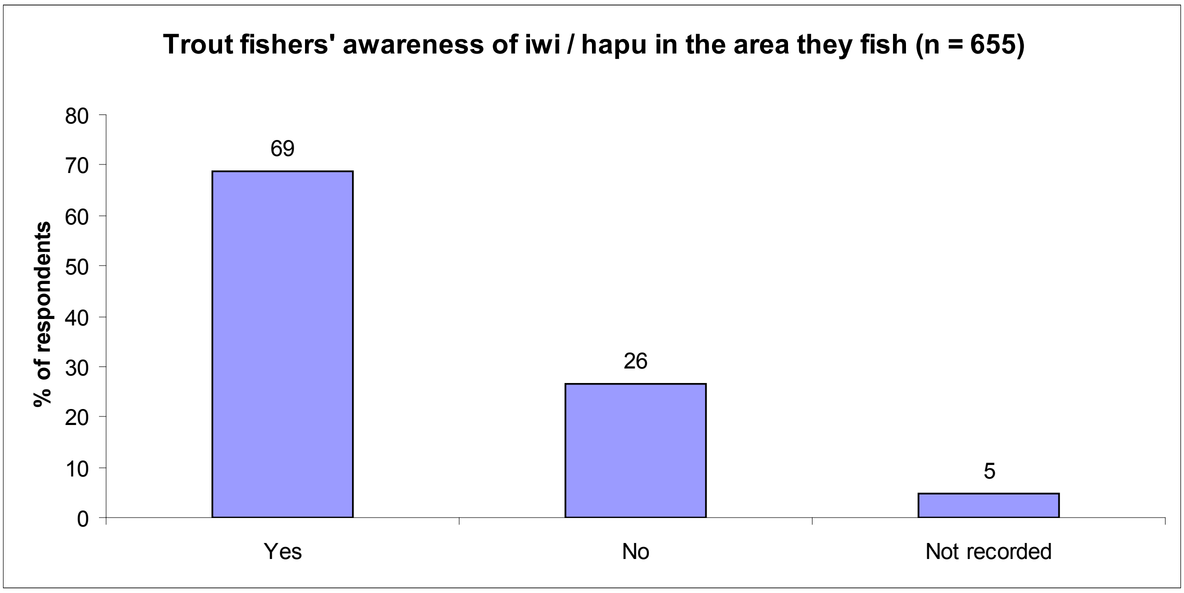
Importance of fishing as a reason for visiting the Taupō district



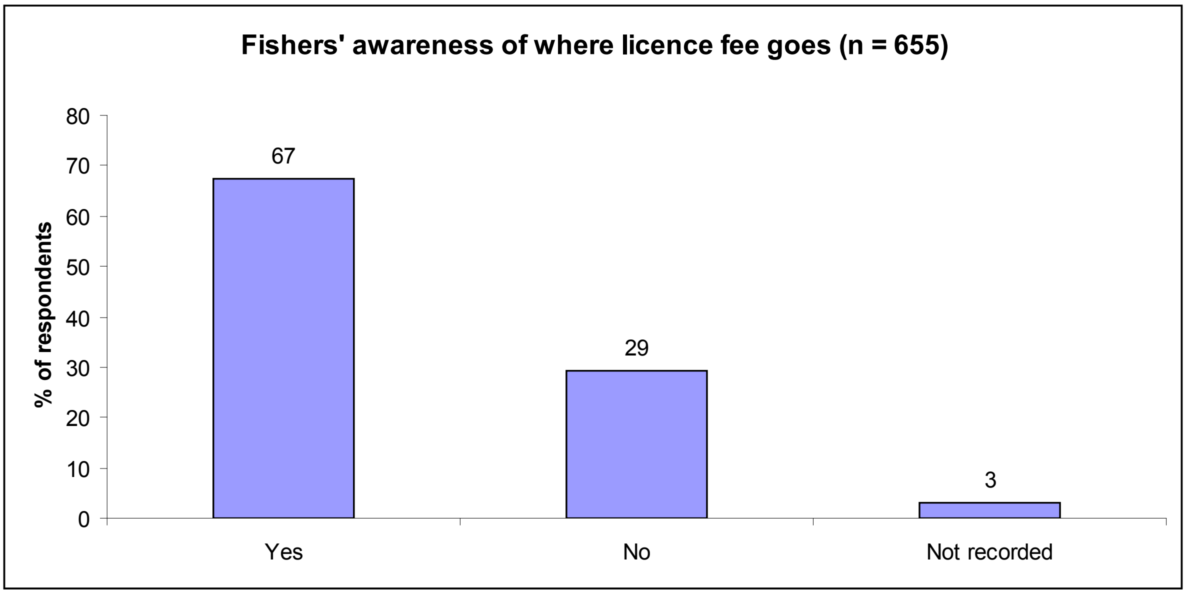
Respondents who were active trout fishers were asked how important fishing was as a reason for visiting the Taupō district. Respondents who did not fish or who no longer fished were not asked this question. While not representative of all visitors to Taupō, results show that, for many survey respondents, fishing was a significant driver for their decision to visit. Fishing was the main or only reason for visiting the region for 51% while 21% already lived in Taupō. For the remaining respondents (n = 377), more than half (56%) primarily visited the region for holidays and 17% visited to see friends and family.

Management of the fishery and the region's lakes and rivers

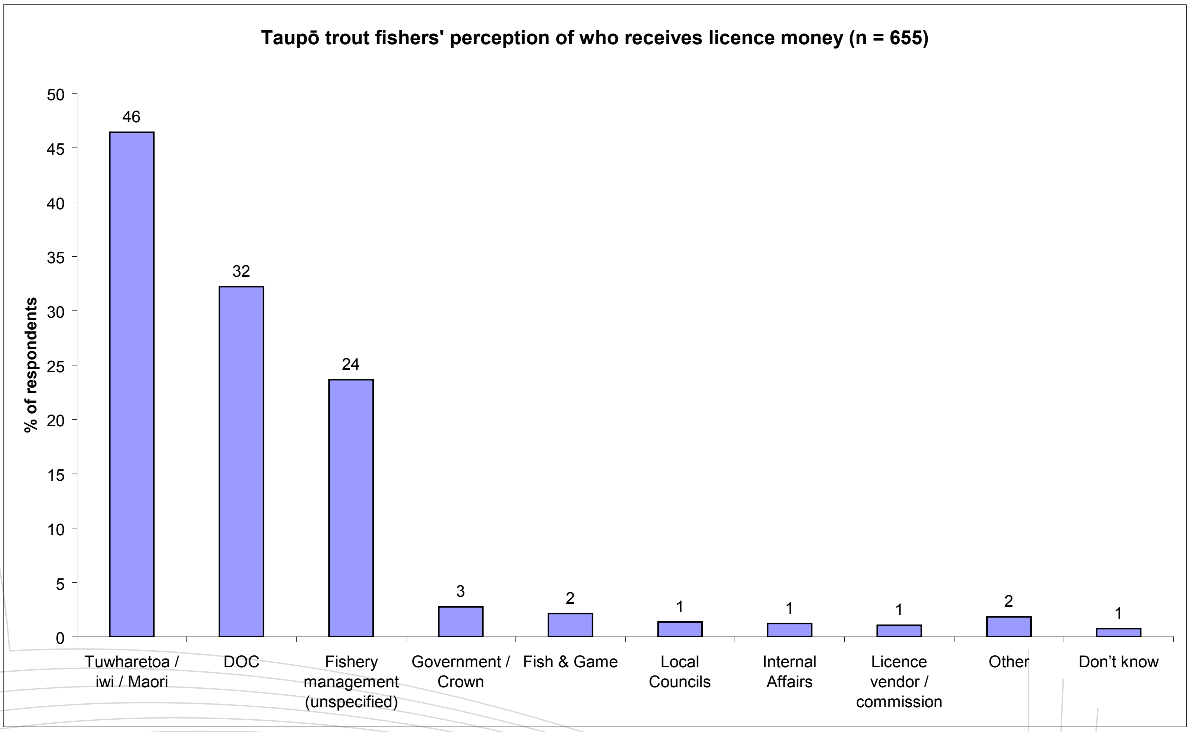
Awareness of local iwi / hapu and role in management



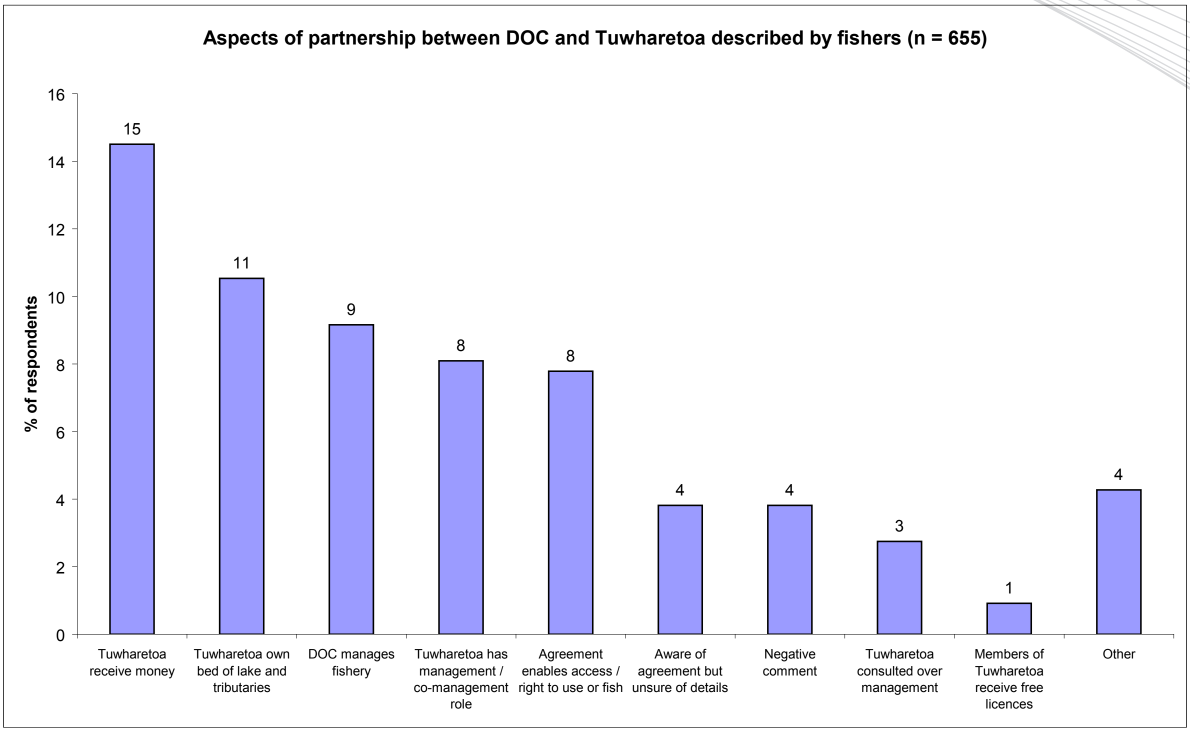
Almost 70% of trout fishers said that they were aware of iwi and / or hapu in the area in which they fished. Twenty six percent of fishers said that they were unaware of local iwi and / or hapu.



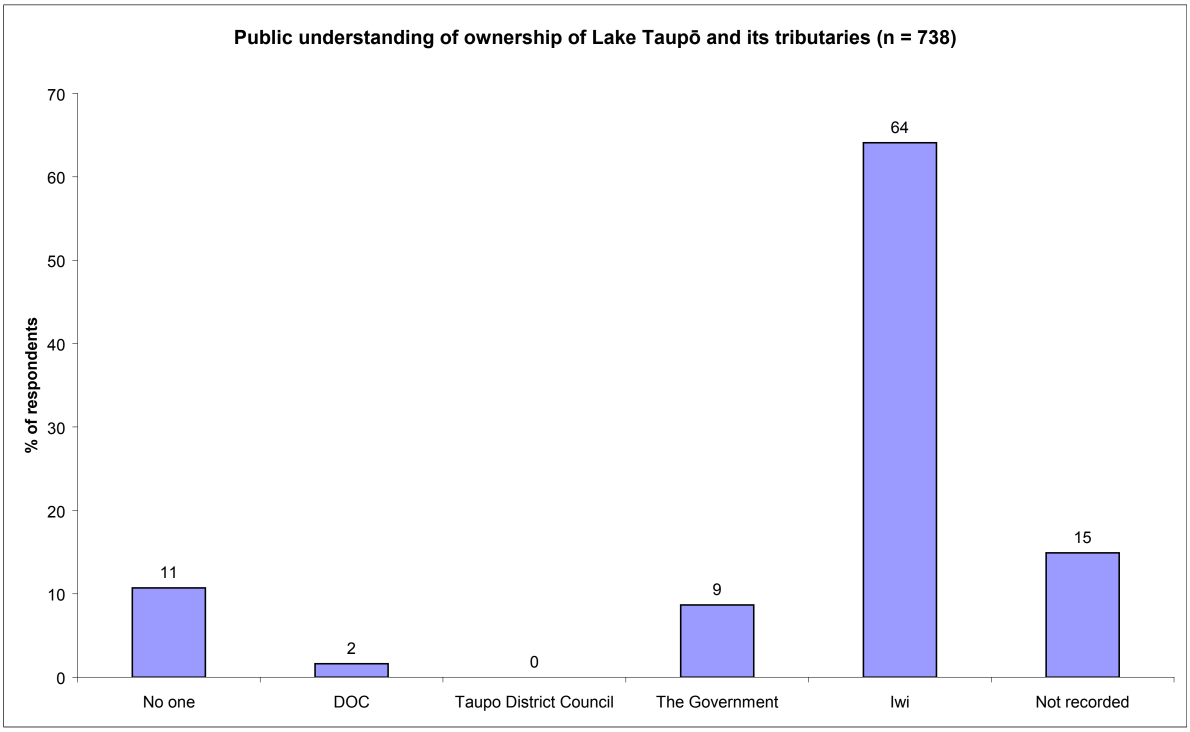
Most fishers (67%) said that they were aware of where their licence fees went however, 29% said that they were unaware of this.



Forty six percent of respondents identified local iwi as a recipient of money from licensing, 32% said DOC and 24% indicated that it went to various aspects of management of the fishery (some of these respondents were not aware of DOC's role). A number of other organisations were mentioned by respondents.

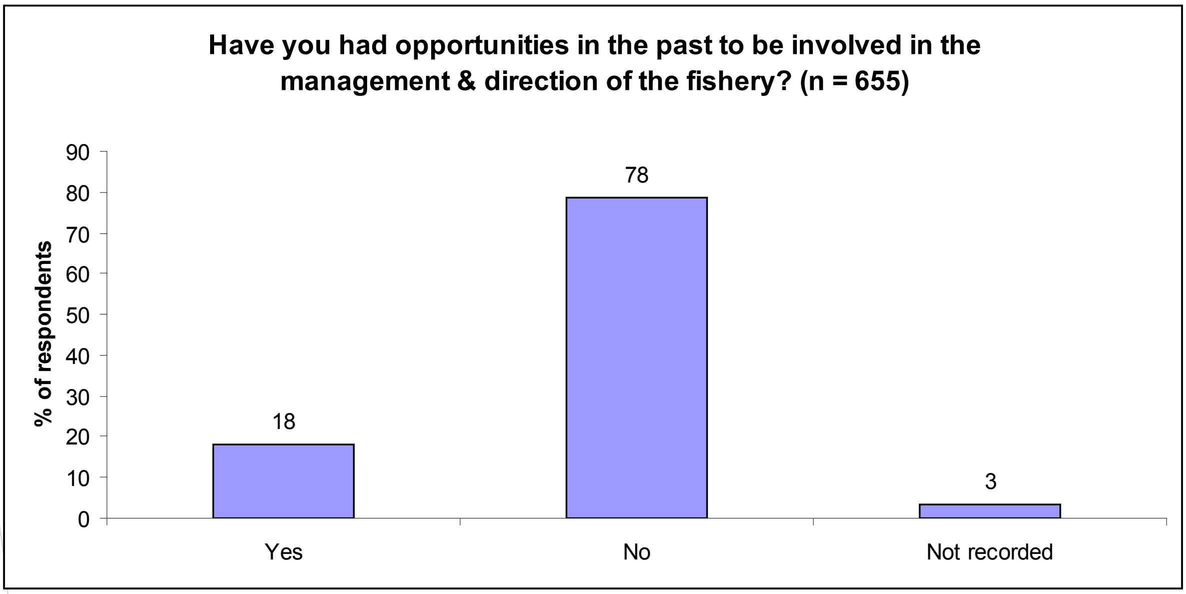


Awareness of the partnership between DOC and Tūwharetoa regarding the fishery was lower with 53% of fishers being aware and 43% unaware of the partnership. Forty four percent of fishers who responded to the survey provided further comments on their understanding of the partnership. Money received by Tūwharetoa from the crown or a split of the licence fees was cited by 15% while 11% correctly stated that Tūwharetoa owned the bed of the lake and / or some tributaries. Nine percent of fishers identified that DOC managed the fishery as a result of this partnership but, where this was mentioned, there was some confusion over who the fishery was being managed on behalf of. Some respondents thought the fishery was managed on behalf of the crown and some on behalf of Tūwharetoa. Eight percent of fishers identified the role of the partnership in allowing access or the right to fish and the same number described a significant management or co-management role for Tūwharetoa. The small number of negative comments on the partnership varied but the most common themes were about alleged poaching, access issues and the relationship being skewed toward one party or the other.

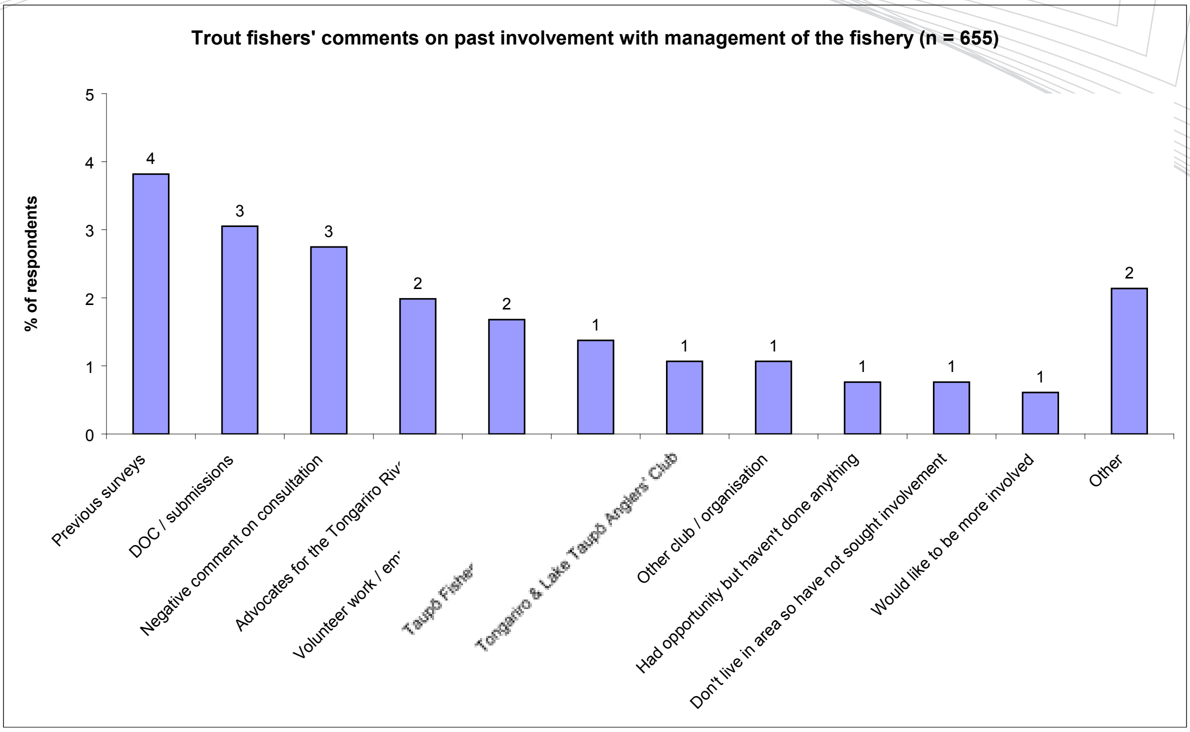


All survey respondents (fishers and non-fishers) were asked about ownership of the bed of Lake Taupō and the rivers that flow into it. Sixty four percent correctly stated that "iwi" were the owners. A small minority of respondents thought that no one (11%) or the government (9%) or DOC (2%) were the owners.

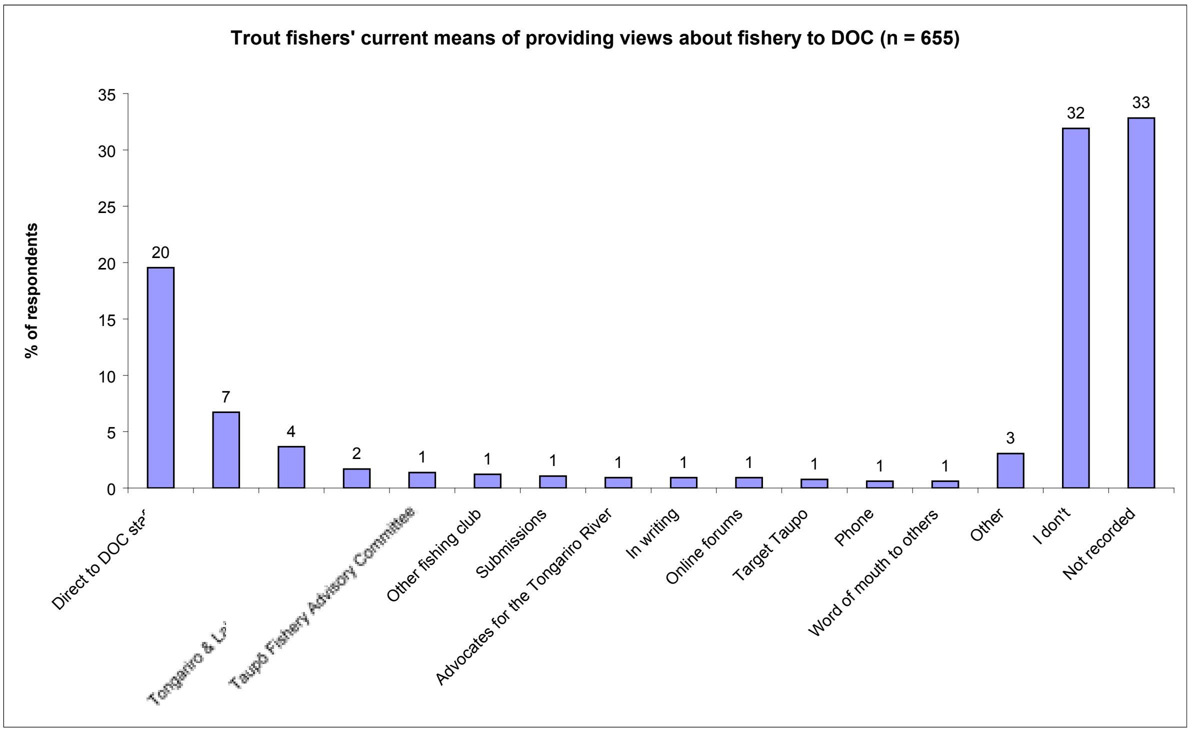
Public involvement in management & direction of the fishery



Only 18% of trout fishers felt that they had had opportunities in the past to be involved in the management and direction of the Taupō fishery while 78% said that they did not. This suggests that there is considerable scope for greater public involvement although it is noted that many respondents were visitors to the region and may have less interest in being actively involved.



Previous surveys (4%) and communication with DOC (including submissions) (3%) were the two most common ways that respondents had been involved with management of the fishery in the past.



Direct comment to DOC staff (20% of respondents) was the most common response when trout fishers were asked how they currently provided views on the Taupō Fishery. This was generally opportunistic when rangers were encountered while fishing e.g.

> *"Chat to the rangers when we meet them"*

> *"I have spoken to rangers when approached re licence holding & also when I see DOC staff on tracks & walkways."*

Seven percent of trout fishers had provided feedback through previous surveys. No other method of contact was favoured by more than 5% of trout fishers. Those who did provide feedback to the Department were very much in the minority. Thirty two percent of respondents indicated that they did not provide feedback and a further third of respondents did not respond to this question.

A small number of negative responses (3%) were received for this question. These respondents generally felt that providing feedback to DOC was pointless or that feedback was not listened to. Typical comments include;

> *"I am fed up of providing my views. LITTLE APPEARS TO HAPPEN."*

> *"No. Given up. I have given up talking to DOC, do express my views to various members of the Advisory Committee but have no idea if these are expressed by those committee members."*

> *"I whinge to the rangers about it - especially about jigging in the lake to unrestricted depths and down rigging and being allowed three flies per line - when they stop me to inspect my licence and they just look totally bored and turn away."*

> *"I don't. I feel that my opinion is (generally) not valued on this topic."*

Some respondents (3%) were also unaware of how to give feedback, for example;

"I don't because I am unaware of the appropriate channels or procedure to do this."

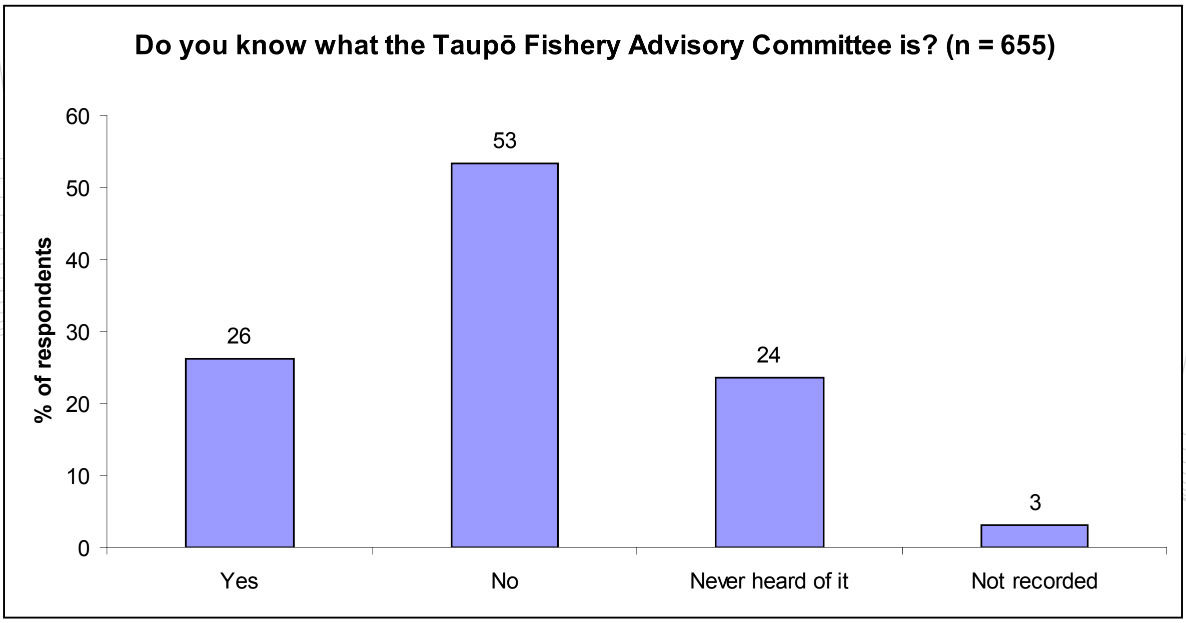
"No direct outlet or conduit for doing so."

While positive feedback was not directly sought in this question, it is interesting that only nine trout fishers (1%) provided positive comments on their interaction with DOC. Most of these comments related to a single ranger "Didymo Dave."

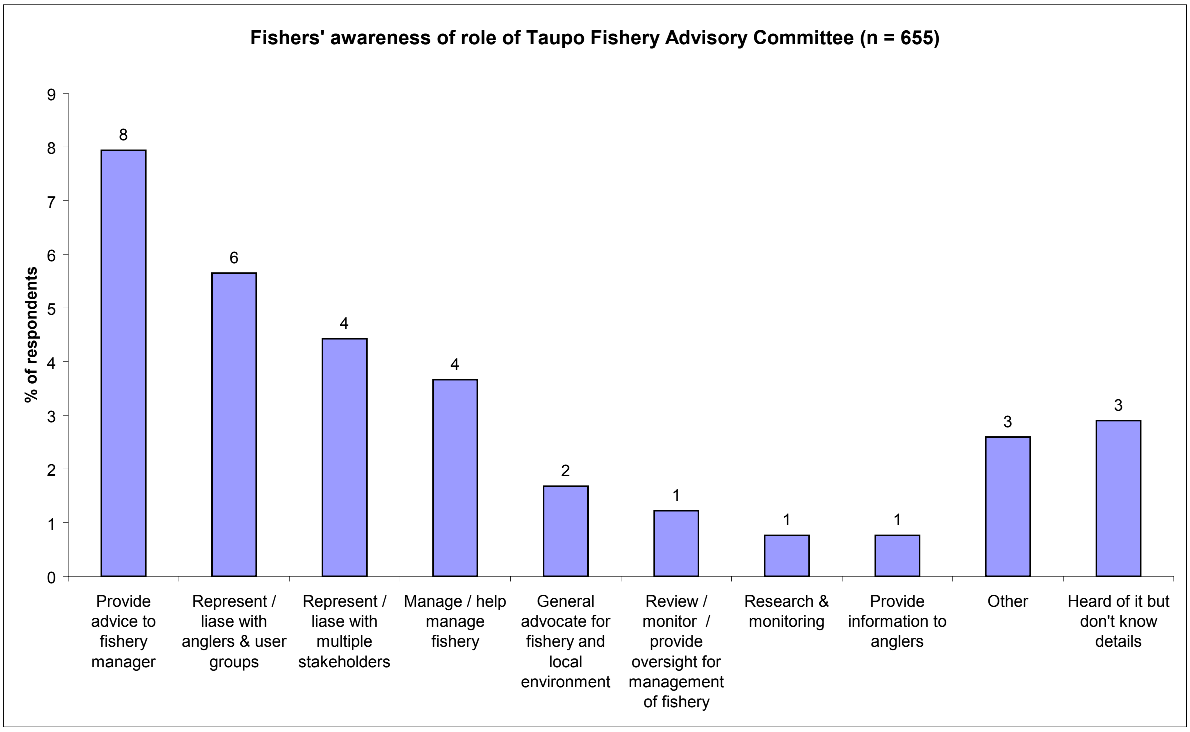
"Via 'Didymo Dave' Cade. What a gem of a man, a man very much on the pulse with whats going on around the district."

"I don't. I have spoken to the didymo chap, very passionate about his job and great PR."

The lack of positive feedback may relate to the fact that most encounters with the Department occur in the context of compliance work, or it may indicate a problem with the Department's approach to the public in this area.

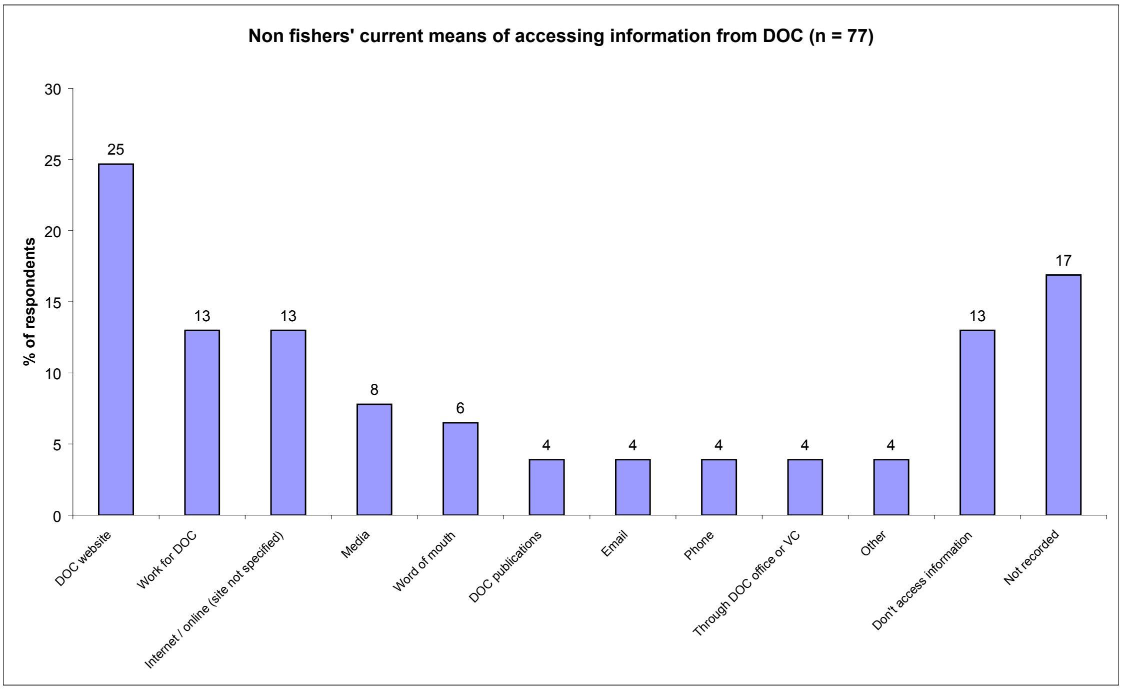


Seventy one percent of respondents did not know what the Taupō Fishery Advisory Committee was compared to 26% who did. Note some respondents ticked both "No" and "Never heard of it" therefore the percentages in the graph do not add up to 100% or match the figure of 71% mentioned above.

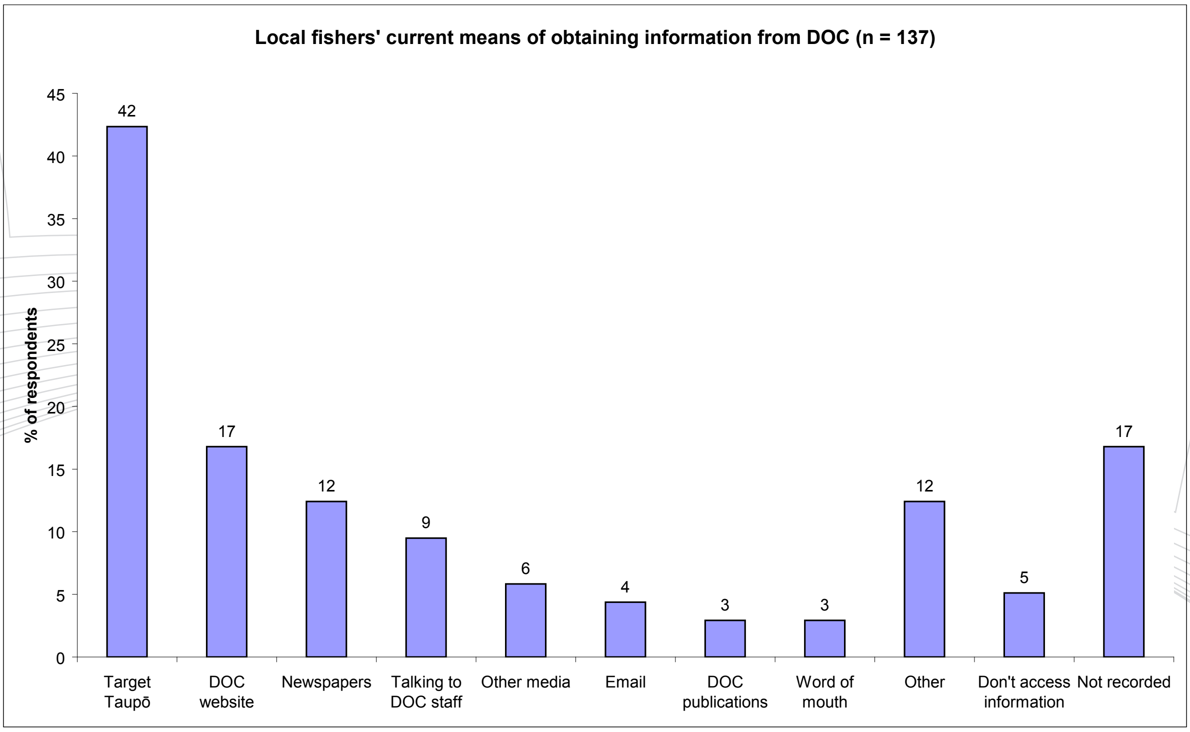


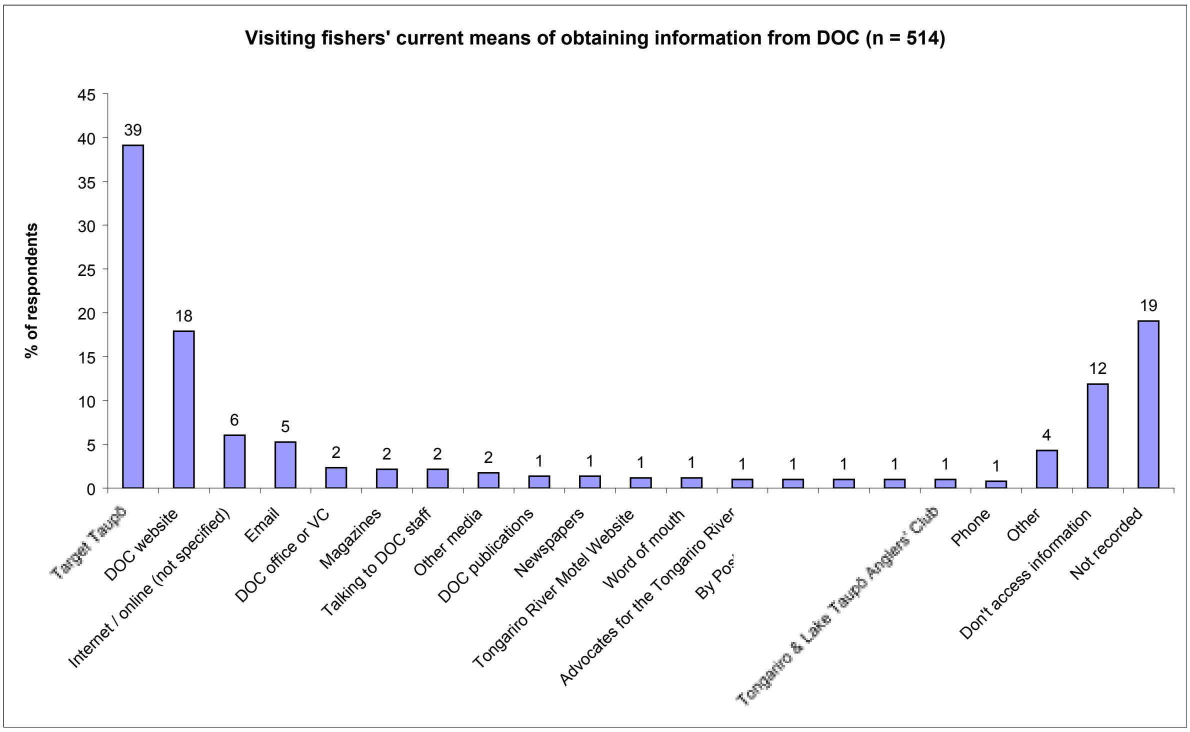
Awareness of specific aspects of the Taupō Fishery Advisory Committee's role was very low. The most common response was that that committee role was to provide advice to the fishery manager (i.e. DOC) and 8% of respondents mentioned this. The next most common responses related to the committee's role in representing anglers (6%) or a wider group of stakeholders (4%). Four percent of respondents gave responses indicating that the committee had a direct role in management of the fishery.

Current and preferred methods for receiving information

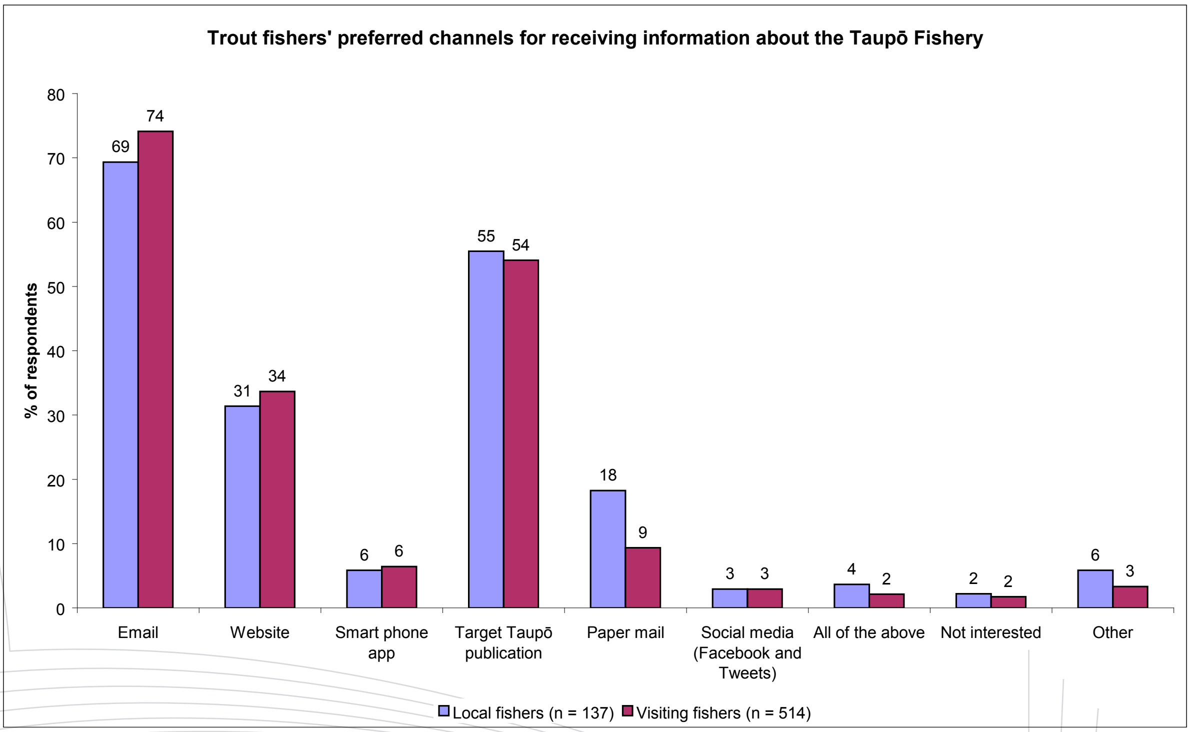


All respondents were asked about the ways they currently get information from the Department. The DOC website was the preferred channel for non fishers with 25% of these respondents indicating that they used this to access information. Thirteen percent of respondents accessed information from DOC online but did not specify a particular site. It is likely that these responses also relate to the DOC website. A number of the non fishers (13%) actually worked for the Department of Conservation and obtained information through their work. Media such as newspapers and magazines (8%) and word of mouth (6%) were other common responses from non fishers. Thirteen percent of non fishers indicated that they did not seek information from the Department and 17% did not provide a response.





Responses from fishers were markedly different to those for non fishers. The Target Taupō newsletter was easily the most common source of information and was used by 42% of local trout fishers and 39% of those who were visiting. The DOC website was the next most common information source for both locals (17%) and those who were visiting (18%). Local fishers also sourced information from newspapers (12%), other media (6%) and conversations with DOC staff (6%). Visiting trout fishers made less use of these resources and more use of online resource. Six percent of visiting trout fishers mentioned internet and 5% said that they obtained information by email.



Trout fishers were also asked what their preferred methods for obtaining information on the Taupō Fishery would be. There was little difference in the preferences of local compared to visiting trout fishers. Email was preferred by almost three quarters (74%) of visiting fishers and 69% of those who were local. Just over half wanted to receive information through the Target Taupō newsletter and approximately one third through a website. A larger proportion of local fishers (18%) preferred to receive email by post compared to those who were visiting (9%).

Taupō FISHERIES 2012 SURVEY

QUESTION 27 ANALYSIS

PREPARED FOR

THE DEPARTMENT OF CONSERVATION

BY

APR CONSULTANTS

DECEMBER 2012

TABLE OF CONTENTS

INTRODUCTION

The Department requested that APR Consultants undertake an analysis of Question 27 from a survey of Taupō Fisheries that was undertaken by the department. Question 27 was an open question asking respondents "do you have any further comments or thoughts about how you would like to see the Taupō fishery managed in the future?"

APR Consultants analysed all the responses received for this question and grouped the comments into similar categories. These categories were used to create a table that provided a summary indication of the comments received and how many of the respondents provided comments on each category.

RESULTS

People were invited to complete an online survey on fishing within the Taupō fishery. A total of 732 responses were received. From the 732 responses, 405 provided comments to the question "do you have any further comments or thoughts about how you would like to see the Taupō fishery managed in the future?"

Comments coded to categories:

	Number	Percent
Fishery management	212	29.2%
DOC/Fish and Game	95	13.1%
Regulations/enforcement/rangers	60	8.3%
Research/monitoring	57	7.8%
Fixing/modifying/cleaning rivers/effects of works/power companies/river flows	52	7.2%
Funding/cost	49	6.7%
Fishing limits/closures/compulsory catch and release	48	6.6%
Iwi	41	5.6%
Communication with anglers/community	41	5.6%
Fishing licences	39	5.4%
Pest management	38	5.2%
Access/tracks/available for all	36	5.0%
Education/maps/information	23	3.2%
General positive comments about fishery	20	2.8%
Target Taupo	14	1.9%
Encourage children to fish	12	1.7%
Commercial guides	9	1.2%
Promotion	9	1.2%
Pollution/rubbish	8	1.1%
Comments relating to survey	7	1.0%
Not feeling save fishing	6	0.8%
Worms/parasites in trout	6	0.8%
Farm trout/sell trout	4	0.6%
Other	17	2.3%
Sample	**727**	

Note: Not additive as respondents comments could be coded into multiple categories
Note: These coded categories are made up out of comments provided by 405 individuals

The majority of answers received were to do with respondents opinions of fishery management, with 29.2% of respondents providing comments related to fishery management. These comments have been summarised below. The major management issues were the fishery having declined and this needing to be rectified (6.5% of respondents), followed by releasing trout (6.3%), lack of food in Lake Taupō (6.1%) and suggestions on best management priorities (5.6%).

Other major comment groupings were responsibilities of DOC/Fish and Game (13.1% of respondents), regulations/enforcement/rangers (8.3% of respondents), research/monitoring (7.8% of respondents), Fixing/modifying rivers/power companies/river flows (7.2%), funding/costs (6.7%), fishing limits/closures (6.6%) iwi issues (5.6%) and communication with anglers (5.6%).

*Comments for "**fishery management**" coded:*

	Number	Percent
DOC/Fish and Game	95	13.1%
Fishery has declined - must be rectified	47	6.5%
Releasing trout/restocking/selected breeding	46	6.3%
Lack of food for trout in lake/smelt	45	6.2%
Suggestion on types of management/examples	41	5.6%
Anything to increase fishery/bigger fish/better quality fish	29	4.0%
River issues/runs	17	2.3%
Maintain wild fishery	16	2.2%
Management is good now	16	2.2%
Management representation	12	1.7%
Cleaner water/water clarity	10	1.4%
Look at historical lessons learnt	7	1.0%
Must be sustainable	7	1.0%
Other	8	1.1%
Sample	**727**	

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	Number	Percent
Fishery has declined - must be rectified	47	6.5%
Releasing trout/restocking/selected breeding	46	6.3%
Lack of food for trout in lake/smelt	44	6.1%
Suggestion on types of management/examples	41	5.6%
Anything to increase fishery/bigger fish/better quality fish	29	4.0%
River issues/runs	17	2.3%
Maintain wild fishery	16	2.2%
Management is good now	16	2.2%
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TAUPŌ FISHERIES ECONOMIC ANALYSIS

CONFIDENTIAL

PREPARED FOR
DEPARTMENT OF CONSERVATION

BY
APR CONSULTANTS

14 DECEMBER 2012

DISCLAIMER

All care has been taken in the production of this report to ensure its contents are as accurate as possible. However, neither APR Consultants Ltd (APR) nor any other organisation takes responsibility for incorrect information or decisions by any persons based on information provided in this report.

APR has derived conclusions in this report from information supplied by the client and other information in the public domain. These findings may change as additional information becomes available. All estimates in the report should be treated as indicative.

EXECUTIVE SUMMARY

Purpose

The purpose of this project was to determine the economic impact of Taupō fisheries visitors on the Taupō District. The project was undertaken for the Department of Conservation (DOC). Among its strategic objectives, DOC seeks to increase revenue from the Taupō fisheries and more generally contribute to the Taupō economy.

Methodology

This report is presented in three main sections: Literature Review; Survey Results Analysis; and Discussion.

The Literature Review section includes a review of literature relevant to the aims of DOC and the primary research survey analysed in this report.

The Survey Results Analysis section analyses the primary research undertaken by using data taken from an online web-based survey carried out by DOC. APR has analysed the survey data to produce estimates of total net value added, total net output (ie, expenditure) and total net employment created or sustained in the Taupō District economy.

The Discussion section aims to move from the findings of the Literature Review and the Survey Results Analysis to actionable recommendations that will contribute to DOC's objectives of increasing revenue from the Taupō fisheries and more generally to contribute to the Taupō economy.

Summary of findings

Economic impact analysis

This section's analysis was primarily based on data collected from an online survey conducted by DOC. Expenditure made by Taupō residents would have been expended in the District anyway, therefore Taupō residents' expenditure was excluded from impact estimates.

The overwhelming majority (87%) of the survey's raw data was associated with respondents who currently possess season licences or had purchased one in the past. Therefore, the most reliable estimates attributable to the sample size used, were those relating to adult season licences. Given a much smaller sample size associated with adult week licence data this category's impact estimates are less reliable. Impact estimates associated with the other DOC licence categories were made using a range of conservative assumptions about Taupō visitors' expenditure, as survey data for these categories was insufficient to enable the formulation of meaningful estimates.

Survey-based estimates of adult season and week licences total economic impacts in the year ended June 2012 were:

- $23 million (net total output)
- $9 million (net[1] total[2] value added); and
- 239 FTEs (net jobs created or sustained). t

1 In other words, the estimate excludes spending made by Taupō residents and those who sole or primary reason for visiting Taupō was activities other than fishing.

2 ie, includes, direct, indirect and induced spending effects.

Impact estimates made for other licence categories using theoretical assumptions about visitors' expenditure were made on the basis of providing a relatively conservative indication of licence impacts that were not covered by the survey's responses. A conservative estimate of the overall, total economic impact associated with visitors spending in Taupō attributable to the Taupō fisheries (using theoretical assumptions as well as survey-based data) in the year ended June 2012 was:

- $29 million (net total output);
- $11 million (net total value added); and
- 294 FTEs (net total jobs created or sustained).

Visitor activity

Overall, visitor arrival statistics for Taupō have declined slightly, falling 5.4% between 2000 and 2010. This was in contrast to New Zealand where guest arrivals grew by 22.6% during the same period.

Total DOC fishing licence sales decreased from 54,086 to 41,363 (ie, -23.5%), between the 2007/08 and 2011/12 seasons continuing a general downward trend in DOC trout fishing licence sales over the past 24 years, since sales peaked at over 82,000 in the 1987/88 season.

The results of DOC's survey showed that 66% of respondents' primary reason for visiting Taupō was for fishing (note that the majority of respondents (86.9%) were Adult Whole Season licence holders and as such, this may be expected). A total of 83% of the survey respondents were aged over 40 years. The two largest groups surveyed were those aged between 50 and 59 (26%) and those aged between 60 and 69 years (28%). A total of 88% of respondents were male, while 12% were female. The findings showed that visitors undertook many activities while in Taupō, not only fishing. This included mountain biking and other recreational activities.

Opportunities to grow the market

The purpose of this section is to highlight areas where fishing can improve its contribution to the Taupō economy.

1. *Link fishing to wider Taupō attractions*

Taupō has an enduring strength in freshwater fishing, however, the typical angler may be constrained by the need to engage other family members' interests for the same visit period in Taupō. Therefore, to potentially increase angler visits and visits to Taupō in general it may be beneficial to link fishing to a wider Taupō tourism experience. Further, it may be possible to increase sales of fishing licences and visitor numbers to Taupō generally by marketing to specific groups or a segment of interest groups. For example, this could cover packages that include combinations of mountain biking, trout fishing and other attractions and activities available in the Taupō area.

2. *Main markets*

The major markets for both anglers and visitors in general to the Taupō area are New Zealand domestic visitors, especially Auckland, Wellington, Bay of Plenty, Hawkes Bay, Waikato and Manawatu. The strongest international market is Australia, which is showing strong and on-going growth. Other significant international visitor markets include the UK (and Europe more generally) and the USA, all of which are relatively stagnant due to economic conditions. China continues rapid economic growth manifesting through an expanding and increasingly independent and demanding middle class.

3. *A growing market: China's middle class*

The fastest growing (by percentage) international visitor market is from China, however, at this stage absolute numbers are relatively small, under 6,000 visitors in 2011. This group will continue to grow rapidly, and in the future may have huge potential.

4. *Focus international marketing on river fishing*

An interesting finding from the National Angling Survey NIWA (Unwin, 2009) was that overseas visitors prefer river fishing to lake fishing. When developing marketing material to appeal to the international market, it may be more effective in attracting anglers to the Taupō area if the marketing material focuses on the diverse range of rivers available to anglers in the Taupō area. This may contradict the existing focus on "Great Lakes" marketing.

Recommendations

Recommendations to grow Taupō's economy

1. **Integrate marketing 1**

Explore integrating angler focused marketing with more general and family based attractions to facilitate attracting anglers and their families to the Taupō area. This widens the attraction of visiting Taupō to the whole family rather than those only focused on angling.

2. **Integrate marketing 2**

Explore integrating other activities, such as mountain biking, within marketing material developed to attract anglers. The same people who are attracted to an area for angling are known to undertake other activities on a visit and as such it may be more effective to appeal to several activities in combination.

3. **Market Taupō's rivers and streams to anglers**

Findings indicate anglers' preference for fishing on rivers as opposed to lakes. Taupō has strength in both. It may be more effective to increase the focus of marketing material onto Taupō's rivers.

4. **Focus on existing markets**

Taupō's visitors are predominantly from several domestic regions and Australia. It is likely to be more effective to focus on building these existing markets than attempting to develop smaller existing or new markets.

5. **Identify new markets**

Markets are in flux. The Japanese market, for example, is shrinking and the China market is growing rapidly. Although still relatively small, the China market has significant potential and it may be worth taking steps to start to position Taupō as an area of choice for fishing.

Other recommendations

1. **Collect licence data**

One of the challenges for developing an accurate and comprehensive picture in terms of, for example, demographic profile or angler effort is that insufficient data has been collected at the point of sale for licence sales. To be more fully informed for the purposes of, for example, assessing economic impact, marketing and better decision making, it is vital to have obtained this kind of information. As such, it is a strong recommendation that such information is obtained at licence point-of-sale.

CONTENTS

1.0 Purpose

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The Discussion section aims to move from the findings of the Literature Review and the Survey Results Analysis to actionable recommendations that will contribute to DOC's objectives of increasing revenue from the Taupō fisheries and more generally to contribute to the Taupō economy. It must be noted that the Discussion section will move beyond the scope of only fishing to link fishing into wider marketing based recommendations to increase tourism.

3.0 INTRODUCTION

In 1985 APR's director, Deryck Shaw, undertook the study "Taupō: A Treasury of Trout" for the New Zealand Wildlife Service. The primary focus of the study was to determine the socio-economic profiles, travel activity and fishing patterns of Taupō anglers, and subsequently derive the economic impact of the anglers in the Taupō District in the early 1980's. Specific objectives focussed on determining the annual expenditure associated with recreational angling in the Taupō Fishing District, and, in part, detail the extent expenditure was coming from outside of the area. The study utilised field and postal survey data obtained from anglers and businesses in the 1982/83 and 1983/84 fishing seasons.

In the time since the study, the Taupō fisheries have undergone multiple changes. Selected aspects of change include:

the fisheries management structure;

the number of trout fishing licences purchased each year by anglers; and

the average time spent fishing by anglers in a wider context.

This report's analysis primarily focused on the fisheries' ability to attract anglers from outside the District, and to assess to what extent this provides economic benefits to the area during the fishing season. This work was aligned with DOC's broader aim which is to ensure that the management of the Taupō Sports Fishery contributes optimally to the social, economic, environmental and cultural well-being of the Taupō fishing region[3].

To achieve the objective DOC wants to ensure that:

- Taupō is an internationally renowned sustainable fishery and destination for anglers;
- The Taupō fishery is an integral and integrated part of Destination Great Lake Taupō, and DOC's management contributes to the social, economic and cultural wellbeing of the region;
- Angler participation in the Taupō Sports Fishery is at the optimal level;
- The tino rangatiratanga and kaitiakitanga of Ngāti Tūwharetōa over Taupō-nui-a-Tia and the fisheries within the Tūwharetōa rohe is acknowledged and recognised;
- DOC is meeting the Crown's obligations under the 2007 Deed to Ngāti Tūwharetōa as the owner of the Taupō lake bed;
- DOC understands and is well integrated and aligned with the aspirations of other fish and game and fisheries managers (including the Lake Rotoaira Trust), the angling community, district and regional councils and energy companies;
- As the Taupō Fishery manager, DOC has the confidence of its key partner (Ngāti Tūwharetōa), anglers, stakeholders and the support of the wider community; and
- Management of the fishery is financially sustainable.

3 Exploring Future Opportunities for the Taupō Fishery – Project Update #1

4.0 BACKGROUND

4.1 Lake Taupō fisheries

4.1.1 Catchment overview

The Taupō Fisheries catchment encompasses a multitude of lakes, rivers, streams and tributaries in the Central North Island of New Zealand. The catchment extends from the Waikato River boundary at Huka Falls in the North, to Lake Moawhango and the Maowhango River in the South. Lake Taupō (616 sq. km) and the Tongariro River are the most popular bodies of water for fishing in the study region, both of which are considered to be of national significance (Ministry for the Environment). Also included in the catchment area are Lake Rotoaira, Otamangakau, Kuratau and Moawhango, and many more rivers and streams affecting the lakes, such as the Tauranga-Taupō River (also considered nationally significant) (Figure 1).

Taupō and Tūrangi are the main urban centres in the Taupō catchment. Much of their development corresponds to development in fishing activity in the area. As the centres have grown, alongside the popularity of recreational trout fishing in the District, so too has the supporting infrastructure (direct and indirect). An example of this is the Tongariro National Trout Centre (est. 1926), promoting the ongoing education and monitoring involved in sustaining fisheries and New Zealand freshwater ecology. Indirectly supporting the industry is the strong accommodation sector in the District, developed alongside Taupō's reputation as a tourist destination.

4.1.2 Management history4

The Taupō fisheries began with the introduction of Brown trout in 1887 and Rainbow trout in 1900, under the direction of the Auckland Acclimatisation Society. In 1906 the government, realising the national importance of the fisheries, took control of them to ensure the sustainability of fishing activities. Initially vesting the fisheries under the direction of the Department of Tourist and Health Resorts, rangers were employed and licences issued to fish the area.

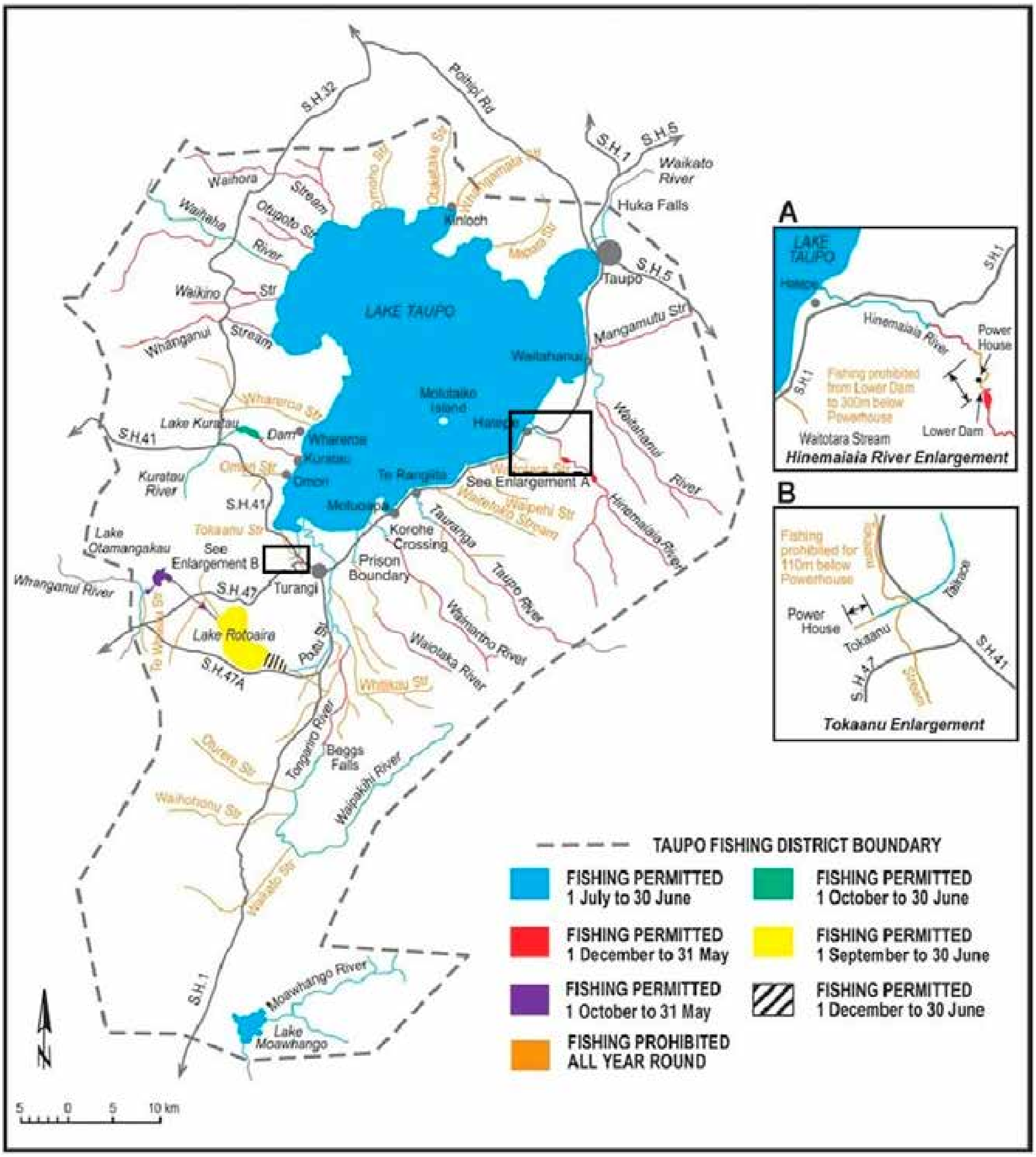
Following an increase in visitor numbers in the 1920's, and a desire to ensure the fishery was appropriately managed and available to all New Zealanders, the Crown entered into negotiation with Ngati Tuwharetoa. The results of these negotiations were later formalised as the Māori Land Amendment and Māori Land Claims Adjustment Act (1926), which saw the Crown secure the rights to the Taupō fishery, to be managed under the Department of Internal Affairs Wildlife Service. In exchange, the Tuwharetoa Māori Trust Board was paid (then) £3,000 per annum plus a sum equivalent to half of all fishing licence revenue. This exchange guaranteed a licensed angler foot access to fish the streams and lake, and the general public access to the lake. The number of anglers using the fishery continued to grow over the following decades and peaked at around 82,000 licence sales in the 1987/88 season.

In 1987 the Wildlife Service of the Department of Internal Affairs was restructured into the new Department of Conservation. Under the Conservation Act, acclimatisation societies and conservancy councils were abolished and replaced by regional fish and game councils. However, the Māori Land Claims Adjustment Act 1926 required that the Crown manage the Taupō Fishery, thus the Conservation Act stipulated the Director General of Conservation was to undertake the managing role of the Taupō fisheries, with all the powers of a fish and game council to do so. The Taupō Fishery Advisory Committee was established in 1990, recognising that user input to the fishery was essential. The committee is made up of representatives of local fishing clubs and groups, national fishing interests and the Tuwharetoa Māori Trust Board, to advise the Minister of Conservation and the Department of Conservation on management policies and activities.

4 Tongariro National Trout Centre (*http://www.troutcentre.com/?id=143*)

In 1993, title to the beds of Lake Taupō and certain parts of its tributaries were returned to the Ngati Tuwharetoa people and is now managed by Crown, iwi, and other representatives through the Taupō-nui-a-Tia Management Board.

Figure 1: Taupō Fishing District



Source: www.fishingmag.co.nz/Assets/Taupō-Tongariro/Taupō-fishery-MAP100k.jpg

5.0 literature review

This section provides a summary of relevant research and previous surveys related to recreational freshwater fishing in Taupō and New Zealand.

5.1 Tourism activity literature review

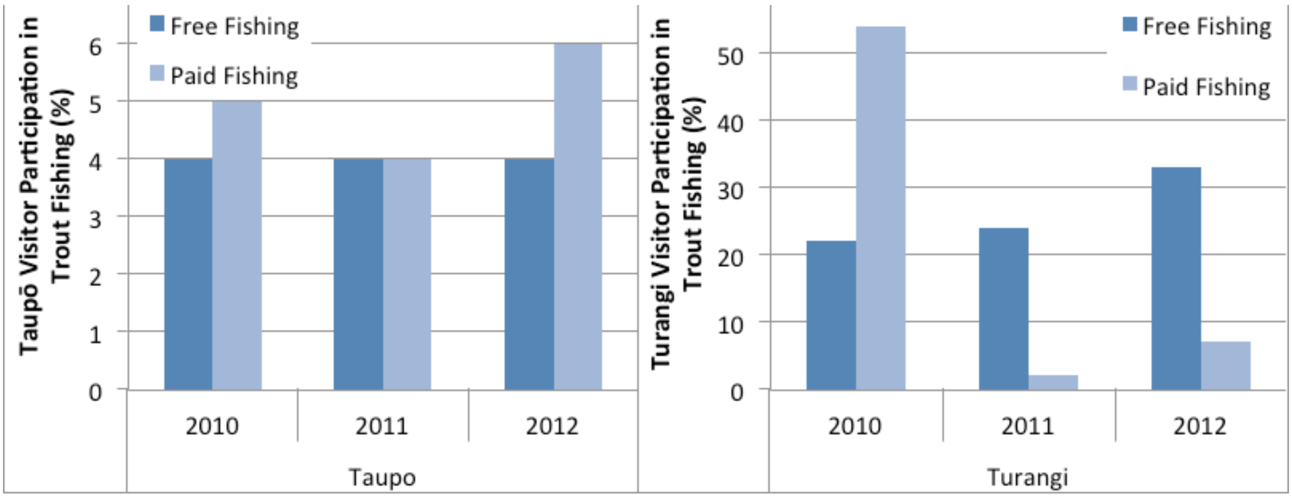
5.1.1 Taupō visitor information survey reports and MED regional tourism estimates

The Visitor Information Survey Reports 2010, 2011 and 2012, prepared for Destination Great Lake Taupō presented a targeted profile of visitors to the region.

Taupō visitor information survey reports[5]

Figure 2 presents selected results from the surveys detailing the percentage of survey respondents who claim to have taken part in trout fishing (either free or paid) while visiting the Taupō and Tūrangi centres. Respondents from Taupō consistently reported around 4% of visitors taking part in free fishing activities, and between 4-6% of visitors taking part in paid fishing activities. Tūrangi has a much higher percentage of visitors taking part in fishing while staying the centre, likely due to its close proximity to both the Tongariro River and Lake Taupō. Visitors taking part in paid fishing activities show no consistency between surveys, fluctuating between 2% and 54% of visitors. However, visitors taking part in free fishing activities increased over the three years the survey took place. Around 22% of visitors to Tūrangi took part in free fishing activities in 2010. This increased to around 33% in 2012.

Figure 2: Visitor participation in fishing, Taupō and Tūrangi, 2010-2012



Source: Visitor Information Survey Report 2010/11/12. Destination Great Lake Taupō

Included in the visitor report was information relating to the origin of visitors to the Taupō District. Figure 3 and Figure 4 outline both the domestic and international origins of the survey respondents in both the Taupō and Tūrangi Centres.

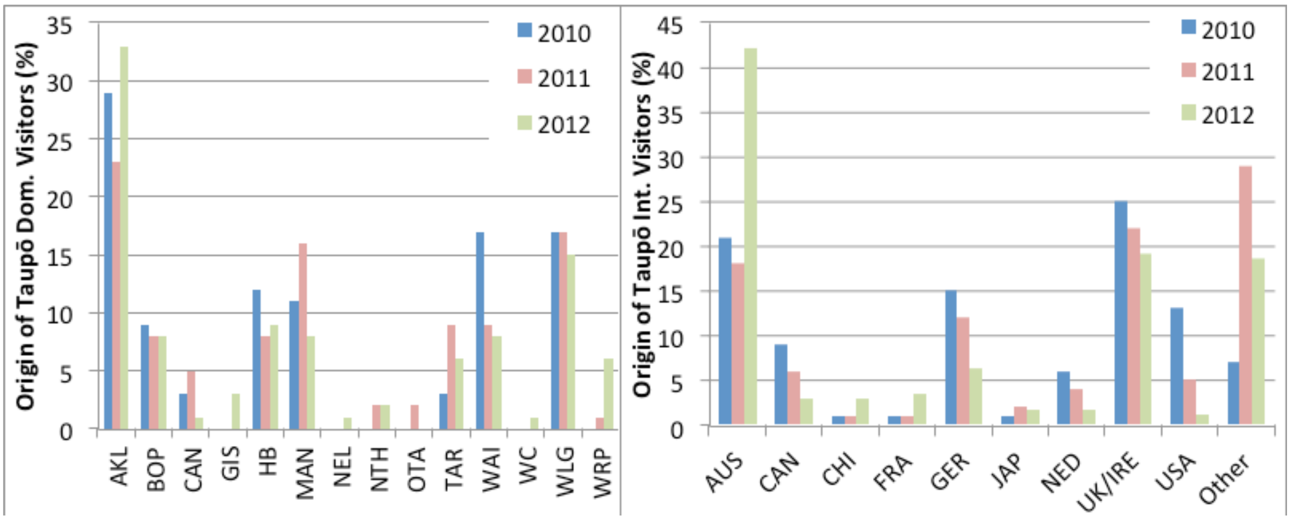
It is suggested that the majority of domestic travellers to Taupō originate in Auckland each year. Auckland visitors accounted for 23 to 33% of domestic visitor arrivals to Taupō in 2010 to 2012 (Figure 3). The second most popular region of origin is Wellington, which consistently accounted for around

5 Information obtained in this section should be treated as indicative of travellers to Taupō, due to the small sample size of the surveys, bias due to the fixed locations for interviewers (eg, Prawn Park, Huka Falls), and the use of non-random sampling. Data sampled was a snapshot over five days of interviews (per year), based on a sample of 287 (2010), 289 (2011), and 384 (2012) domestic and international overnight visitors, and “day trippers” to the Taupō and Tūrangi Centres.

15% of visitors to Taupō. Other regions making consistent contributions to Taupō visitor activity were the Manawatu, Waikato, Hawke's Bay, and Bay of Plenty.

International visitors to Taupō predominantly originated in Australia, the United Kingdom/Ireland, and Germany. Australian visitors to Taupō, as a percentage of the total, saw a massive upturn in 2012, accounting for over 40% of visitors over the five days the survey was conducted.

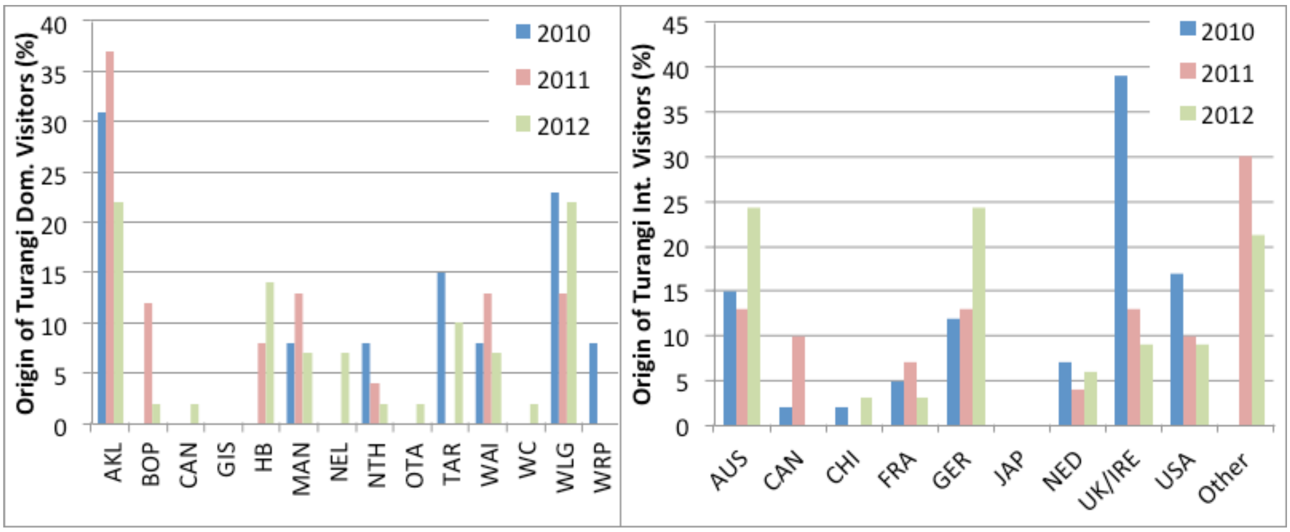
Figure 3: Origin of domestic and international visitors to Taupō, 2010-2012



Source: Visitor Information Survey Report 2010/11/12. Destination Great Lake Taupō

The evidence suggests that visitors to Tūrangi were very similar in composition to those who visit Taupō. The main domestic markets were Auckland, Wellington, Manawatu, Waikato and Hawkes Bay. Internationally, visitors travelled from Australia, the United Kingdom/Ireland, Germany, and notably, the US (Figure 4).

Figure 4: Origin of domestic and international visitors to Tūrangi, 2010-2012



Source: Visitor Information Survey Report 2010/11/12. Destination Great Lake Taupō

It was indicated that the majority of both domestic and international visitors surveyed in Taupō and Tūrangi cited "Holiday" as their main reason for visiting, over 80% each year. This was followed by "visiting friends and relatives."

Regional tourism estimates

Supporting the visitor data from the Destination Great Lake Taupō surveys, are official visitor estimates by the Ministry of Economic Development (MED). Selected information details estimated visitor origins for the years 2006 and 2011, on both a national and Taupō Regional Tourism Organisation (RTO) scale (see Table 1 and Appendix 3).

It is estimated that over one-fifth of visitors to the Taupō District in 2011 originated in Auckland, followed by around 14% from Wellington, with the Waikato, Manawatu, Hawkes Bay, and Bay of Plenty regions each contributing between 5 to 10% of total visitor arrivals.

Leading the international visitor arrivals is Australia accounting for 8.3% of the total estimated visitor arrivals to the Taupō District in 2011. Australia is followed by the United Kingdom (4.4%), other European nations (4.3%), Germany (2.1%), and the United States of America (1.9%).

When compared against the New Zealand totals for estimated visitor origins, Taupō, on average, attracts more visitors from around the North Island of New Zealand and fewer visitors from overseas. For example, Australia is estimated to make up for around 11.4% of all visitor arrivals to New Zealand, but only accounts for 8.3% of guest arrivals to the Taupō District.

These estimates match the findings outlined in the Destination Great Lake Taupō survey reports 2010/11/12. Note, as domestic and international visitors were treated as separate markets in the Taupō Visitor survey (eg, Figure 3, Figure 4), their percentage of visitor arrivals differs from the percentage of arrivals as presented in Table 1 below.

Table 1: Top 15 contribution to estimated visitor arrivals to Taupō and New Zealand by place of origin (2006-11)

	Est. Visitor Arrivals 2006 (%)		Est. Visitor Arrivals 2011 (%)		P.P. Change 06-11 (%)	
Origin	**Taupō**	**NZ**	**Taupō**	**NZ**	**Taupō**	**NZ**
Auckland	21.5%	18.0%	21.7%	18.4%	0.2%	0.4%
Wellington	13.8%	7.5%	14.0%	7.7%	0.2%	0.2%
Waikato	9.9%	7.3%	9.9%	7.4%	0.0%	0.1%
Australia	6.4%	9.7%	8.3%	11.4%	1.9%	1.7%
Bay of Plenty	8.2%	4.9%	8.1%	4.8%	-0.1%	-0.1%
Manawatu	7.0%	3.9%	6.9%	3.8%	-0.1%	-0.1%
Hawke's Bay	6.2%	2.2%	6.1%	2.2%	-0.1%	0.0%
United Kingdom	6.4%	6.6%	4.4%	4.5%	-2.0%	-2.1%
Other Europe	4.1%	4.1%	4.3%	4.2%	0.2%	0.1%
Canterbury	2.0%	8.5%	2.2%	9.2%	0.2%	0.7%
Germany	2.1%	2.1%	2.1%	2.1%	0.0%	0.0%
Taranaki	1.9%	1.7%	1.9%	1.7%	0.0%	0.0%
United States	2.6%	3.4%	1.9%	2.5%	-0.7%	-0.9%
Rest of World	1.0%	1.1%	1.4%	1.5%	0.4%	0.4%
Other Americas	1.2%	1.4%	1.4%	1.5%	0.2%	0.1%

Source: Ministry of Economic Development and APR Consultants Ltd. Extracted from: Regional Tourism Data Pivot Tables 2006 to 2011 [725 KB XLSX]

Notes: (1) List ordered by origin from largest contribution to Taupō Guest Arrivals in 2011

(2) Additional table with estimated visitor arrivals and estimated growth from 2006 to 2011 presented in Appendix 3

The Taupō Economic Monitor for the June 2012 Quarter gives some indication of the extent to which the total guest arrivals are international visitors. During the year ended June 2012, visitor arrivals totalled 558,842, made up of 66% domestic visitors and 34% (190,006 visitors) international visitors. A breakdown of domestic and international arrivals by origin is presented in Appendix 3.

5.1.2 Taupō Commercial Accommodation Survey

The Taupō Commercial Accommodation Survey is a monthly publication by Statistics New Zealand detailing a range of commercial accommodation statistics.

Commercial accommodation sector

Table 2 details the data for Taupō's commercial accommodation sector between the year 2000 and 2011, with data calculated for calendar year. The sector grew in capacity over this period, from a yearly capacity of 1,461,958 visitors in the year 2000, to 1,527,659 in 2011. Despite this increased capacity, guest arrivals declined steadily from its peak of 644,182 in 2004 to 555,032 in 2010. In 2011, guest arrivals increased for the first time in six years. However, the total arrival growth rate was still -5.4% for the period 2000 to 2011.

Despite the decrease in visitor arrivals using commercial accommodation in Taupō, from 2000-2011, there has been a marginal increase in the length of stay by visitors to the region. On average, guests stayed 1.72 nights, meaning that those that did visit Taupō and use commercial accommodation, spent more time in the centre.

Table 2: Commercial accommodation data – Taupō, 2000-2011

Year ended December	No. of estab. at year end	Avg. daily capacity	Yearly capacity	Guest nights	Guest arrivals	Average stay length
2000	104	3,994	1,461,958	1,000,838	597,946	1.67
2011	108	4,186	1,527,659	970,006	565,433	1.72
11 Yr. numerical change	**4**	**192**	**65,701**	**-30,832**	**-32,513**	**0.04**
Growth rate 00-11	**3.8%**	**4.8%**	**4.5%**	**-3.1%**	**-5.4%**	**2.5%**
Avg. ann. growth. rate 00-11	**0.3%**	**0.4%**	**0.4%**	**-0.3%**	**-0.5%**	**0.2%**

Source: Statistics New Zealand and APR Consultants

Table 3 presents Taupō commercial accommodation data statistics for New Zealand and Rotorua. The New Zealand data provides insight into the tourism activity nationwide while Rotorua's data provides an indication of sector changes in a geographically and geologically similar area to Taupō.

Nationally from 2000 to 2011, the commercial accommodation sector expanded in all the areas analysed. During the 11-year period, guest arrivals increased by over 22%, growing at an average rate of 1.9% p.a. Despite the similarities between the two areas, Rotorua's commercial accommodation sector grew by 6.8% over the period, at an average rate of 0.6% p.a.

Similar to Taupō, both Rotorua and New Zealand experienced marginal increases in the average length of stay. The national average increase in the average length of stay was around 0.4% p.a., with the Rotorua accommodation sector growing more slowly on average at 0.1% p.a.

Table 3: Commercial accommodation statistics – New Zealand and Rotorua, 2000-2011

Year ended December	No. estab. at year end	avg. daily capacity	Yearly capacity	Occupancy rate (%)	Guest nights	Guest arrivals	Stay length (days)
New Zealand							
2000	6,250	253,896	92,914,374	33.5%	55,105,173	29,370,190	1.88
2011	7,023	300,341	109,592,529	37.7%	70,222,042	35,999,805	1.95
11 Yr. numerical change	**773**	**46,445**	**16,678,155**	**4.2%**	**15,116,869**	**6,629,615**	**0.07**
Growth rate 00 -11	**12.4%**	**18.3%**	**18.0%**	**12.5%**	**27.4%**	**22.6%**	**4.0%**
Avg. ann. growth. rate 00 – 11	**1.1%**	**1.5%**	**1.5%**	**1.1%**	**2.2%**	**1.9%**	**0.4%**
Rotorua							
2000	122	5,256	1,923,540	42.22%	1,588,714	918,193	1.73
2011	118	6,122	2,234,304	41.48%	1,710,645	980,390	1.74
11 Yr. change	**-4**	**866**	**310,764**	**-0.7%**	**121,931**	**62,197**	**0.01**
Growth rate 00 -11	**-3.3%**	**16.5%**	**16.2%**	**-1.8%**	**7.7%**	**6.8%**	**0.8%**
Avg. ann. growth. rate 00 - 11	**-0.3%**	**1.4%**	**1.4%**	**-0.2%**	**0.7%**	**0.6%**	**0.1%**

Source: Statistics New Zealand and APR Consultants

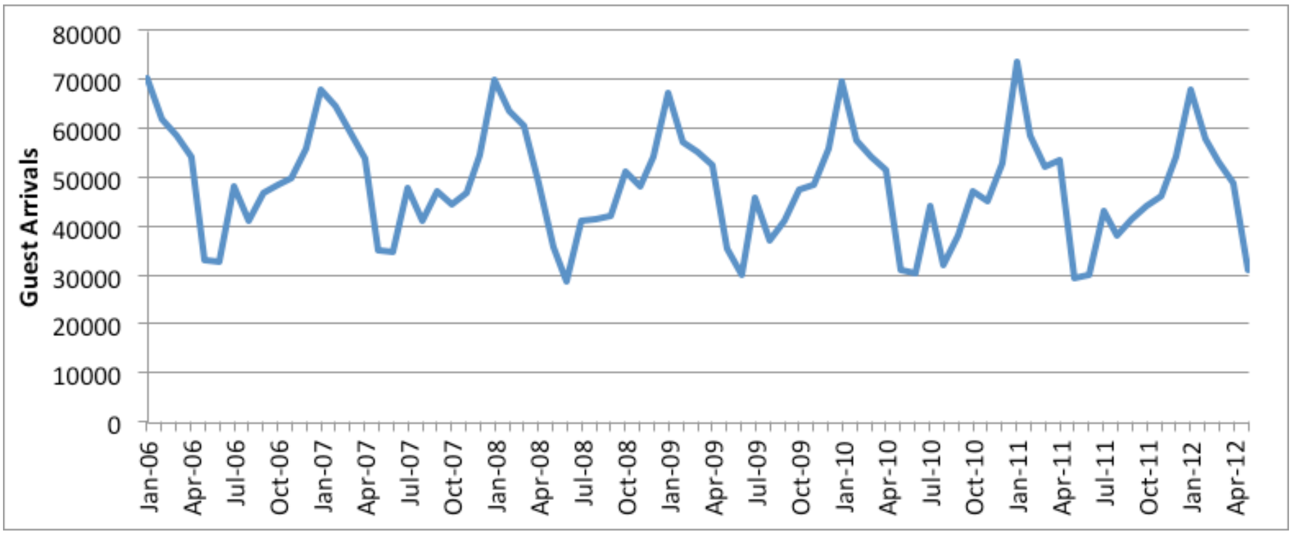
SNZ data shows that the commercial accommodation sector has recovered to some degree since the 2008 recession. The accommodation sector in some areas has surpassed pre-recession levels, with others being slower to return to positive growth.

Seasonality

Figure 5 shows the commercial accommodation guest arrivals for Taupō between January 2006 and May 2012. Prominent features of the data include a five month "low" season May-September, with a recurring "spike" in July, four shoulder months of October, November, March and April, supporting the peak tourism season of December-January-February. Guest arrivals to Taupō commercial accommodation establishments regularly recorded lows of around 30,000 guest arrivals in May, and peaks of around 70,000 guest arrivals in January.

Possible reasons contributing to the spike occurring each year in July is this date generally corresponds to primary, intermediate, and secondary mid-year school holidays (late June to mid-July).

Figure 5: Taupō commercial accommodation guest arrivals, 2006-2012



Source: Statistics New Zealand, Accommodation Survey and APR Consultants

5.2 Summary of selected fresh water fisheries literature and analysis

5.2.1 Taupō: A Treasury of Trout (Shaw, 1985)

Recreational trout fishing in the Taupō District was about to peak at the time this study was published, based on data from the 1982/83 and 1983/84 fishing seasons. Total Taupō fishing licence sales were at their highest in the 1987/88 season (around 82,000, National Trout Centre), and the region was to undergo a restructuring in terms of fisheries management and control. But since the late 1980s, total licence sales for the fisheries have decreased by around 50%. Findings below should be treated as indicative of the time.

Angler characteristics

Based on field interviews (1,823 respondents), a postal survey (276), and a business survey (69), a picture was created of anglers and their activities in the Taupō Fishing District in the early 1980s.

Licences

A key finding from the initial survey from the 1982/83 fishing season was that despite almost 70,000 licences being purchased, only around 16% (10,945 licences) of the total sample actually held Adult Whole Season (AWS) licences. Anglers who bought part season licences, such as a day, week, or month licences, were likely to purchase more than one licence in a typical season. Based on Shaw's calculations, it was estimated that around 45,113 anglers accounted for the 69,515 licences sold in the 1982/83 Taupō DOC trout fishing season.

Age/sex/origin

Results from the survey indicated that around 87% of anglers were males with a mean age of 40-45[6], and the approximate 13% of female anglers had a mean age of around 43 years old.

During the time of Taupō's development, before the centre established its name as an adventure tourism destination, trout fishing was a major driver in attracting visitors to the area. This notion is supported by the evidence suggesting only 9.3% of anglers were actually from the Taupō Centre in the early 1980s. Approximately 84.3% of visitors were from around the rest of the country. The remaining 6.4% of anglers in the region originated from overseas (predominantly Australia and the United States).

Habits

Of the 1,823 anglers interviewed in the field, 64.1% had only fished in the Taupō Fishing District for 1983/84 season. Other regions utilised by anglers who had fished in more than one region were Rotorua (12.9%), Hawkes Bay (7.2%) and Wellington (6.5%). A general trend identified with anglers in the area was that longer term licence holders made more trips to the fisheries than shorter term licence holders. Adults with a whole season licence for the area made, on average, 7.2 trips to the region over the course of a season, utilising their own car (63.2%), or another's car (30.8%) as their most preferred method of transportation.

5.2.2 National Angling Survey NIWA (Unwin, 2009)

In the 1994/95, 2001/02, and 2007/08 fishing seasons, NIWA representatives conducted the Nation Angler Survey for Fish and Game New Zealand (FGNZ). The purpose of the studies was to detail angling effort in the 12 FGNZ regions, excluding Taupō (Appendix 1). Key findings from the surveys are presented below. Note that fishing effort is measured by an angler-day, which represents one angler spending any part of one day fishing.

6 Male field survey respondents had a mean age of 40.1 years, whereas postal survey respondents had a mean age of 45 years old.

Selected key findings

- Over the 13 years of the surveys, the evidence suggested the majority of North Island regions declined in the total fishing effort spent by anglers in each season, despite an increase in the number of individual licence sales in each report.
- South Island fisheries are generally more popular than those in the North Island for attracting anglers from overseas.
- Overseas visitors prefer river fishing to lake fishing, namely back country and main-stem river fisheries.
- Also worthy of note is the assumption that 90% of the anglers analysed in these studies are male (Unwin and Image, 2003).

National trends

Total angling effort nationwide increased from 1.156 million angler-days in 1994/95, to 1.202 million angling days in 2007/08. However, the evidence presented in Table 5 suggested that most regions in the North Island declined in effort over the study period. This means the majority of the increase in fishing effort by anglers was from within the South Island. This is further supported by the fact that total adult/family FGNZ season licence sales within the North Island for the 2007/08 season totaled 21,196, whereas South Island sales totaled 43,829 for the same period, despite the major differences in population sizes between islands.

It is suggested that the strength of trout fishing activity within the South Island is not only attributed to South Island residents, but also with overseas visitors with a desire to fish in New Zealand. Anglers visiting from overseas who purchased FGNZ fishing licences for the 2007/08 season expended 69,100 angler-days trout fishing in New Zealand. Of that, around 56,400 angler days (81.6%) were spent in South Island waters, namely back country, and headwater river fisheries. The Eastern Region of the North Island was the only FGNZ region to attract significant visitor numbers for the trout fishing season. This is discussed further in Regional Trends.

Overseas anglers

Collectively, overseas visitors accounted for over 12,000 FGNZ fishing licence sales around the country for the 2007/08 FGNZ season. If classified as a single entity, international anglers would rank as the fourth largest fishing population in New Zealand, behind Eastern Region, Otago, and North Canterbury anglers.

Over the 2007/08 FGNZ fishing season, the three most prominent countries of origin for overseas visitors purchasing New Zealand FGNZ licences were Australia, United States of America, and the United Kingdom (UK). Collectively, these three nations accounted for around 77.5% of total trout fishing licence sales to overseas visitors. Close to 40% of licence sales were to visitors from around Oceania, 27% to North Americans, and 14% from the UK (Table 4).

Around 40% of British and North American visitors invested in Adult Whole Season (AWS) licences, while almost 48% of Oceania visitors purchasing an AWS trout fishing licence.

Table 4: FGNZ fishing licence sales to adult oversea anglers by origin, 2007/08 season

Angler origin	Total sales (%)	Total Adult Licences	Whole Season Sales (%)	Part Season Sales (%)
Oceania	39.7%	4,855	47.7%	52.3%
N. America	27.0%	3,301	40.7%	59.3%
UK	14.0%	1,709	40.4%	59.6%
Europe	11.8%	1,439	52.4%	47.6%
S.E. Asia	5.6%	688	29.9%	70.1%
Africa	1.0%	125	44.8%	55.2%
C. & S. America	0.4%	46	8.7%	91.3%
Unknown	0.6%	71	40.8%	59.2%
Total	**100.0%**	**12,234**	**44.1%**	**55.9%**

Source: National Angling Survey 2007/08, NIWA (pp. 15)

Another key finding from the surveys was that anglers visiting from overseas showed a large preference for fishing rivers over lakes. As mentioned above, the total effort from anglers in New Zealand totaled 1.2 million angling days in 2007/08. Of this effort, 69,000 angler days (5.4%) were spent by overseas anglers. Total lake fisheries accounted for only 12,600 of the overseas visitor effort, whereas 56,400 (81.7%) of effort was spent on rivers. Mainstem river and back country water ways accounted for the majority of the river fishing activity.

This perhaps accounts for the fact why overseas visitors prefer fishing the South Island over the North. It is suggested that the scenery and experience associated with fishing back country rivers (refer to Appendix 4) provides more value, therefore more draw, to anglers visiting from overseas.

Regional trends

Table 5 details the effort spent fishing by New Zealand residents and overseas visitors in regions surrounding the Taupō Fishing District over the history of the survey (1994/95, 2001/02 and 2007/08).

Between the 1994/95 and 2007/08 fishing seasons, all the regions surrounding the Taupō District in the North Island recorded negative growth in total angler effort each season, except for the minor fishing region of Taranaki. During the 13 years of the study, only Taranaki recorded a net increase in effort after a drop in activity in the 2001/02 season.

Table 5: Fishing effort in selected North Island FGNZ Regions (1994/95-2007/08)

Effort by anglers by Year (x1000)	FGNZ Region				
	Auckland/ Waikato	Eastern (incl. Rotorua)	Taranaki	Hawkes Bay	Wellington
1994/95	58.6	246.7	13.1	37.8	68.0
2001/02	41.3	231.3	8.0	46.5	45.3
2007/08	29.8	209.5	16.9	32.5	44.4
Total Change in Effort (94/95-07/08)	-28.8	-37.2	3.8	-5.3	-23.6
Change 94/95-01/02	-29.5%	-6.2%	-38.9%	23.0%	-33.4%
Change 01/02-07/08	-27.8%	-9.4%	111.3%	-30.1%	-2.0%

Source: National Angling Survey 2007/08, NIWA (pp. 25), and APR Consultants

Angler effort for the Eastern Region declined by over 37,000 angler days over the course of the study, at an average rate of negative 1.2% p.a. The Eastern Region is the largest North Island fishery managed by FGNZ, and one of the most popular fishing destinations nationwide in terms of licence sales and effort spent by anglers. This is important to note as the area encompasses the Rotorua Catchment, which houses many of the same geological features as the Taupō Fishing District. In the area are multiple lakes, numerous rivers, streams and tributaries which together attract anglers to the region. For this reason, and others highlighted in subsequent sections, a parallel is drawn between trends in the Eastern Region and Taupō fisheries.

Table 6 breaks down licence sales in the Eastern Region by licence type to New Zealand residents and overseas visitors in the 2007/08 trout fishing season. Around 9.0% of Adult/Family Whole Season licence sales were to overseas visitors, but interestingly, Part Season licence sales to overseas visitors in the region accounted for almost a quarter (23.1%) of the total part time licence sales for the 2007/08 season.

Table 6: Eastern Region FGNZ fishing licence sales by type and buyer (2007/08)

Eastern Region - includes Rotorua Lakes	**Licences issued 2007/08**			
Licence type	**NZ Resident**	**Overseas visitor**	**Total**	**% Overseas visitor**
Adult/family (whole season)	9,474	937	10,411	9.0%
Junior (whole season)	631	26	657	4.0%
Part Season	7,223	2,173	9,396	23.1%
Total	17,328	3,136	20,464	15.3%

Source: National Angling Survey 2007/08, NIWA (pp. 7)

Of the total fishing effort spent in the Eastern Region in 2007/08, the vast majority was spent by New Zealand residents (ie, 209,500 of 215,600 total angler days). Only 6,100 angler days (2.8%) was made by international visitors to the region who accounted for 15.3% of the total licence sales for the season. This implies that most overseas licenses purchases were short-term with this segment spending a short duration of time in the area as part of holiday spent experiencing a number of New Zealand destinations. It also implies that the main reason for most international visitors short visit to Eastern Region was not primarily to undertake trout fishing, but rather to experience a wide range of visitor activities.

5.2.3 DOC trout fishing licence sales

Total DOC fishing licence sales decreased from 54,086 to 41,363 (-23.5%), between the 2007/08 and 2011/12 seasons (Table 7). Behind this movement was a decrease in sales in excess of 20%, for every type of licence over the five year period. Adult Whole Licence (AWS) sales declined the most of all licence types, with an average annual growth rate of negative 8%. This was a decrease from 12,065 licences sold in 2007/08 to 8,650 in the 2011/12 season.

These movements continue on a general downward trend in DOC trout fishing licence sales over the past 24 years, since sales peaked at over 82,000 in the 1987/88 season.

Table 7: Taupō fishing licences sales by type and year (2007/08 - 2011/12)

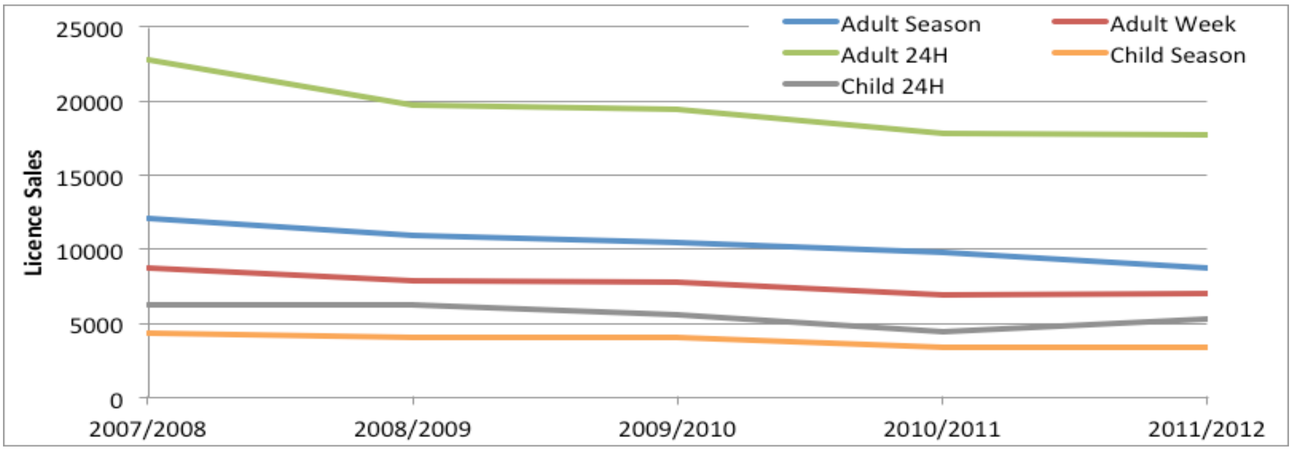
	Licence type						**Total sales ann. growth**
Year	**Adult Season**	**Adult Week**	**Adult 24H**	**Child Season**	**Child 24H**	**Total Sales**	
2007/08	12,065	8,706	22,732	4,371	6,212	54,086	
2008/09	10,955	7,866	19,667	4,052	6,220	48,760	-9.8%
2009/10	10,461	7,738	19,408	4,052	5,525	47,184	-3.2%
2010/11	9,791	6,896	17,718	3,425	4,405	42,235	-10.5%
2011/12	8,650	6,949	17,520	3,329	4,915	41,363	-2.1%
Total growth. 07/08-11/12	-3,415	-1,757	-5,212	-1,042	-1,297	-12,723	
Total growth. 07/08-11/12	-28.3%	-20.2%	-22.9%	-23.8%	-20.9%	-23.5%	
Avg. ann. growth. Rate 07/08-11/12	-8.0%	-5.5%	-6.3%	-6.6%	-5.7%	-6.5%	

Source: Department of Conservation and APR Consultants

Note: (1) Growth in Licence types per year is shown in Figure 6.

After major decreases in sales in the 2008/09 and 2010/11 seasons, the downward trend appears to be slowing. After a 10.5% decrease in total sales in the 2010/11 season, 2011/12 saw only a marginally negative 2.1% growth in total licence sales. As shown in Figure 6, AWS licence sales were the primary driver behind the movement. Child Whole season and A24 hour licences declined marginally. Child 24 hour licences and Adult Week licences both increased in sales volume for the first time in four years.

Figure 6: Taupō trout fishing licence sales by type (2007/08 - 2011/12)



Source: Department of Conservation and APR Consultants

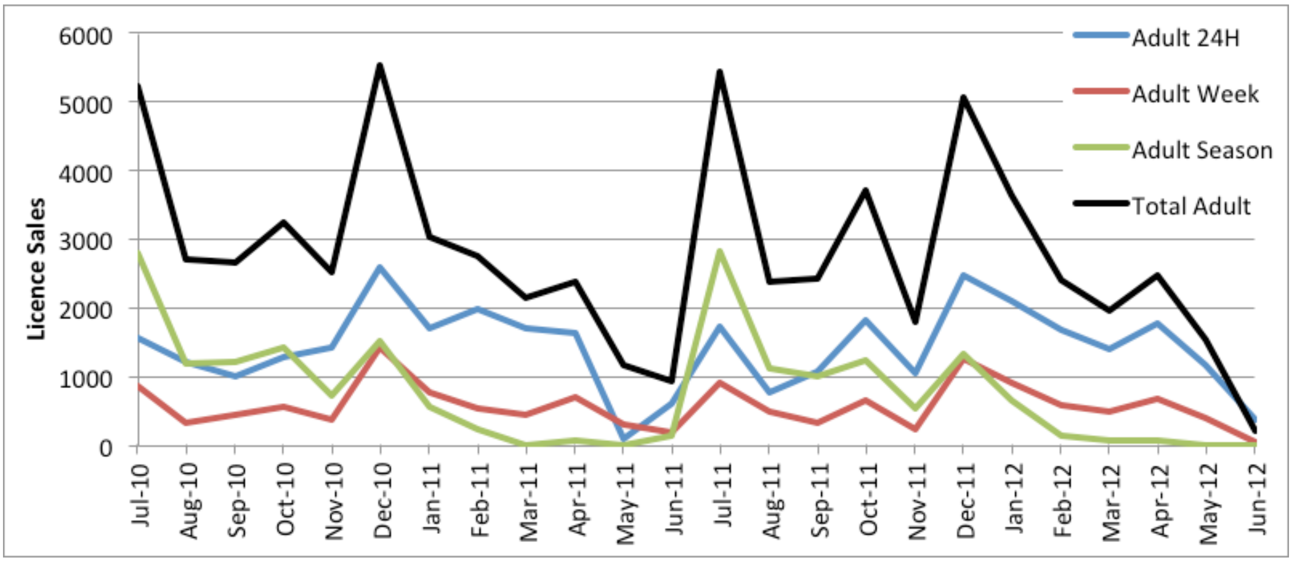
A further breakdown of DOC fishing licence sales for recent years allows a clear view of when the majority of licence purchases were made. Each year, there are a number of peaks and troughs (

Figure 7), corresponding to the fishing season start on July 1, and the subsequent opening and closure of different lakes, rivers, and streams (Figure 1). Lake Taupō itself is open for fishing year round, as are major sections of Tongariro River, accounting for the major spike occurring annually at the start of the fishing season in July. AWS licence sales contribute the majority of sales at this point, reaching their peak of around 2,800 licence sales for the month of July. After this point, AWS licence sales generally decline until the next season.

The second large spike in sales occurs in December, attributed largely to openings of fisheries in the Tongariro and Tauranga/Taupō Rivers. However, the December spike differs in composition from the July spike. As opposed to AWS licences driving total licence sales, A24 Hour licence sales contribute the majority of sales, around 2,500 for the month of December. Adult Week licence, and AWS licence sales each peak at around 1,100 to1,500 sales over the same period.

The third spike occurring in October can largely be attributed to AWS and A24 Hour licence sales. These sales correspond to fishery openings in Lake Otamangakau, Lake Kuratau, and the upper section of the Tongariro River, above Beggs Fall.

Figure 7: Monthly Taupō trout fishing licence sales by type (2010/11, 2011/12 seasons)



Source: Department of Conservation and APR Consultants Ltd.

Notes: (1) Child licence sales data not used due to lower figures reducing clarity

(2) Total Adult sales drop in June 2012 due to licence consignments

DOC/FGNZ trout fishing licence sales comparison

Certain regions of New Zealand much better cater to recreational trout fishing than others. This was reflected in the licence sales by region as presented in the NIWA National Anglers Survey 2007/08 (Unwin, 2009). The Eastern, North Canterbury, and Otago Regions all registered over 10,000 AWS and family licence sales for the year, with the Eastern and Otago regions also registering substantial "Part Season" licence sales (Table 8). The Taupō Fisheries, although not included in the same study, nor managed by FGNZ, were shown to sell quantities of fishing licences well in excess of those reported by any other individual FGNZ region. When comparing DOC licence sales against FGNZ licence sales, the importance of recreational trout fishing to the Taupō District is noticeable.

Licence data from the 2007/08 season was used for this comparison due to it being the latest data available for large scale comparison. Total DOC licence sales for the Taupō Fishing District were 54,116 for the 2007/08 season (DOC), whereas FGNZ licence sales for the rest of the country were only 97,215 (Unwin, 2009).

Adult Whole Season (AWS) licences accounted for around 12,065 (22%) of the total Taupō Fishery licence sales. The Otago FGNZ region was the closest to Taupō when comparing total AWS licence sales, with total Otago AWS sales reaching 6,743 (35.7%) of the total. Eastern Region, despite selling fewer than half of the amount of AWS licences as Taupō, made a very similar percentage of its' total sales from AWS licences (ie, compare Eastern Region 24.9% with Taupō 22.3%).

Adult 24 Hour (A24) licences are where Taupō greatly outsells any other region, with 22,732 sales recorded in the 2007/08 season. FGNZ A24 licence sales only reached around 27,317 for the rest of the country. Eastern Region, despite selling fewer than half of the amount of A24 licences as Taupō, made a very similar percentage of its' total sales from A24 licences (Eastern Region 46.7% and Taupō 42.0%).

Table 8: DOC/FGNZ licence sales comparison, 2007/08

		Taupō (DOC)	Eastern (FGNZ)	Otago (FGNZ)	New Zealand (FGNZ)
2007/08 Licence Sales	Total licences	54,116	21,620	18,898	97,215
	Adult Whole Season (AWS)	12,065	5,374	6,743	29,456
	AWS as % total Sales	22.3%	24.9%	35.7%	30.3%
	Adult 24 Hour (A24)	22,732	10,097	6,001	27,317
	A24 as % total Sales	42.0%	46.7%	31.8%	28.1%

Source: Department of Conservation and National Angling Survey 2007/08, NIWA, FGNZ Regional Annual Reports, APR Consultants

Notes: (1) As the Eastern and Otago regions were of the most popular fishing regions in the country, they were used as a proxy to calculate the amount of National AWS licences sold, based on total sales of 97,215 as presented in the National Angling survey, 2007/08.

(2) Part Season FGNZ data from the National Angling Survey 2007/08 was used as a proxy for calculating the total New Zealand 24H licences sold, due to similarities observed in the reported levels of Regional 24H sales, and National Survey level of Part Season licence sales.

(3) The majority of the remaining licence sales are made up by Adult Week (DOC) and Family (FGNZ) licences.

(4) Junior / child data not compared as DOC and FGNZ have differing classification for younger age brackets.

Taupō and Eastern Region fishing licence sales are compared in Table 8. The percentage of A24 licence sales for Taupō and the Eastern Region was greater than the national average (refer to Table 8). This suggests a high level of visitor activity.

Overall, A24 licences declined for both the Eastern Region and Taupō fisheries over recent seasons (Table 9). Either fewer visitors arrived in the area to fish, or those who came to Taupō undertook less fishing or a combination of both possibilities. In terms of Taupō's main international visitor markets that possess a preference for trout fishing, in recent years there has been less US visitors to New Zealand and Taupō (down 24.6% and 23.3% respectively from 2006 to 2011). This may explain some of the decline in terms of international visitor activity in Taupō.

The Taupō domestic visitor market in terms of visitor nights in 2012 has recovered to pre-recession levels. This suggests that a significant proportion of visitors who come to Taupō may now have a decreased preference for undertaking fishing. Possible reasons for this decline are a greater competition for visitors' limited holiday time, visitors increased preference for free-to-use recreational activities and/or a perception that the quality of Taupō fisheries has declined.

Table 9: Taupō (DOC) and Eastern Region (FGNZ) fishing licence sales comparison, 2008/09-2010/11

Year	Total Licence Sales		Adult Whole Season Sales		Adult 24 Hour Sales	
	E. Region	Taupō	E. Region	Taupō	E. Region	Taupō
2007/08	21,620	54,086	5,374	12,065	10,097	22,732
2008/09	20,336	48,760	4,891	10,955	9,115	19,667
2009/10	20,119	47,184	4,833	10,461	8,886	19,408
2010/11	18,319	42,235	4,525	9,791	7,976	17,718
Tot. Growth 07/08-10/11	-3,301	-11,851	-849	-2,274	-2,121	-5,014
Tot. Growth 07/08-10/11 (%)	-15.3%	-21.9%	-15.8%	-18.8%	-21.0%	-22.1%
Avg. Ann. Growth. Rate 07/08-11/12 (%)	-5.4%	-7.9%	-5.6%	-6.7%	-7.6%	-8.0%

Source: Department of Conservation, Eastern Region Fish and Game Council Annual Report 2011, and APR Consultants

Note: (1) Junior / child data not compared as DOC and FGNZ have differing classification for younger age brackets

We can observe that the proportion of Taupō's total license sales for both adult 24-hour and AWS licenses have remained relatively constant over the past few years (Table 10). This suggests that the causes of license sales decrease in difference license sales segments may be the same, rather than being segment specific. Reasons for license sales decreases can in part be explained by an increase in consumers' post-recessionary preferences for free-to-use recreational activities and an increased preference for recreational opportunities that are perceived as providing exceptional value-for-money. It also may imply that aside from fishing enthusiasts, among other consumer segments trout fishing has become generally less popular. Reasons for this decline in popularity may be the level of competition from a wide range of up-and-coming recreational opportunities and/or an increased perception that the quality of Taupō fisheries has declined over the past few years.

Anecdotal evidence suggests that despite the fact that there are fewer anglers in the Taupō District, effort and pressure on the fisheries has not declined at the same rate. In other words, attributable to a decrease in the number of people fishing there is now more room for dedicated anglers.

Table 10: Taupō (DOC) and Eastern Region (FGNZ) fishing licence sales composition, 2008/09-2010/11

Year	Adult Whole Season Sales		Adult 24 Hour Sales	
	E. Region	Taupō	E. Region	Taupō
2007/08	24.9%	22.3%	46.7%	42.0%
2008/09	24.1%	22.5%	44.8%	40.3%
2009/10	24.0%	22.2%	44.2%	41.1%
2010/11	24.7%	23.2%	43.5%	42.0%
PP. Chng. 07/08-10/11	-0.2%	0.9%	-3.2%	-0.1%

Sources: Department of Conservation, Eastern Region Fish and Game Council Annual Report 2011 and APR Consultants **5.2.4**

Understanding Commitment and Enduring Involvement in Outdoor Recreation in New Zealand (Jellum, Lovelock and Thompson, 2011)

This Otago University study was conducted to assess the level of “commitment and enduring involvement” in a range of outdoor recreational activities by New Zealanders. An online survey of 1,024 people was distributed to New Zealand residents from Wellington (20.5%), Christchurch (60.5%), Taranaki (2.1%) and Nelson/Malborough (15.3%) between September and November, 2010. Freshwater angling was one of the most prominent activities featured in the survey, with 478 of the 1,024 respondents identifying themselves as “Anglers.” Selected findings identified in the survey showed the average angler:

- Was male (94%);
- Was around 49 years old;
- Had full-time employment (76.8%); and
- Earned $60,001 - $80,000 annually.

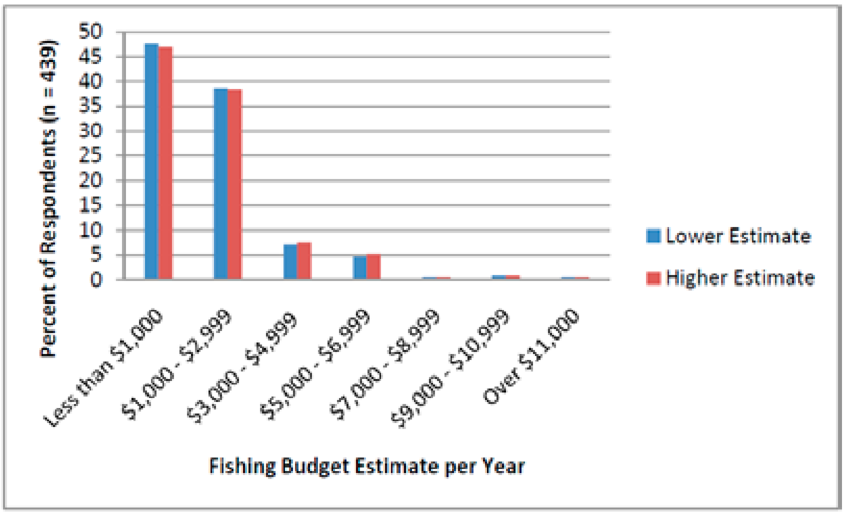
From the anglers identified, participation trends in fishing activity were also detailed. Anglers:

- Had fished for more than ten years (76.7%);
- Fished on a monthly basis (49%), followed by yearly (27%), and weekly (22%);
- During Summer (95%), Spring (72%), Autumn (67%), and Winter (32%);
- With 3 or less friends (42%), solo (30%), or with family (21%); and
- Utilised fly fishing (79%), lure fishing (75%), and bait fishing (19%).

People who spent time recreational fishing also took part in a multitude of other outdoor activities, such as camping (61%), marine fishing (58%), tramping (47%), hunting (36%) and mountain biking (30%).

Of those respondents that provided an estimate of annual expenditure on fishing (439 respondents), it is expected the average angler spends less than $1,000 per year on fishing (Figure 8).

Figure 8: Fishing budget estimate per year, 2010



Source: Understanding Commitment and Enduring Involvement in Outdoor Recreation in New Zealand, 2011

5.2.5 Fishing for Understanding (Beville & Kerr, 2008)

This Lincoln University study published in 2008 primarily looked into freshwater anglers preferences in terms of fishing sites in the Canterbury FGNZ Region. Results were based on a survey of 813 anglers, with the majority of respondents originating from within the Canterbury region (84%). Select findings from the survey determine the average recreational angler characteristics. As the Canterbury region is geographically and geologically removed from the Taupō Fishing District (with river fishing being much more prominent than lake fishing), findings should be treated as indicative.

Selected findings from the survey were that the average angler in the Canterbury region:

- Was between 41 and 50 years of age;
- Had 22 years of fishing experience;
- Fished 11-20 days per year;
- Earned $60,000 – $80,000 annually;
- 8% of respondents were international visitors; and
- 95% of respondents were male.

6.0 Survey results analysis

This section presents a summary and analysis of the economic impact made by visitors to the Taupō fisheries in the year ended June 2012. A selection of respondents' demographic, motivation and spending survey data collected from DOC's online survey were used as the basis of the analysis.

6.1 Respondent demographics

A total of 83% of the survey respondents were aged over 40 years. The two largest groups surveyed were those aged between 50 and 59 (26%) and those aged between 60 and 69 years (28%) (refer to Table 11). Note that DOC's write up of the survey's demographic data cross tabulated for those who fished, and those who did not. For presentational clarity, this section's analysis combines both groups for the purpose of providing an overview of the characteristics of those who currently undertake, or may have a future interest in undertaking fishing in Taupō.

Table 11: Age

Age (years)	Number (respondents)	Percent
16 to 19	7	1%
20 to 29	35	5%
30 to 39	83	11%
40 to 49	119	16%
50 to 59	191	26%
60 to 69	202	28%
70 plus	88	12%
Total	**725**	**100%**

Notes: (1) Analysis in the table above excludes respondents who did not specify an answer.

(2) Percentages shown in the table have been rounded and therefor may not sum to 100%.

A total of 88% of respondents were male, while 12% were female (refer to Table 12).

Table 12: Gender

	Number (respondents)	Percent
Male	627	88%
Female	89	12%
Total	**716**	**100.0%**

Note: analysis in the table above excludes respondents who did not specify an answer.

Both gender and age survey data correspond well with the profile of experienced domestic fresh-water anglers outlined in selected previous New Zealand recreational and fishing studies.

Respondent origin

Leaving aside Taupō residents, the top six areas survey respondents resided were Auckland (20%), Wellington Region (17%), Waikato Region (9%), Manawatu Region (7%), Bay of Plenty Region (5%) and Hawkes Bay Region (5%) (refer to Table 13).

A total of 26 (4%) of respondents were from overseas. There were 21 respondents from Australia, three from the US and two from Scandinavia.

Table 13: Origin

Area	Number	Percent
Taupō	166	23%
Auckland	142	20%
Wellington (including Wairarapa)	124	17%
Waikato	62	9%
Manawatu	49	7%
Bay of Plenty	37	5%
Hawkes Bay	33	5%
Taranaki	27	4%
Overseas	26	4%
Nelson/Marlborough	14	2%
Canterbury	13	2%
Whanganui	9	1%
Northland	8	1%
Otago	6	1%
Coromandel	3	0.4%
East Coast	3	0.4%
West Coast	3	0.4%
Southland	0	0.0%
Total	**725**	**100.0%**

Note: analysis in the table above excludes respondents who did not specify an answer.

1.1 Motivation for visiting Taupō

Approximately two-thirds (66%) of respondents' primary reason for visiting Taupō was to fish (ie, those for whom fishing was the sole or main reason for visiting) (refer to Table 14).

Table 14: Motivation for visiting Taupō to undertake fishing

Motivation	Number (respondents)	Percent
Sole/only reason	144	27%
Main reason	209	39%
Important reason	134	25%
A reason	44	8%
Not important	11	2%
Total	**542**	**100.0%**

Note: analysis in the table above excludes respondents who did not specify an answer.

Respondents' motivation for visiting Taupō other than to undertake fishing are shown in Table 15. A significant number of respondents (34%) did not specify their motivation. Leaving aside those who did not specify an answer the main reasons for respondents visiting Taupō was to take a holiday (46%) or visit friends and family (15%). Other reasons (71 respondents) for visiting Taupō specified were alternate forms of recreation such as hunting, skiing, mountain biking and tramping.

Table 15: Motivation for visiting Taupō other than to undertake fishing

	Number (respondents)	Percent
Holiday	290	46%
Not specified	215	34%
Visit friends or family	95	15%
Other	71	11%
Business	43	7%
Participate in or watch an event	34	5%
Conference	5	1%
Sample	636	

Notes: (1) As respondents could identify multiple categories will not sum 636 respondents and percentage will not sum to100%.

Respondent license type – representativeness of survey data

Table 16 shows a breakdown of Taupō fishing licence types purchased by respondents who currently have, or have purchased licenses in the past. Not all answers to the question were made by respondents who purchased licenses in one particular year. Despite this factor we can treat the data as if it was collected for a specific year.

Assuming that license type was a variable strongly correlated with the socio-economic characteristics of fishing behavior, this question provided an indication of how representative the survey's data was of various segments of the trout fishing community. Comparing the composition of DOC year ended June 2012 licence sales to the composition of the survey's licence sale data, we can observe that the survey over-represented adult season licenses by 66 percentage points and under-sampled adult 24-hour license by 39.3 percentage points. Overall, the survey's data generally represented those who currently possess an adult season Taupō fishing licence, or have purchased one in the past.

Table 16: Respondents' license type

	October 2012 DOC Survey		DOC 2011/12 licence sale data		
License type	Number (licences)	Percent	Number (licences)	Percent	PP difference
Adult season	512	86.9%	8,650	20.9%	66.0%
Adult week	53	9.0%	6,949	16.8%	-7.8%
Adult 24 hour	18	3.1%	17,520	42.4%	-39.3%
Child season	6	1.0%	3,329	8.0%	-7.0%
Child 24 hour	0	0.0%	4,915	11.9%	-11.9%
Total	**589**	**100.0%**	**41,363**	100.0%	

Notes: (1) PP denotes percentage points.

(2) Licence sales data was provided to APR by DOC.

(3) The percentage point difference was the difference between the DOC's survey percentages and licence sale data percentage composition.

6.3 Sample expenditure analysis

Respondents who travelled to Taupō to fish in the year ended June 2012 were asked to estimate their immediate family's annual expenditure (excluding fishing license expenditure) made in the District during their visits. Expenditure made by respondents whose sole or main motivation for visiting Taupō was other than fishing was excluded from the report's analysis of sample expenditure. This was because it was not possible to accurately estimate the proportion of these respondents' motivation (and hence economic impact) for travel to Taupō directly attributable to fishing. Smaller sample sizes data for Other International, Taupō, South Island and Australia segments appear to be too small to enable a reliable indication of these groups annual average expenditures (refer to Table 17).

The largest annual average expenditure was made by those from Australia ($5,657) followed by those from Auckland ($3,317). Expenditure made by Taupō residents' would have been made in the District even if fishing was not possible, therefore this expenditure was excluded from key statistics. Average annual sample expenditure across respondents' origin (excluding those who came from Taupō) was $2,655.

Table 17: Sample annual expenditure by respondent origin for respondents who sole or main reason for visiting Taupō District was to undertake fishing

	Taupō	Auckland	Wellington	Other NI	South Island	Australia	Other int	NS	Total across area	Total across area excluding Taupō
Sample	5	89	75	108	6	15	3	1	302	297
Total	$5,190	$295,193	$167,649	$228,435	$6,635	$84,850	$4,655	$1,020	$793,627	$788,437
Ann. average	**$1,038**	**$3,317**	**$2,235**	**$2,115**	**$1,106**	**$5,657**	**$1,552**	**$1,020**	**$2,628**	**$2,655**

Notes: (1) NS denotes non specified.

(2) Data pertains to the year ended June 2012.

Annual average sample expenditure (excluding Taupō) was largest in the accommodation sector ($922) followed by the food and beverages sector ($598), fishing or visit-related expenditure ($377) and the shopping/retail sector ($330) (refer to Table 18).

Table 18: Sample annual average expenditure by respondent origin and sector for respondents who sole or main reason for visiting Taupō District was to undertake fishing

Sector/area of visitor origin	Taupō	Auckland	Wellington	Other NI	South Island	Australia	Other international	NS	Across area average	Across area average ex. Taupō
Accommodation (includes batch)	$500	$1,102	$838	$780	$367	$1,640	$433	$500	$915	**$922**
Food and/or beverages	$170	$780	$519	$481	$267	$933	$500	$250	$591	**$598**
Entertainment and sightseeing	$20	$82	$65	$60	$22	$263	$50	$0	$76	**$77**
Shopping/retail	$152	$517	$227	$212	$58	$737	$250	$50	$327	**$330**
Travel within the Taupō District	$92	$304	$219	$214	$138	$433	$83	$120	$248	**$250**
Fishing or visit related spending	$100	$442	$246	$276	$217	$1,480	$218	$100	$372	**$377**
Other Expenditure	$4	$90	$122	$91	$38	$170	$17	$0	$99	**$100**
Across sector average	**$1,038**	**$3,317**	**$2,235**	**$2,115**	**$1,106**	**$5,657**	**$1,552**	**$1,020**	**$2,628**	**$2,655**

Notes: (1) NS denotes non-specified.

(2) The sample size was 287 respondents.

(3) NI denotes North Island.

Sample total annual expenditure by fishing license type for respondents who came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing is shown in Table 19. Only adult season and adult weekly license type data are large enough to provide an indication of average annual sample expenditure. Realistically, only adult season data could be regarded as capable of providing a robust indication on expenditure. Annual average sample expenditure associated with those who purchased adult season licenses was $2,894 while expenditure associated with those who purchased adult weekly licenses was $1,006.

Table 19: Sample total annual expenditure by fishing license type for respondents who came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

	Adult season	Adult week	Adult 24hr	Child season	Child 24hr	Not specified
Sample (respondents)	261	30	3	1	0	2
Total	$755,348	$30,191	$708	$260	0	$1,930
Average	**$2,894**	**$1,006**	**$236**	**$260**	**0.0**	**$965**

Data pertains to the year ended June 2012.

The largest annual average sample expenditure associated with those who purchased adult season licenses was made in the accommodation sector ($1,004) followed by spending made on food and beverages ($652), fishing or visit related spending ($412) and shopping/retail ($360) (refer to Table 20).

Table 20: Average annual sample expenditure by fishing license type and sector for respondents who came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Sector /license type	Adult season	Adult week	Adult 24hr	Child season	Child 24hr	Not specified
Accommodation (includes batch)	$1,004	$363	$25	$60	$0	$315
Food and/or beverages	$652	$220	$103	$60	$0	$225
Entertainment and sightseeing	$84	$34	$0	$20	$0	$25
Shopping/retail	$360	$132	$23	$10	$0	$50
Travel within the Taupō District	$272	$91	$40	$100	$0	$150
Fishing or visit related spending	$412	$133	$41	$10	$0	$100
Other Expenditure	$109	$33	$3	$0	$0	$100
Total	**$2,894**	**$1,006**	**$236**	**$260**	**$0**	**$965**

Notes: (1) The sample size was 261 respondents.

(2) Data pertains to the year ended June 2012.

6.4 Economic impact analysis

6.4.1 Methodology

Entity analysed

Economic impact analysis is based upon analysing the effects of the spending made by private or commercial entities. In this report's analysis the spending analysed is that made by visitors who travelled to Taupō District to undertake trout fishing[7].

Conversion of spending data to total value added, total output and total employment

In this report's analysis spending data (ie, termed 'direct output') was converted to a metric called value added (ie, GDP). Valued added is money in the form of profit, interest, taxes (local and national) and workers' remuneration (ie, salary and wages). The analysis of newly created value added in this section's analysis shows how much the size of the local economy will expand as a result of visitors' spending.

Expenditure (ie, direct output) data was also converted to total output (ie, this includes direct, indirect and induced flow-on spending effects) and total employment created or sustained (ie, this includes direct, indirect and induced flow-on employment creation effects).

Period analysed

This section represents an estimation of economic impact associated with visitor activity during the year ended June 2012.

Gross impact adjusted for non-additional economic impacts

The gross impact of visitor's spending needs to be adjusted to exclude impacts which are not additional to the local economy (ie, estimate a net impact). To estimate net economic impact, offsetting effects (ie, non-additional effects) need to estimated and then subtracted off from the gross impact. Selected typical non-addition effects (ie, off-setting effects) which usually must be taken into account are:

1. A proportion of visitors who attend an event or holiday in a particular area and simply change the timing of their visit to a selected area (ie, time switchers).

2. Events or activities which simply displace attendees to another event or activity which provides a similar bundle of spending opportunities in the same geographic area in the same period.

3. Council, sponsorship or grants funding etc. that would have occurred in the geographic area in the same year for a different project, event or activity, even if the particular project/event/activity being analysed had not taken place.

4. Local event attendees' impact is not considered additional as it is assumed that their annual discretionary leisure/recreational budgets are fixed and they would have spent their allocated funds in the District even if the event/activity of interest had not taken place.

In general off-setting effects are those forms of spending that would have occurred in the District even if the fishing was not a visitor attraction. The main sources of visitors' non-additional spending in the District were:

1. Taupō residents spending; and

2. Spending made by visitors to Taupō who fished but whose sole or main reason for visiting Taupō was to undertake activities other than fishing.

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7 Visitors' spending excluded expenditure made on fishing licenses.

Rating-up total sample expenditure to total population expenditure

The ratio of the estimated visitor population to the sample size can be used to scale-up the surveyed levels of spending to make an indicative estimate of total population economic impact attributable to fishing. Sample expenditure segmented by licence type was the data used in this report's analysis to scale up to the population level as this appeared to be well-correlated with visitor spending behaviour. Only adult season and weekly licence expenditure data was scaled up to the population level as the majority of respondents' purchased these types of licences. Economic impact estimates associated with respondents who possessed other licence types were made suing theoretical assumptions as the sample sizes associated with these groups were too small to enable the calculation of meaningful estimates.

Survey respondents were asked to detail their family's total expenditure in Taupō District during their most recent fishing season (year ended 30 June 2012). The number of adult season and weekly licenses sold by DOC in the year ended June 2012 was used to estimate the number of groups/ families who visited Taupō to fish and therefore rate up sample expenditure reported in the survey to the population level. To convert licenses to the number of groups who visited it was necessary to know how many licences on average were purchased by each group/family who visited Taupō to fish. Since this number is uncertain, total impacts associated with one, two and three licences per group were estimated to provide an indication of the potential range of impacts.

In the year ended June 2012 there were 8,650 adult season and 6,949 adult week licenses issued.

This report's analysis of sample expenditure excluded non additional impacts (ie, gross impacts) on the local economy associated with locals' expenditure and expenditure made by whose primary motivation for visit in Taupō was to undertake activities other than fishing. Therefore, the sample expenditure needed to be scaled up to the population level has similarly excluded these non additional impacts. To achieve this the proportions of respondents who made an additional economic impact out of the overall sample size of each license holder type was used as an estimate of the proportion of the population who made an additional economic impact. The population of adult season licence holders used was 4,409 (50.97% of 8,650 adult season licence holders) while the population of adult week licence holders used was 3,933 (56.6% of 6,948 adult week licence holders).

Multiplier effects

Direct output[8,9] (ie, the initial 'raw' spending) made in Taupō is subject to flow-on (multiplier) effects:

1. Visitor expenditure causes an on-spending effect within the industry sector in which the initial spend is made. This is called the indirect effect.
2. The on-spending effect will cause salaries, wages and profits to increase leading to an increase in household income. This in turn results in an increase in household expenditure (ie, an induced effect).

Direct, indirect and induced expenditure are collectively covered by what are termed as type-two multipliers, which are multiplied by the initial spend to give a total impact figure. The total flow-on effect is the difference between total impact and the initial expenditure.

Value added conversion factors and multipliers

Examples of average total employment tourism multipliers are shown in Table 21. To estimate the total impact of the visitors spending in Taupō, a total value added multiplier of 1.4 was used. This value lies within the range of multipliers associated with other relatively small areas (Table 21). Before the value added multiplier was applied to expenditure data (ie, direct output) it was converted to value added. The average value added conversion factor (ie, the ratio of direct value added to direct output) APR selected was 0.4.

8 Note that the word 'direct' denotes the initial spend made by visitors to Taupō District, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

9 Output (ie, spending) is a measure of cash-flows and is therefore a measurement of the level of business activity.

Table 21: Examples of average (ie, across sector) total value added tourism multipliers[10]

Location	Average ratio of direct value added to direct output (ie, raw expenditure)	Average (ie, across sector) total value added tourism multiplier (Type-Two)
Kaikoura	0.42	1.38
Rotorua	0.41	1.59
Westland	0.54	1.19
Christchurch	0.34	1.98
Akaroa	0.35	1.15

Source: Compiled from Butcher G. (2005). Economic Impacts of Tourism and Measurement Implications in Understanding the Host-Guest Encounter in New Zealand: Foundations for Adaptive Planning and Management.

Output multipliers

Examples of average total output (ie, expenditure) tourism multipliers are shown in Table 22. In APR's analysis to estimate total output (ie, expenditure plus all flow-on effects) impacts for Taupō District a total output multiplier of 1.4 was used.

Table 22: Examples of average (ie, across sector) total output (ie, expenditure) tourism multipliers

Location	Average total output tourism multiplier (Type-Two)
Kaikoura	1.31
Rotorua	1.49
Westland	1.19
Christchurch	1.75
Akaroa	1.11

Source: As specified for Table 21

Employment multipliers and conversion factors

Examples of average total employment tourism multipliers are shown in Table 23. In APR's analysis to estimate total employment (ie, this includes direct employment plus all flow-on employment) impacts for Taupō District a ratio of direct employment to direct output (ie, a conversion multiplier) of 11 FTEs per $1 million of direct expenditure was used while an average total employment tourism multiplier of 1.3 was used. Overall, APR assumed that total employment (direct employment plus flow-on employment) created or sustained in Taupō District was 14.3 FTEs per $1 million of direct expenditure (ie, direct output).

Table 23: Examples of average (ie, across sector) total employment tourism multipliers

Location	Average ratio of direct employment to direct output (direct FTEs per $1 million direct output)	Average (ie, across sector) total employment tourism multiplier (Type-Two)	Total FTEs per $1 million of direct output
Akaroa	9.41	1.08	10.16
Kaikoura	11.68	1.21	14.13
Westland	9.88	1.11	10.97
Rotorua	11.29	1.39	15.69
Christchurch	9.95	1.46	14.53

Source: As specified for Table 21

10 Figures shown in the table have been rounded to two decimal places.

6.4.2 Net impact estimation

Adult season licences

Estimates shown in Tables 24 to 26 assume one licence per family/group[11].

Total net value added impact - adult season licences

In the year ended June 2012, assuming one fishing license per family/group or individual, the total[12] net[13] value added to Taupō District's economy[14] as a result of spending made by families/groups who came to Taupō to fish and purchased adult season licenses was estimated to be $7.1 million.

The greatest total net annual value added impact on the local economy was made in the accommodation sector ($2.5 million) followed by the food and beverages sector ($1.6 million), fishing or visit-related spending ($1.0 million) and the shopping/retail sector ($0.9 million).

Table 24: Estimates of total annual value added impact made by respondents who purchased adult season licenses, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping /retail	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure by sector		$262,146	$170,237	$21,801	$93,986	$71,041	$107,612	$28,525	$755,348
B	Rating (ie, scaling) up sample expenditure (ie, direct output) to the population level expenditure (ie, total output) ($millions)	(A*16.89)/1,000,000	$4.4	$2.9	$0.4	$1.6	$1.2	$1.8	$0.5	$12.8
C	Converting direct expenditure to direct value added ($millions)	B*0.4	$1.8	$1.2	$0.1	$0.6	$0.5	$0.7	$0.2	$5.1
D	Converting direct value added to total value added ($millions)	C*1.4	$2.5	$1.6	$0.2	$0.9	$0.7	$1.0	$0.3	$7.1
E	**Percentage breakdown**		**34.7%**	**22.5%**	**2.9%**	**12.4%**	**9.4%**	**14.2%**	**3.8%**	**100.0%**

Notes:

(1)The word 'direct' denotes the initial spend made by visitors to Taupō District, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that the impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

(2) Numbers presented in the table may not sum or multiply precisely to stated totals, attributable to the fact that calculations for the stated totals were based upon figures with a higher level of precision (ie, a greater number of decimal places).

(3) The analysis assumes that each survey respondent was accurately able to report expenditure for the rest of their group.

(4) Estimates are made using data collected from 261 respondents.

11 One licence per family/group represents solo fishing which is most likely undertaken on rivers, whereas greater than one licence per family/group most likely represents family or groups of friends undertaking fishing excursions, most likely on the lake.

12 Ie, includes, direct, indirect and induced spending effects.

13 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

14 Excluding the impact of DOC's expenditure in the District funded by license sale revenue.

Total net output impact - adult season licences

In the year ended June 2011, assuming one fishing license per family/group or individual, the total[15] net[16] output injected into Taupō District's economy[17] by families/groups who came to Taupō to fish and purchased adult season licenses was estimated to be $17.9 million.

The greatest total net output impact on the local economy was made in the accommodation sector ($6.2 million) followed by the food and beverages sector ($4.0 million) and fishing or visit-related spending ($2.5 million).

Table 25: Estimates of total annual output impact made by respondents who purchased adult season licences, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure by sector (ie, direct output)		$262,146	$170,237	$21,801	$93,986	$71,041	$107,612	$28,525	$755,348
B	Rating (ie, scaling) up sample expenditure to the population level expenditure(population direct output) ($millions)	(A*16.89)/1,000,000	$4.4	$2.9	$0.4	$1.6	$1.2	$1.8	$0.5	$12.8
C	Converting direct output to total output (population total output) ($millions)	B*1.4	$6.2	$4.0	$0.5	$2.2	$1.7	$2.5	$0.7	$17.9
D	Percentage breakdown		34.7%	22.5%	2.9%	12.4%	9.4%	14.2%	3.8%	100.0%

Notes:

(1)The word 'direct' denotes the initial spend made by visitors to Taupō District, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that the impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

(2) Numbers presented in the table may not sum or multiply precisely to stated totals, attributable to the fact that calculations for the stated totals were based upon figures with a higher level of precision (ie, a greater number of decimal places).

(3) The analysis assumes that each survey respondent is accurately able to report expenditure for the rest of their group.

(4) Estimates are made using data collected from 261 respondents.

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15 Ie, includes, direct, indirect and induced spending effects.

16 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

17 Excluding the impact of DOC's expenditure in the District funded by license sale revenue.

Total net employment impact - adult season licences

In the year ended June 2012, assuming one fishing license per family/group or individual, the total[18] net[19] employment created or sustained in the Taupō District[20] as a result of the spending made families/ groups who came to Taupō to fish and purchased adult season licenses was estimated to be 182.5 full-time equivalent (FTE) jobs. The greatest total net employment impact on the local economy was made in the accommodation sector (63.3 FTEs) followed by the food and beverages sector (41.1 FTEs) and fishing or visit-related spending (26.0 FTEs).

Table 26: Estimates of total annual employment impact initiated by respondents who purchased adult season licences, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping /retail	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure (ie direct output) by sector		$262,146	$170,237	$21,801	$93,986	$71,041	$107,612	$28,525	$755,348
B	Rating (ie, scaling) up sample expenditure (ie, direct output) to the population level expenditure ($millions)	(A*16.89) /$1,000,000	$4.4	$2.9	$0.4	$1.6	$1.2	$1.8	$0.5	$12.8
C	Converting direct expenditure to direct employment (FTEs)	B*11 FTEs per $1 million direct output	48.7	31.6	4.1	17.5	13.2	20.0	5.3	140.4
D	Converting direct employment to total employment created or sustained(FTEs)	C*1.3	63.3	41.1	5.3	22.7	17.2	26.0	6.9	182.5
E	**Percentage breakdown**		**34.7%**	**22.5%**	**2.9%**	**12.4%**	**9.4%**	**14.2%**	**3.8%**	**100.0%**

Notes:

(1)The word 'direct' denotes the initial spend made by attendees, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that the impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

(2) Numbers presented in the table may not sum or multiply precisely to stated totals, attributable to the fact that calculations for the stated totals were based upon figures with a higher level of precision (ie, a greater number of decimal places).

(3) The analysis assumes that each survey respondent is accurately able to report expenditure for the rest of their group.

(4) Estimates are made using data collected from 261 respondents.

Sensitivity of economic impact associated with adult season licences to the number of season licences per family/group

The number of licenses sold by DOC in the year ended June 2012 was used to estimate the number of groups/families who visited Taupō to fish and therefore scale up sample expenditure reported in the survey to the population level. To convert licenses to the number of groups who visited it is necessary to know how many licences on average each group/family who visited Taupō to fish purchased. Since this number is uncertain, total impacts associated with one, two and three licences per group are shown in Table 27. One licence per group implies that the majority of those who came to fish came on their own where two or more licenses per family is more likely to represent a family-based excursion to Taupō.

18 Ie, includes, direct, indirect and induced spending effects.

19 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

20 Excluding the impact of DOC's expenditure in the District funded by license sale revenue.

Table 27: Sensitivity of economic impact associated with adult season licences to the number of adult season licences per family/group who came to Taupō to fish

	Licences per group/family		
Metric	**3**	**2**	**1**
Total output (million)	$6.0	$8.9	$17.9
Total value added (million)	$2.4	$3.6	$7.1
Total FTEs	60.8	91.2	182.5

Adult week licences

This section estimates the economic impacts associated with visitors' expenditure in Taupō who fished using adult week licenses. Because the survey's sample of this segment was small (ie, 30 respondents) the estimates are provided in this section on the basis of supplying an approximate indication of the quantum of impact. Estimates shown in Tables 28 to 30 assume one licence per family/group.

Total net value added impact - adult week licences

In the year ended June 2012, the total[21] net[22] value added to Taupō District's economy[23] as a result of spending made by families/groups who came to Taupō to fish and purchased whole adult week licences was estimated to be $2.2 million. The greatest total net annual value added impact on the local economy was made in the accommodation sector ($0.8 million) followed by the food and beverages sector ($1.6 million), fishing or visit related spending ($0.3 million) and the shopping/retail sector ($0.3 million).

Table 28: Estimates of total annual value added impact made by respondents who purchased adult week licenses, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping /retail	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure by sector		$10,901	$6,610	$1,005	$3,960	$2,730	$3,990	$995	$30,191
B	Rating (ie, scaling) up sample expenditure (ie, direct output) to the population level expenditure (ie, total output) ($millions)	(A*131.1)/1,000,000	$1.4	$0.9	$0.1	$0.5	$0.4	$0.5	$0.1	$4.0
C	Converting direct expenditure to direct value added ($millions)	B*0.4	$0.6	$0.3	$0.1	$0.2	$0.1	$0.2	$0.1	$1.6
D	Converting direct value added to total value added ($millions)	C*1.4	$0.8	$0.5	$0.1	$0.3	$0.2	$0.3	$0.1	$2.2
E	Percentage breakdown		36.1%	21.9%	3.3%	13.1%	9.0%	13.2%	3.3%	100.0%

Estimates are made using data collected from 30 respondents.

21 Ie, includes, direct, indirect and induced spending effects.

22 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

23 Excluding the impact of DOC's expenditure in the District funded by license sale revenue.

Total net output impact - adult week licences

In the year ended June 2012, the total[24] net[25] output injected into Taupō District's economy[26] by families/groups who came to Taupō to fish and purchased adult week licences was estimated to be $5.5 million.

The greatest total net output impact on the local economy was made in the accommodation sector ($2.0 million) followed by the food and beverages sector ($1.2 million) and fishing or visit-related spending ($0.7 million).

Table 29: Estimates of total annual output impact made by respondents who purchased adult week licences, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure by sector (ie, direct output)		$10,901	$6,610	$1,005	$3,960	$2,730	$3,990	$995	$30,191
B	Rating (ie, scaling) up sample expenditure to the population level expenditure(population direct output) ($millions)	(A*131.1)/1,000,000	$1.4	$0.9	$0.1	$0.5	$0.4	$0.5	$0.1	$4.0
C	Converting direct output to total output (population total output) ($millions)	B*1.4	$2.0	$1.2	$0.2	$0.7	$0.5	$0.7	$0.2	$5.5
D	Percentage breakdown		36.1%	21.9%	3.3%	13.1%	9.0%	13.2%	3.3%	100.0%

Notes:

(1)The word 'direct' denotes the initial spend made by visitors to Taupō District, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that the impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

(2) Numbers presented in the table may not sum or multiply precisely to stated totals, attributable to the fact that calculations for the stated totals were based upon figures with a higher level of precision (ie, a greater number of decimal places).

(3) The analysis assumes that each survey respondent is accurately able to report expenditure for the rest of their group.

(4) Estimates are made using data collected from 30 respondents.

24 Ie, includes, direct, indirect and induced spending effects.

25 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

26 Excluding the impact of DOC's expenditure in the District funded by license sale revenue.

Total net employment impact - adult week licences

In the year ended June 2012, the total[27] net[28] employment created or sustained in the Taupō District[29] as a result of the spending made families/groups or individuals who came to Taupō to fish and purchased adult week licenses was estimated to be 56.6 FTE jobs (refer to Table 28).

The greatest total net employment impact on the local economy was made in the accommodation sector (20.4 FTEs) followed by the food and beverages sector (12.4 FTEs) and fishing or visit-related spending (7.5 FTEs).

Table 30: Estimates of total annual employment impact initiated by respondents who purchased adult week licenses, came from outside of Taupō District and whose sole or main reason for visiting Taupō District was to undertake fishing

Code	Explanation	Formula	Accomm. (includes batch)	Food and/or beverages	Entertain, and sightseeing	Shopping /retail	Travel within the Taupō District	Fishing or visit related spending	Other Exp	Total across sector impact
A	Annual sample expenditure (ie direct output) by sector		$10,901	$6,610	$1,005	$3,960	$2,730	$3,990	$995	$30,191
B	Rating (ie, scaling) up sample expenditure (ie, direct output) to the population level expenditure ($millions)	(A*131.1) /$1,000,000	$1.4	$0.9	$0.1	$0.5	$0.4	$0.5	$0.1	$4.0
C	Converting direct expenditure to direct employment (FTEs)	B*11 FTEs per $1 million direct output	15.7	9.5	1.4	5.7	3.9	5.8	1.4	43.5
D	Converting direct employment to total employment created or sustained (FTEs)	C*1.3	20.4	12.4	1.9	7.4	5.1	7.5	1.9	56.6
E	**Percentage breakdown**		**36.1%**	**21.9%**	**3.3%**	**13.1%**	**9.0%**	**13.2%**	**3.3%**	**100.0%**

Notes:

(1)The word 'direct' denotes the initial spend made by attendees, whereas the term 'total' in an impact context denotes the fact that the impact detailed is inclusive of direct, indirect and induced effects. In other words the term 'total' denotes the fact that the impact considered is inclusive of the initial expenditure and all its flow-on (re-spending) effects.

(2) Numbers presented in the table may not sum or multiply precisely to stated totals, attributable to the fact that calculations for the stated totals were based upon figures with a higher level of precision (ie, a greater number of decimal places).

(3) The analysis assumes that each survey respondent is accurately able to report expenditure or the rest of their group/family.

(4) Estimates are made using data collected from 30 respondents.

27 Ie, includes, direct, indirect and induced spending effects.

28 In other words, the estimate excludes spending made by Taupō residents and those whose primary motivation for visiting Taupō District was to undertake activities other than fishing.

29 Excluding the impact of DOC's expenditure in the District funded by licence sales revenue.

Sensitivity of economic impact associated with adult week licences to the number of week licences held per family/group

The number of licenses sold by DOC in the year ended June 2012 was used to estimate the number of groups/families who visited Taupō to fish and therefore scale up sample expenditure reported in the survey to the population level. To convert licenses to the number of groups who visited it was necessary to estimate how many licences on average each group/family who visited Taupō to fish purchased. Since this number was uncertain, total economic impacts associated with one, two and three licences per family/group are shown in Table 31.

Table 31: Sensitivity of economic impact associated with adult week licences to the number of week licences held per family/group

	Licences per group/family		
Metric	**3**	**2**	**1**
Total output ($ million)	$1.8	$2.8	$5.5
Total value added ($ million)	$0.7	$1.1	$2.2
Total FTEs	18.9	28.3	56.6

Adult 24-hour licences

The survey did not provide a significant amount of data pertaining to those purchased adult 24-hour licenses, therefore in this section indicative estimates are made about this group's fishing related economic impact based on relatively conservative assumptions.

There were 17,520 adult 24-hour licenses issued in the year ended June 2012. Key assumptions made in this section's analysis were:

- The majority of visitors to Taupō District who come to fish using adult 24-hour licences are domestic day visitors with an average minimum expenditure of $50 per person per day (excluding license fees);
- All 24-hour licenses were purchased by those who came from outside of Taupō, therefore all money spent in Taupō District was additional to the local economy;
- The primary motivation for visitors being in Taupō during the day modelled in this section's analysis was to fish therefore all money spent in Taupō District was additional to the local economy;
- The visitors who came to Taupō may have stayed longer than one day but only the expenditure associated with the day they fished was considered;
- There may have been a number of friends and family who accompanied licence holders and these people may not have come to Taupō if the licence holder had not visited. Therefore, these peoples' impact would have created an additional economic impact. Selected scenario levels regarding the number of accompanying individuals was modelled with each additional person adding $20 visit expenditure over and above the initial $50 impact.
- The impact multipliers and conversion factors used in the analysis of adult season and week licences was also used in this section's analysis.

The total output, value added and FTEs associated with adult 24-hour licence holders who are accompanied by one other adult who did not fish was estimated to be $1.7 million, $0.7 million and 17.5 FTEs.

Table 32: Economic impact of adult 24-hour licence holders

Average no. of people accompanying licence holder(s) (excluding children with 24-hour licences)	Total output (million)	Total value added (million)	Total FTEs
0	$1.2	$0.5	12.5
1	$1.7	$0.7	17.5
2	$2.2	$0.9	22.5

Child 24-hour licence

There were 4,915 adult 24-hour licenses issued in the year ended June 2012. Assumptions made in this section's analysis were:

- The majority of visitors to Taupō District who come to fish using adult 24-hour licences were domestic day visitors. Children who used 24-hour licences were associated with an additional $20 per person expenditure in Taupō on top of that made by their parents;
- For simplicity it is assumed that all children who fish are accompanied by parent(s) who fish and whose impact was modelled in the previous section under adult 24 hour licences. The case of a child using a 24-hour licence to fish with an adult who possessed a season licence to undertake on a one-off fishing excursion was ignored.
- All the assumptions made for adult 24-hour licences in the preceding section all apply.

Table 33: Economic impact of child 24-hour licences

Total output (million)	Total value added (million)	Total FTEs
$0.14	$0.06	1.41

Child season licences

The impact of child season licences was covered by adult season licenses as survey respondents were asked to detail expenditure made by their immediate family and the majority of families who came from outside of Taupō that purchased child season licenses would at least possess one adult season licence.

Impact of adult season license holders whose sole or main reason for visiting Taupō was to undertake activities other than fishing

In the sample there were 261 respondents who used adult season licenses, came from outside of Taupō and whose primary reason for visiting the area was to fish. The number of adult season licence holders excluding those from Taupō was 400 respondents while the number from Taupō was 112. Therefore, 139 respondents (ie, 400 respondents minus 261 respondents) divided by total sample of 512 adult season licence holders (ie, 27.12%) provided an estimate of the proportion of the population who came from outside of Taupō but whose primary reason(s) for visiting were to undertake activities other than fishing. In the year ended June 2012 there were 8,650 adult season licenses issued. Therefore, the population of adult season licence holders whose sole or main reason for visiting Taupō during 2012 was to undertake activities other than fishing was estimated to be 2,348 people (27.12% of 8,650 people who purchased adult season licence holders).

These individuals expenditure relating to days they fished was not accurately provided by the survey as the survey asked for expenditure made in Taupō during the latest fishing season (ie, the year ended June 2012), much of which for these respondents was associated with attractors to Taupō which were not fishing related. APR has attributed expenditure, and therefore the impact made on the days respondents fished during the season to the fisheries. A conservative approach was taken by modelling the minimum days in which fishing was undertaken. Since a season licence costs $90 per person and a 24-hour license costs $17 per person, if an individual intended to fish on six or more times (during different weeks), then they would be better off purchasing a season licence than a 24-hour licence. APR has a selected a representative level of ten fishing days per year (ie, ten impact days) for adult season licences holders whose sole or main reason for visiting Taupō was generally for other reasons than fishing.

This number of fishing occasions implies that those with adult season licences were regular visitors to Taupō for work and/or leisure/recreational pursuits, with fishing being an activity which is enjoyed, but not strong enough to attract participants on its own. A strong version of impact attribution theory would set the fisheries' net impact at zero for those licence holders whose sole or main reason for visiting Taupō was generally other than fishing. A softer version of impact attribution, as applied by APR in this report, is to attribute a conservative impact associated with the spending which occurred during the days in which the fishing activity was undertaken.

Assumptions made in this section's analysis were:

- The majority of visitors to Taupō District who come to fish using adult season licences are domestic day visitors with an average minimum expenditure of $50 per person per day (excluding license fees);
- For visitors who came to Taupō but stayed longer than one day (ie, they were not day visitors), only the expenditure associated with the day they fished was considered to make an impact;
- There may have been a number of friends and family who accompanied licence holders and these people may not have come to Taupō if the licence holder had not visited. Therefore, these peoples' impact will have created an additional economic impact. Selected scenario levels regarding the number of accompanying individuals was modelled with each additional person adding $20 visit daily expenditure over and above the initial $50 impact.
- The impact multipliers and conversion factors used in the analysis of adult season and week licences was also used in this section's analysis.
- Licence holders went fishing on a minimum of ten days per year (in order to justify the purchase of their season licence)

Table 34: Economic impact associated with adult season licence holders whose sole or main reason for visiting Taupō was to undertake activities other than fishing

Average no. of people accompanying licence holder	Total output (million)	Total value added (million)	Total FTEs
0	$1.6	$0.7	16.8
1	$2.3	$0.9	23.5
2	$3.0	$1.2	30.2

Impact of adult week license holders whose sole or main reason for visiting Taupō was to undertake activities other than fishing

The proportion of the 53 sample respondents who purchased adult week licenses who came from outside of Taupō and whose sole or main reason for visiting Taupō during 2012 was to undertake activities other than fishing was 43,4% (ie, 23 respondents out of a total of 53 respondents). The population of adult week licence holders who came from outside of Taupō and whose sole or main reason for visiting Taupō during 2012 was to undertake activities other than fishing was estimated to be 3,015 (43.4% of 6,948 people who purchased adult week licences in the year ended June 2012). APR attributed expenditure and therefore the impact made on the days respondents fished during the season to the fisheries. A conservative approach was taken by modelling the minimum days in which fishing was undertaken. Since a DOC week licence costs $38 per person and a 24-hour license costs $17 per person, if an individual intended to fish on three or more days on a visit in which they intended to stay in Taupō for the best part of a week, then they would be better off purchasing a week licence. APR has a selected a representative level of four fishing days per year (ie four impact days per year) in which a net additional impact was made.

Assumptions made in this section's analysis were:

- The majority of visitors to Taupō District who come to fish using adult season licences were domestic day visitors with an average minimum expenditure of $50 per person per day (excluding license fees);
- For visitors who came to Taupō and stayed longer than one day (ie, they were not day visitors), only the expenditure associated with the day in which they fished was considered to make an impact;
- There may have been a number of friends and family who accompanied licence holders and these people may not have come to Taupō if the licence holder had not visited. Therefore, these peoples' impact will have created an additional economic impact attributable to fishing. Selected scenario levels regarding the number of accompanying individuals was modelled with each additional person adding $20 visit expenditure over and above the initial $50 impact.
- The impact multipliers and conversion factors used in the analysis of adult season and week licences was used in this section's analysis.
- Licence holders went fishing on a minimum of four days (in order to justify the purchase of their week licence).

Table 35: Economic impact associated with adult week licence holders whose sole or main reason for visiting Taupō was to undertake activities other than fishing

Average no. of people accompanying licence holder	Total output (million)	Total value added (million)	Total FTEs
0	$0.8	$0.3	8.6
1	$1.2	$0.5	12.1
2	$1.5	$0.6	15.5

6.4.3 Summary of impact estimates

The most reliable estimates attributable to the sample size used were those relating to adult season licences. Given the much smaller sample size associated with adult week licence data these category's estimates are less reliable. Survey-based estimates of adult season and week licences total economic impacts were $23 million (total output), $9 million (total value added) and 239 FTEs (jobs created or sustained). Impact estimates made using theoretical assumptions about visitors' expenditure were made on the basis of providing a relatively conservative indication of licence impacts that were not covered by the surveys' responses. A conservative estimate of total impact associated with the visitors spending in Taupō attributable to the Taupō fisheries was $29 million (total output), $11 million (total value added) and 294 FTEs (jobs created or sustained).

Table 36: Summary of impact estimates

Type of estimate	Impact type	Total output (million)	Total value added (million)	Total FTEs	% of total impact
Based on DOC survey data (n= 261)	Adult season (sole or main reason for visiting Taupō was fishing)	$17.90	$7.10	182.5	62.2%
Based on DOC survey data (n=30)	Adult week (sole or main reason for visiting Taupō was fishing)	$5.50	$2.20	56.6	19.3%
Sub-total – survey based estimates		$23.4	$9.3	239.1	81.5%
Based on assumptions about visitor expenditure	Adult 24-hour	$1.70	$0.70	17.5	6.0%
Based on assumptions about visitor expenditure	Child 24-hour	$0.14	$0.06	1.4	0.5%
Based on assumptions about visitor expenditure	Adult season (fishing was not the primary reason for visiting Taupō)	$2.30	$0.90	23.5	8.0%
Based on assumptions about visitor expenditure	Adult week (fishing was not the primary reason for visiting Taupō)	$1.20	$0.50	12.1	4.1%
	Total (million or FTEs)	$29	$11	294	100.0%

Notes:

(1) Child season impact was included within the adult season impact as respondents were asked to report spending of their entire group/family.

(2) Adult and week season impact estimates assumed one license per family/group/ individual who visited Taupō. This implies that the majority of those who came to Taupō to undertake fishing came on their own, rather than as a family or group of friends.

(3) Adult 24-hour, child 24-hour, adult season (where fishing was not the primary reason for visiting Taupō) and adult week (where fishing was not primary reason for visiting Taupō) estimates assumed that on average one non-fishing person accompanied the person who fished on their visit to Taupō.

6.4.4 Conclusions

This report's most defensible estimates are those made for season licence holders. In other words, the survey's data enabled partial estimates of Taupō fishing visitors' impact rather than undervaluing the fisheries per se. Conservative assumptions were made in order to generate a more complete estimate of Taupō visitorss economic impact attributable to fishing. Overall, it appears reasonable to assert that the fisheries support nearly 300 jobs, create at least $29 million in business turnover and add $11 million to the size of the economy.

Deryck Shaw's economic impact assessment of the Taupō fisheries impact in the year ended June 1983 estimated the total output (ie, total turnover) to be $10.8 million and 244 FTEs. Between 1983 and 2012 annual CPI inflation has averaged approximately 4.2% p.a. Taking into account GST increases, an inflation adjusted impact would be at least $30 million. Methodological differences between the 2012 and 1983 impact estimates in terms of data gathering (web-survey and theoretical estimates compared to postal survey and person-to-person surveying) as well as the fact that money should be conceptualised and understood within relative price structures, expected quality of life and consumer paradigms (in different epochs) seems to imply that the two estimates are not directly comparable. What we can observe is that the two estimates are of a similar quantum.

6.4.5 Recommendations

1. The survey needs to be carried out on a regular basis (at least every two to three years etc.) so that a time series of impact estimates can be collated and analysed for potential patterns. The survey needs to find a way in which it can engage a wider range of respondents (ie, respondents for different licence types). Potentially there may need to be several surveys written for different consumer segments which are administered in different cost-effective ways.
2. The survey needs to ask respondents who detailed their spending about how many people on average they were accompanied by on their visits to Taupō. This would enable a per person expenditure to be calculated.
3. The survey needs a question added which asks how many times respondents visited Taupō in the latest season. This will enable an average visit expenditure to be calculated (see recommendation four detailed below).
4. The survey' expenditure question should ask respondents about their average visit expenditure. This could be used to calculate an annual economic impact in conjunction with the number of visits per year specified. APR's view is that respondents' average weekly visit expenditure estimates would be much more likely to be more accurate than their annual estimates.
5. For those respondents whose sole or main reason for visiting Taupō was for motivations other than fishing the survey should have a question added which asks them about how many days in the latest season they went fishing. Expenditure made on days respondents went fishing could be attributed to the fisheries.

6.4.6 Key limitations of the economic impact analysis

1. Most of the survey's data pertained to adult and week season license and therefore the report's most robust impact estimates are those made for these groups.

2. The survey data was not collected on a random basis thereby the data collected for season license holders may be slightly biased.

3. Respondents were asked to estimate their visit expenditure during an entire season which may lead to biased sample estimates.

4. Impact multipliers used in analysis were averages over the sub-sectors which make up the overall tourism sector and were chosen to correspond to Taupō District's economy rather than purchased for the specific purpose of this report's analysis.

5. The impact estimated made in this report exclude impacts made by DOC spending in Taupō funded by license sales revenue.

6. Not only was there uncertainty around survey-based expenditure estimates but also around the population sizes of those who came to Taupō to fish. The choice of how many licences there were per family/group on average makes a significant difference to impact estimates and represents a choice around what type of fishing each licence type predominantly represents (ie, one licence per family/group represent solo fishing versus greater than one licence per family/group which most likely represents family or groups of friends undertaking fishing excursions).

Overall, impact estimates made in the report are useful for gauging the quantum of impact associated with season license holders' annual expenditure in Taupō District, rather than making a precise determination of economic impact.

7.0 Discussion

Among its strategic objectives, DOC seeks to increase revenue from the Taupō fisheries and more generally contribute to the Taupō economy. Increasing revenue for DOC amounts to increasing sales in fishing licences. This implies a need to focus on growing the angler market. The angler market in turn is a specialised segment of the wider visitor market. It is the wider market inclusive of anglers that attracts new money to the Taupō area and consequently grows the Taupō economy. Elements that could be explored in order to achieve growth in both the angler market and wider visitor market include:

- identify what might attract people to Taupō;
- explore how to extend their stay in Taupō;
- explore how to increase their spend per day while they are in Taupō;
- understand some of the influencing environmental factors affecting visitors' decision making; and
- identify some of the trends in the visitor market.

Demographic shift

New Zealanders make up the majority of visitors to the Taupō area. The demographic profile of New Zealanders is shifting towards an older population. This means that New Zealand's population is getting more like the characteristic profile of anglers. Due to this demographic alignment, there may be opportunities to promote the appeal of angling to a wider audience than was previously possible.

Link fishing to a wider Taupō tourism experience

Importantly, from a perspective of attracting more visitors to the Taupō area, the angler demographic has some further typical features, for example, they could have families who may or may not travel with them. Identifying and promoting the Taupō area as more than the rivers and lakes of a trout fishing paradise may enable anglers to persuade family members to visit the area and consequently spend more and extend their stay. Families may be attracted by a more diverse tourism offer, for example, Taupō's boutique shopping, the lakeside walkways, Huka Falls, and Lake Taupō's beaches (including hot water beaches).

Link fishing to other growing attractions

When visiting the area anglers will typically undertake other activities. For example, 30% of people who went recreational fishing also went mountain biking, which is a rapidly growing tourism attraction for the central North Island. Taupō has existing strengths in mountain biking, such as the W2K trail. It may be possible to increase sales of fishing licences and visitor numbers to Taupō generally by, for example, marketing to mountain bikers or developing combination touring packages that include combinations of mountain biking, trout fishing and other attractions and activities available in the Taupō area.

A growing market: China's middle class

The fastest growing (by percentage) visitor market is from China, however, at this stage absolute numbers are relatively small, under 6,000 visitors in 2011. At present this visitor market is dominated by tour groups but is understood to be increasing in terms of its independent traveller sector. The growth of Chinese independent travellers corresponds with a growing Chinese middle class. This group will continue to grow rapidly, and in the future may have huge potential. It is one to watch.

Focus on major existing markets: Australia, New Zealand, Europe and the USA

Australia is Taupō's largest (and largest growing) international market in terms of numbers of visitors (104,661[30]), followed by the UK (55,078), Other Europe (54,539), Germany (26,941) and the USA (24,241). The highest visitor numbers to Taupō are from Auckland (272,456) and Wellington (175,626). The Bay of Plenty (101,311), Manawatu (86,453), Hawkes Bay (77,006) and Waikato (124,836) also contribute strongly to visitor numbers to Taupō.

Due to the above statistics, it will likely be most productive to promote Taupō to the Auckland, Wellington, Waikato, Bay of Plenty, Hawkes Bay and Manawatu domestic visitor markets. Marketing to international visitors should focus on Australia, by far the largest and closest international visitor market. There may be benefits to marketing the area to the UK and Europe as well as the USA, however, marketing within these huge markets for relatively low numbers may have prohibitive cost to benefit ratios.

Focus international marketing on river fishing

An interesting finding from the National Angling Survey NIWA (Unwin, 2009) was that overseas visitors prefer river fishing to lake fishing. When developing marketing material to appeal to the international market, it may be more effective in attracting anglers to the Taupō area if the marketing material focuses on the diverse range of rivers available to anglers in the Taupō area. This may contradict the existing focus on "Great Lakes" marketing.

Economic conditions

Economic conditions affecting tourism based economies in New Zealand, include:

- The global economic recession. This affects the ability of people to travel for their holidays and may reduce their ability to spend when they do travel. The Ministry of Business, Innovation and Employment's (MBIE's) annual forecasting programme predicts that
- The high New Zealand dollar. The cost of purchasing the New Zealand dollar reduces the effective spending levels of visitors.
- Fuel costs. The high cost of fuel affects visitors from within New Zealand from driving large distances from their homes. Due to high fuel costs, New Zealanders may be more inclined to visit attraction closer to home.

Highlights from MBIE New Zealand Tourism Forecasts 2012-2018[31]

- Tourism revenue will recover from a sharp slowdown, brought on by the Global Financial Crisis (GFC). Spending will grow by 9% by December 2018 recovering to the pre- downturn level.
- The outlook is challenging for the next 1-2 years but total tourism spending will pick up again once the worst of the Global Financial Crisis passes.
- Visitor numbers will rise. Weak demand from debt-ridden traditional Western markets will be more than offset by robust demand from Australia and emerging Asia (China in particular).
- The average spend per day will hold steady but the average length of stay will continue to trend downwards. The main driver is a shift in the mix of visitors towards more short-haul, for example from Australia and Asia, who tend to stay for a shorter period. In addition, many visitors will be in New Zealand to visit friends and relatives, rather than on holiday, when they tend to spend more.
- The markets offering the best growth prospects are China, Australia, Germany and emerging markets. Australia will continue to grow strongly, building on the strong ties between New Zealand and Australia. Germany will rebound once the worst of the Eurozone sovereign debt crisis has passed. China and other emerging markets are the greatest source of opportunity. Their economies are industrialising, urbanising and rapidly growing the number of middle-class households. Higher incomes will lead to international travel, including to New Zealand.

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30 All figures quoted are for the year 2011.

31 New Zealand's tourism sector outlook, Ministry of Business, Innovation and Employment, 2012

7.1 Opportunities to grow the market

1. Link fishing to wider Taupō attractions

Taupō has an enduring strength in freshwater fishing, however, the typical angler may be constrained by the need to engage other family members' interests for the same visit period in Taupō. Therefore, to potentially increase angler visits and visits to Taupō in general it may be beneficial to link fishing to a wider Taupō tourism experiences. Further, it may be possible to increase sales of fishing licences and visitor numbers to Taupō generally by marketing to specific groups or a segment of interest groups. For example, this could cover packages that include combinations of mountain biking, trout fishing and other attractions and activities available in the Taupō area.

2. Main markets

The major markets for both anglers and visitors in general to the Taupō area are New Zealand domestic visitors, especially Auckland, Wellington, Bay of Plenty, Hawkes Bay, Waikato and Manawatu. The strongest international market is Australia, which is showing strong and ongoing growth. Other significant international visitor markets include the UK (and Europe more generally) and the USA, all of which are relatively stagnant due to economic conditions. China continues rapid economic growth manifesting through an expanding and increasingly independent and demanding middle class.

3. A growing market: China's middle class

The fastest growing (by percentage) international visitor market is from China, however, at this stage absolute numbers are relatively small, under 6,000 visitors in 2011. This group will continue to grow rapidly, and in the future may have huge potential.

4. Focus international marketing on river fishing

An interesting finding from the National Angling Survey NIWA (Unwin, 2009) was that overseas visitors prefer river fishing to lake fishing. When developing marketing material to appeal to the international market, it may be more effective in attracting anglers to the Taupō area if the marketing material focuses on the diverse range of rivers available to anglers in the Taupō area. This may contradict the existing focus on "Great Lakes" marketing.

5. Economic conditions

Current economic conditions and the high New Zealand dollar have both likely contributed to the reduction in visitor arrivals to the Taupō area between 2000 and 2011 of over 5%[32]. The tourism sector is likely to continue to experience challenging conditions, however, in the medium to long term, economic conditions and consequently the tourism sector are expected to improve.

32 According to Statistics New Zealand, Commercial Accommodation Survey.

8.0 Recommendations

8.1 Recommendations to grow Taupō's economy

8.1.1 Integrate marketing 1

Explore integrating angler focused marketing with more general and family based attractions to facilitate attracting anglers and their families to the Taupō area. This widens the attraction of visiting Taupō to the whole family rather than those only focused on angling.

8.1.2 Integrate marketing 2

Explore integrating other activities, such as mountain biking, within marketing material developed to attract anglers. The same people who are attracted to an area for angling are known to undertake other activities on a visit and as such it may be more effective to appeal to several activities in combination.

8.1.3 Market Taupō's rivers and streams to anglers

Findings indicate anglers' preference for fishing on rivers as opposed to lakes. Taupō has strength in both. It may be more effective to increase the focus of marketing material onto Taupō's rivers.

8.1.4 Focus on existing markets

Taupō's visitors are predominantly from several domestic regions and Australia. It is likely to be more effective to focus on building these existing markets than attempting to develop smaller existing or new markets.

8.1.5 Identify new markets

Markets are in flux. The Japan market, for example, is shrinking and the China market is growing rapidly. Although still relatively small, the China market has significant potential and it may be worth taking steps to start to position Taupō as an area of choice for fishing.

8.2 Other recommendations

8.2.1 Collect licence data

One of the challenges for developing an accurate and comprehensive picture in terms of, for example, demographic profile or angler effort is that insufficient data has been collected at the point of sale for licence sales. To be more fully informed for the purposes of, for example, marketing and better decision making, it is vital to have obtained this kind of information. As such, it is a strong recommendation that such information is obtained at licence point of sale.

APPENDIX 1: FISH & GAME NEW ZEALAND REGIONS

Source: National Angling Survey 2007/08, NIWA

APPENDIX 2: International Visitor Activity & Projections

Selected tourism sector profiles have been analysed for major tourist groups which were likely to take part in recreational fishing in the Taupō Fishing District. Data includes travel trends and visitor stay characteristics from 1999-2008 and forecasts for 2011-2016. Sector profiles figures and information paraphrased from the Ministry of Economic Development: www.med.govt.nz/sectors-industries/tourism/tourism-research-data/other-research-and-reports/sector-profiles

Australia

The majority of Australian visitors travel independently and prefer self-driven transportation, with a high incidence of return visitors and families travelling to New Zealand. Likely future trends in Australian visitors to New Zealand include:

- Good long-term prospects for the Australian economy due to its significant resource base and relative proximity to fast growing Asian markets. This strength will continue to drive Australian outbound travel in the future, including to New Zealand.
- Strong friends and family linkages between Australia and New Zealand which will continue to drive growth in the visiting friends and relatives segment.
- Sustained price competition on trans-Tasman routes which will continue to stimulate demand for travel to New Zealand. The share of trans-Tasman airline seats operated by low cost carriers is expected to continue rising (it increased from 17% in 2008 to 24% in 2009), and this trend is likely to keep trans-Tasman airfares low.
- New Zealand's gradual transition from a destination that Australians would like to visit someday to one they intend to visit soon, and high rates of repeat visitation (around three quarters of Australian arrivals have been to New Zealand before).

Australia is New Zealands largest proximal neighbour and accounts for the majority of our inbound and outbound travellers. In 2008, around 40% (over 976,000) of New Zealand's total overseas visitor arrivals originated in Australia, an 86% increase since 1999. These figures are largely driven by an increase in holiday makers (382,000 in 2008), a large number of VFR's (360,000 in 2008), and a large proportion of visitors travelling to New Zealand for business (189,000 in 2008).

The Australian visitor market differs largely from other major countries via a very high proportion of repeat visitors. Around 76% of the total Australian visitors had previously visited New Zealand in 2008. This statistic is heavily influenced by the close proximity of Australia and New Zealand, which has 95% of VFR's making repeat visits.

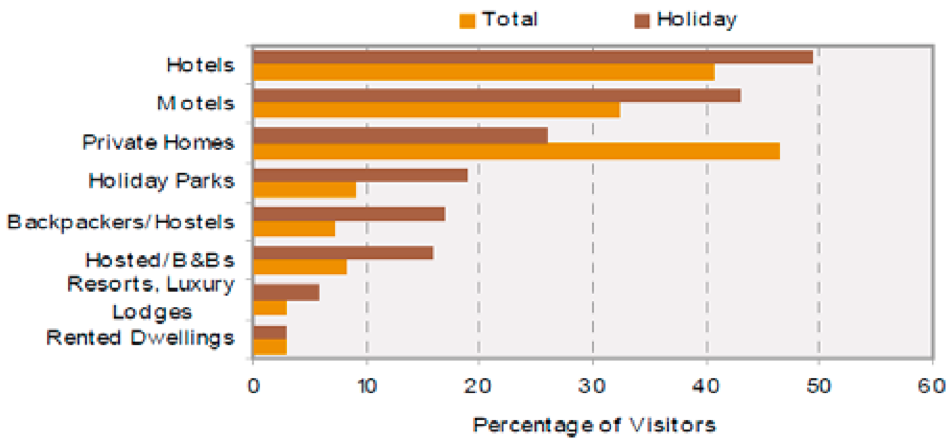
Australian visitors stayed, on average, for 11.7 days in 2008. The average length of stay increased to 13 days for VFR's but business travllers only stayed an average of 6.8 days (Figure 9). The meadian length of stay for all Australian visitors was 8.0 days in 2008.

Figure 9: Length of stay patterns for Australian visitors, 2008

Source: Ministry of Economic Development

The most common types of accommodation used by Australian visitors in 2008 were hotels (41%), motels (32%), and privately owned dwellings (47%). VFR's were the major influence in the high utilisation of privately owned dwellings with around 90% of VFR's using this accommodation method (Figure 10).

Figure 10: Main accommodation types used by Australian visitors, 2008



Source: Ministry of Economic Development

United Kingdom

Similar to Australian visitors, visitors from the UK tend to favour a relatively independent style of travel. Older couples hold potential as a viable market segment as around one-third of UK visitors travel with a partner or spouse and a significant number of UK visitors are over 55 years old.

Key facets of UK visitor growth in years ahead are:

- A recovery in the UK economy starting in 2011 which will lead to a gradual recovery in long-haul leisure travel. UK leisure travel to New Zealand contracted by 14% (20,000 arrivals) in 2009, accounting for 75% of the total fall in UK visitor arrivals.
- Lower growth rates than in previous years. The growth between 2000 and 2005 was driven by an exceptional set of circumstances including a massive increase in household wealth, significant media exposure (eg, Lord of the Rings) and the Lions Series in 2005. This combination of circumstances is not likely to be repeated during the forecasting period.
- Strong friends and family linkages which will continue to drive long-term growth in the visiting friends and relatives segment. This segment accounts for more than 40% of the UK market and only fell by 2% (2,300 arrivals) in 2009.

New Zealand received over 285,000 visitors from United Kingdom (UK) in 2008, around 12% of our total overseas arrivals for that year. This was a decline from a peak of 307,000 in 2005. Holiday makers made up 50% of visitor arrivals (144,000) and VFR's accounted for around 41% (117,000) in 2008.

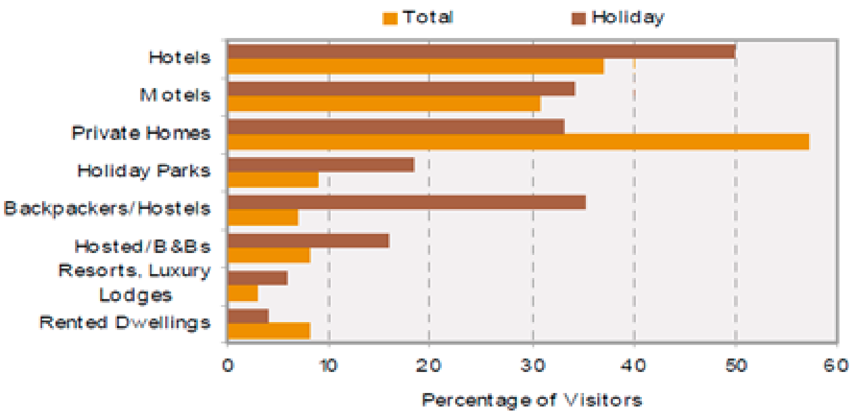
Visitors from the UK characteristically stay in New Zealand longer than other travellers, possibly due to the distance between our countries, and the high amount of visitors with relatives in our country. In 2008, the average length of stay for holiday makers was 28.2 days, whereas VFR's stayed, on average, 29.9 days. The median length of stay for all UK visitors was 20.1 days.

Figure 11: Length of stay patterns for UK visitors, 2008

Source: Ministry of Economic Development

The most common accommodation types used by visitors from the UK include hotels (37%), motels (31%) and privately owned dwellings (57%). Similar to Australian visitors to New Zealand, VFR's from the UK drove up the latter statistic, with around 95% of VFR's using privately owned dwellings when visiting New Zealand.

Figure 12: Main accommodation types used by U.K. visitors, 2008



Source: Ministry of Economic Development

United States of America

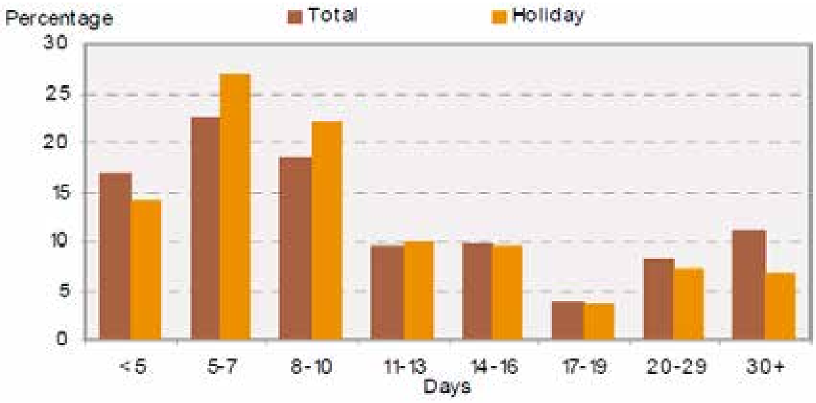
Visitors from the United States of America (US) prefer to travel independently.

- A recovery in the US economy began in 2010 with a return to long-term economic growth rates in 2011. The resulting lift in business and consumer confidence is expected to re-stimulate the market for international travel.
- A gradual increase is expected in seat capacity to pre-recession levels on Air New Zealand's existing US routes (Los Angeles and San Francisco), starting in November 2010.
- The increase in travel demand generated by Continental Airlines' new Houston-Auckland service started in November 2011. The service is likely to operate daily during peak season, and five days per week off-peak. Continental Airlines will be the first US airline to fly to New Zealand since United Airlines exited the market in 2003.
- A rebound in the cruise ship market in 2011/12 as US cruise operators deploy additional ships to the Oceania region.

US visitors accounted for around 9%, or 212,000 international visitor arrivals to New Zealand in 2008. This was a decrease from the peak of 226,000 visitor arrivals from the US in 2006. The US visitor market is predominantly holiday makers (62%), supported by a VFR market (19%) in 2008. Only 35% of US visitors had previously visited New Zealand in 2008. Again, VFR's provided the main driver behind this statistic, with 78% of VFR's having visited New Zealand previously.

Visitors from the US generally don't spend as long in New Zealand as their UK counterparts. On average, US visitors spent 17.8 days in the country in 2008, with holiday makers spending 13.6 days, and VFR's spending 21.2 days here. The median length of stay here was 9.0 days for the total visiting population coming from the US.

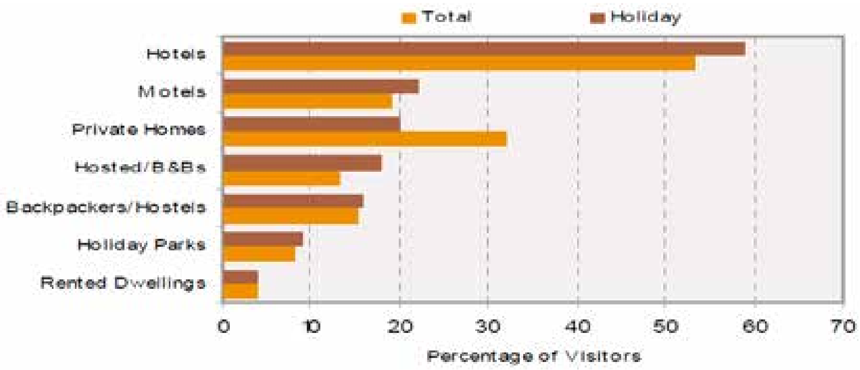
Figure 13: Length of stay patterns for US visitors, 2008



Source: Ministry of Economic Development

The majority of visitors from the US used hotels when staying in New Zealand (53%). As with other visitors, privately owned dwelling (32%) was influenced by VFR's with 94% of all VFR travelers using this kind of accommodation in 2008.

Figure 14: Main accommodation types used by US visitors, 2008



Source: Ministry of Economic Development

North-East Asia

The North East Asian visitor market defined as Korea, China/Hong Kong and Taiwan holds great potential. This number is growing due to the strong demand coming from China, however, this market is much more challenging to attract given their tendency to visit only mainstream well-established attractions (eg, Māori culture and geothermal attractions).

The North East Asian visitor market, especially the Chinese market, is much more likely than visitors from other countries to travel as a tour group or on a holiday package. An opportunity exists to tap this very lucrative market through forming relationships with specialist inbound tour operators. However, language barriers need to be taken into account as it cannot be assumed that visitors from these markets of North East Asia will understand English. This may be an obstacle or an opportunity given that guided tours will be an important part of the visitor experience.

China

China is currently experiencing high rates of economic growth and a rapidly expanding middle class. New Zealand is a desirable destination for Chinese travellers and can expect to benefit from this growth despite the expansion in the number of countries with Approved Destination Status (ADS). Key trends in the Chinese visitor market's growth ahead include:

- Direct services to Beijing and Shanghai which provide a sound platform for growth.
- Expected growth in air capacity between China and New Zealand during the 2011-2016 forecast period, including the entry of one or more Chinese carriers.
- The expanding Chinese population in New Zealand which will continue to drive growth in the VFR segment.
- The New Zealand-China Free Trade Agreement which will increase Chinese business travel to New Zealand.
- Growth in the Chinese export education market which will have a positive impact on both education and VFR arrivals

International visitor market projections

The major trends that have influenced New Zealand's international visitor composition in recent years which may in turn affect the Taupō Fishing District's visitor markets include:

- Strong growth in the Australian inbound market which accounted for 44% of total arrivals in 2009 (up from 31% in 2002).
- A sharp decline in Asian inbound market share despite rapid growth out of China. Asian arrivals in 2009 accounted for 16% of total arrivals (down from 23% in 2002).
- Moderate growth in European arrivals since 2002 but no change in market share.
- Practically no growth in arrivals from Northern America since 2002 and a falling market share.
- A drop in holiday market share from 53% in 2002 to 48% in 2009 and an increase in VFR market share from 26% to 32%.
- A sharp drop in organised tour and group activity, and a rise in independent travel.

A number of factors led to the Ministry of Economic Development deciding not to carry out a full annual forecasting exercise in 2011. A new forecasting approach will be developed later in 2013. However, a provisional national level forecast was published in 2011. An overview of these is provided in this section as they give an indication of international visitor trends to 2016 which may affect the Taupō Fishing District's tourism sector. Key trends from the national level forecasts are as follows:

- The Chinese tourism market will overtake the American and British markets in spending by mid-2012. Chinese tourists will spend $604 million in 2013, easily overtaking the expenditure of US and UK tourists. It won't be until 2014, however, that the number of Chinese tourists exceeds those of the UK and US.
- Australia will still be our largest market by a considerable margin, with $1.9 billion expenditure forecast for 2016.
- The long-term strength of the New Zealand dollar and the poorly performing economies in Britain and the United States of America are the main reasons for the stable numbers from those countries.
- In contrast, Chinese tourism is increasing globally and the New Zealand industry is deriving the benefits of this.

The main visitor markets with the fastest average annual visitor arrival growth are projected to be China (14.3% p.a.), Malaysia (9.9% p.a.), India (7.9% p.a.), South Korea (6.1% p.a.) and Australia (2.8%). New Zealand's top five main visitor markets in 2016 terms of visitor arrival numbers are projected to be Australia, Other, China, United States and United Kingdom (Table 37).

Table 37: Projected international visitor arrivals to New Zealand and growth in international visitor arrivals (2011 – 2016):

Main market	Projected average annual growth rate in visitor arrivals to NZ 2011-16
China	14.3%
Malaysia	9.9%
India	7.9%
South Korea	6.1%
Australia	2.8%
Japan	2.6%
Singapore	2.5%
United States	1.2%
Germany	0.9%
Other	0.6%
Canada	-0.5%
Taiwan	-1.3%
United Kingdom	-2.0%
Total	**2.8%**

Main market	Projected visitor arrivals to NZ in 2016
Australia	1,307,376
Other	545,630
China	287,156
United States	204,900
United Kingdom	203,994
Japan	91,909
South Korea	85,882
Germany	68,320
Canada	47,868
Malaysia	46,365
India	44,757
Singapore	38,327
Taiwan	17,720
Total	2,990,206

Source: Ministry of Economic Development (2012). 2011 - 2016 Forecasts – Update.

APPENDIX 3: ESTIMATED VISITOR Arrivals BY ORIGIN

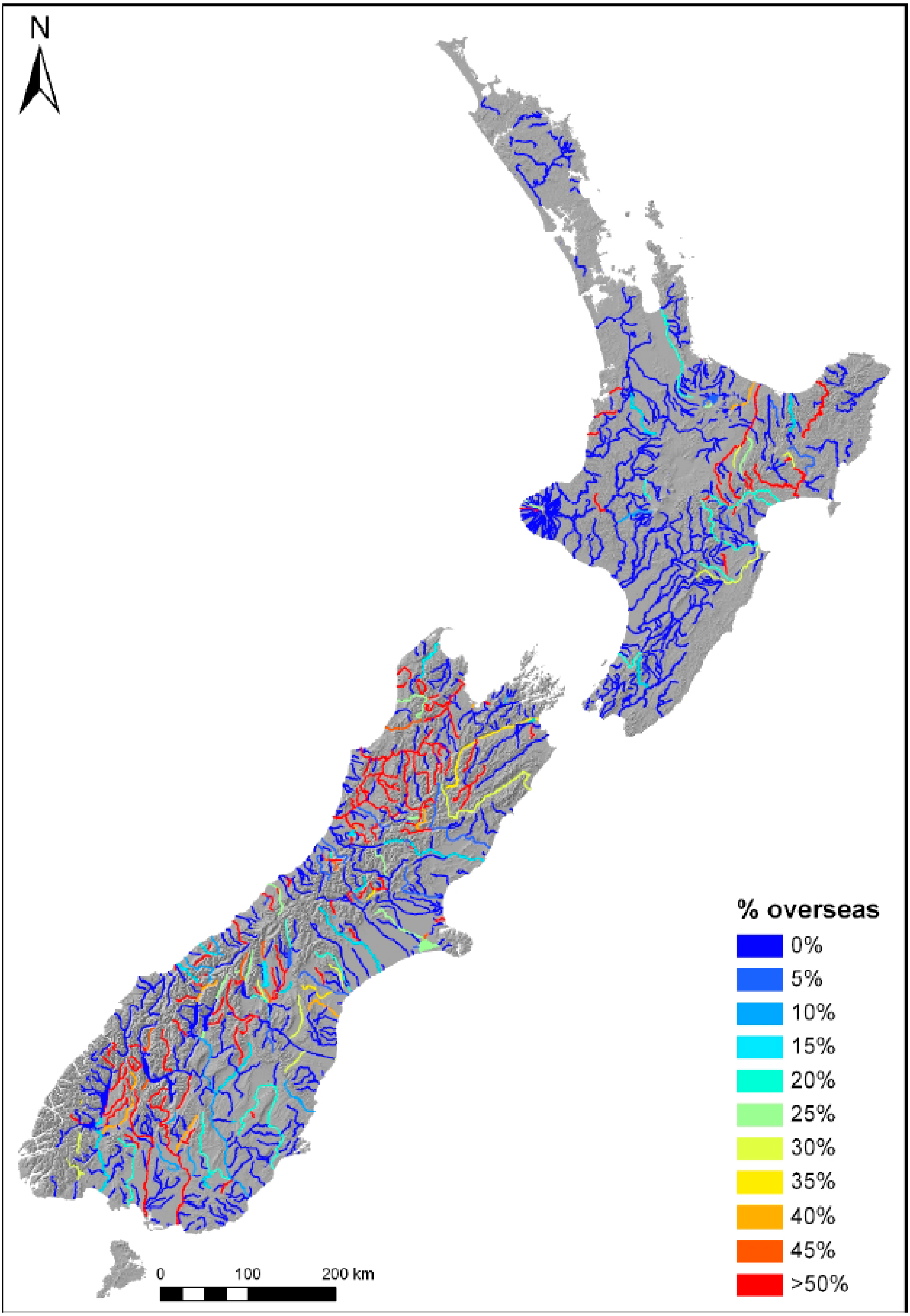
Table 38: Estimated visitor arrivals to Taupō and New Zealand by place of origin (2006-2011)

	Estimated visitor arrivals 2006		Estimated visitor arrivals 2011		Estimated growth in visitor arrivals 2006 – 2011 (%)	
Origin	**Taupō**	**NZ**	**Taupō**	**NZ**	**Taupō**	**NZ**
Rest of World	11,697	369,219	17,269	505,769	47.6%	37.0%
China	4,301	302,204	5,871	413,913	36.5%	37.0%
Australia	77,054	3,192,269	104,661	3,796,783	35.8%	18.9%
Canterbury	24,029	2,779,544	28,252	3,082,252	17.6%	10.9%
Other Americas	15,014	452,371	17,486	511,367	16.5%	13.0%
Marlborough	1,836	309,653	2,061	318,231	12.3%	2.8%
Southland	667	568,909	743	581,708	11.5%	2.2%
Other Europe	50,173	1,355,738	54,539	1,406,491	8.7%	3.7%
Otago	2,425	1,143,931	2,597	1,217,881	7.1%	6.5%
Other Asia	13,400	602,781	14,269	683,383	6.5%	13.4%
Germany	25,362	679,584	26,941	699,592	6.2%	2.9%
Wellington	167,071	2,473,465	175,626	2,580,347	5.1%	4.3%
Gisborne	6,890	261,817	7,239	275,453	5.1%	5.2%
Northland	16,947	753,852	17,798	787,468	5.0%	4.5%
Auckland	259,918	5,894,370	272,456	6,145,261	4.8%	4.3%
Waikato	119,885	2,393,425	124,836	2,489,416	4.1%	4.0%
Taranaki	22,546	542,713	23,362	568,707	3.6%	4.8%
Other Oceania	4,699	254,681	4,865	254,699	3.5%	0.0%
Hawke's Bay	74,538	726,639	77,006	740,396	3.3%	1.9%
Bay of Plenty	98,889	1,605,130	101,311	1,620,022	2.4%	0.9%
Nelson-Tasman	5,911	552,235	6,002	567,130	1.5%	2.7%
Manawatu	85,196	1,270,772	86,453	1,271,000	1.5%	0.0%
United States	31,608	1,102,694	24,241	831,709	-23.3%	-24.6%
United Kingdom	77,648	2,155,569	55,078	1,508,216	-29.1%	-30.0%
Japan	5,750	462,966	3,522	217,640	-38.8%	-53.0%
South Korea	6,108	365,891	3,347	168,183	-45.2%	-54.0%

Source: Ministry of Economic Development and APR Consultants Ltd. Extracted from: Regional Tourism Data Pivot Tables 2006 to 2011 [725 KB XLSX]

Note: List in order of largest growth in Taupō Guest Arrivals from 2006 to 2011

APPENDIX 4: ESTIMATED FGNZ RIVER AND LAKE USAGE BY OVERSEAS VISITORS, 2007/08



Source: National Angling Survey 2007/08, NIWA (p.40)

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Appendix III: A summary of increasing freshwater fishing participation and fishing license sales in Washington State: a marketing plan for the Washington Department of Fish and Wildlife

Introduction

This is a very extensive report comprising some 160 pages, often of very detailed demographic and social survey information. It describes the situation facing the salt and freshwater fisheries in Washington State, on the west coast of mainland USA. On the face of it, this fishery is facing much the same set of issues facing the Taupō fishery, in particular declining licence sales, declining revenues and declining recruitment of new anglers. This report was commissioned in response to these issues, and explores options for marketing responses to help address the on-going decline. Despite the considerable differences between the Washington and Taupō examples, this report does offer some excellent insights and findings which I believe are of tremendous value to the work of the teams looking at the future of the Taupō Sport Fishery. In this summary I have attempted to pull together those features of the report which I feel are salient to the work in front of us all, but by no means is this a complete description of the Washington example.

Considerations

While there is some value in referring to the Washington example for insights, I think it is valuable to bear in mind a number of considerations while doing so. The fisheries described are very different to the Taupō example, and cultural considerations are very different also. For the most part these are native rather than introduced fisheries, and Native American access to them is very different to the situation facing Ngāti Tūwharetoa here. I don't think the report offers much of value with respect to addressing issues such as cultural harvest or engaging with Lake Rotoaira Trust. These are issues of local complexity, so I have not attempted to draw anything from the Washington report in regards to them.

Broadly speaking, the Washington report describes an aging, white, male, Anglo-Saxon angler fishing for salmonids in the Anglo-American tradition in much the same way as the Taupō fishery.

What the report offers is a picture of the demographics of the Washington angler, and a picture of what motivates and de-motivates their involvement in fishing. These insights are of general interest to us I believe, and could help provide us with valuable insight, particularly given the vacuum created by the lack of information about the Taupō angler.

General observations

Population trends

Washington State is facing much the same shift in population as is the North Island. Urbanised populations are growing, and rural populations are declining. The population as a whole is aging and female dominant as well.

Fishing cuts across all demographic variables in the United States, although some groups are more likely to fish than others. Fishing is an activity commonly dominated by men. The National Survey

identified 75% of anglers age 16 and older as male, and 25% as female (U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007a). The fishing rates in the National Survey also show that fishing is more of a male activity than a female activity: while 20% of men age 16 and older fish, only 6% of women do so. Research also found that men tend to be more avid anglers than women as well (Responsive Management, 1996). Furthermore, women fish for different reasons than men, women being more likely than men to fish to be with family and friends and less likely to fish for the sport (Responsive Management, 1998a).
Fishing is more of a rural activity, and is directly co-related to household income. Participation increases with income.

The 'typical' angler;

- gender is male
- resides in a rural area
- from 25 to 54 years old
- personally participates in one or more of the following: hunting, boating, camping, wildlife viewing, saltwater fishing, hiking, and/or visiting national and state parks
- family member hunts
- has a medium to high interest in wildlife.

Recreation trends

Recreational angling is one of the most popular recreational activities in Washington, with approximately 20% of the population reporting to fish at least once a year. This equates closely with the NZ example, with Statistics NZ data (2008) reporting 19% of kiwis claiming to fish at least once a year. That said Washington has seen a 27% decline in licence sales since 1980. Without figures to back it up, my understanding of the Taupō example would suggest a similar picture here.

Resident vs visitor

A similarity between the Washington and Taupō examples is in the resident/non-resident breakdown of licence holders. Washington reports 90% resident sales, and 10% non-resident. If you take NZ as a whole, then previous surveys would indicate a similar 90% NZ resident sales, and 10% NZ non-resident sales in the Taupō fishery.

Level of effort

Despite declining numbers, the level of effort, or 'avidity' of freshwater anglers in Washington has increased over the past decade or so. This would again at least equate with the Taupō example, where my understanding is that angler avidity has increased over a similar period. Both fisheries are have fewer anglers who fish more days per year than in the past.

Factors influencing participation

These are clearly linked to shifting demographics towards urban centres. However dissatisfactions are another powerful causative factor. Some of the most common dissatisfactions include pollution and litter, interference and crowding by other anglers and recreationists, poor behaviour of other anglers, lack of enough game fish, and lack of access and/or places to fish.

Motivation

Fishing is best understood as a cultural, social, and naturalistic experience rather than only as a recreational activity. It is primarily a social activity and secondarily a recreational activity. Furthermore, motivations for fishing are more commonly social (especially familial) and recreational rather than utilitarian. Understanding the social dimensions of fishing is imperative when designing strategies and developing programs to keep current anglers fishing and to encourage those who do not fish to fish. A nationwide survey presented six possible motivations for fishing and asked anglers to indicate which was their main reason for fishing: only 12% gave a utilitarian reason (to catch fresh fish to eat or to catch large fish), while 87% gave various social, naturalistic, or recreational reasons (to be with family and friends, for relaxation, for the sport, or to be close to nature)

A comparison of studies since 1980 found that fishing to catch fresh fish and fishing to catch a large fish have declined in importance, while fishing for relaxation and fishing to be with family and friends have increased in importance.

Anglers and non-anglers are also encouraged to participate in fishing activities by different motivations (Responsive Management, 1999). For example, while at least 80% of anglers reported that they would fish more if they were asked by a child, if it was offered as part of a vacation, or if they were invited by a friend (Figure 5.3), these motivating factors were less influential for non- anglers.

The implication for fisheries management agencies, organizations, and businesses is that service is as important as product—social and psychological motivations for fishing have become more important, while utilitarian motivations have declined in importance. As a result, agencies, organizations, and businesses cannot focus on product (e.g., stocking) to the exclusion of service. This point stands out to me as something to consider in the Taupō context.

Initiation

Fishing initiation is a key factor influencing participation, and most often occurs in childhood. Fathers are the most common person to initiate a child into fishing, followed by other male family members. It is worth noting that most youth, if asked, express interest in going fishing: one nationwide study of youth found that 50% are very interested in fishing, and 35% are somewhat interested (Responsive Management, 2003a). This frequent initiation into fishing by family members points to the importance of mentoring in fishing initiation. Many non-anglers express an interest in fishing—one national study found that 28% of non-anglers 12 years of age and older said that they were very or somewhat interested in freshwater fishing (Responsive Management, 1999). The key point is that while fishing initiation is most commonly a childhood experience, there exists a target market among adults.

Dissatisfaction, constraints and desertion

Anglers in a nationwide study indicated that the most important factors that take away from their enjoyment of fishing are work and family obligations; pollution and litter; interference and crowding by other anglers and recreationists, as well as poor behaviour of other anglers; lack of enough game fish; lack of access and/or places to fish, or having to travel too far to fish; and lack of fishing companions Inactive anglers were also asked about their reasons for deserting the sport. While loss of interest is the most important factor, other important factors include family and work obligations and concomitant lack of time, lack of fishing companions, having to travel too far, and pollution and litter (Responsive Management, 1995). Note that social factors play a larger role than "product" factors (the latter being, for example, the number or size of fish).

Access

Some observations of value from focus group work are

- The upkeep of existing access sites may outweigh the need for new access sites such as boat ramps
- The dissemination of information on fishing access opportunities could always be improved, and the provision of reliable maps is a central aspect of such dissemination;
- Signage is reportedly conspicuously absent in some areas with fishing opportunities, and

such insufficiencies not only increase incidences of trespassing but also frustrate anglers and discourage them from going fishing

- Law enforcement was regarded as inadequate in areas with high rates of littering, property and environmental damage, and irresponsible behaviour, which act as disincentives for anglers

Licence Costs

Fishery managers consider fishing license fees, structure, and policy changes in an attempt to maximize license sales and increase state revenue.

The immediate increase in revenue is the primary incentive for raising license fees. However, fishing license fee increases consistently result in a decrease in participation and licenses sold. A national study of factors that affect fishing license sales found that a $1 increase in the cost of a state resident annual fishing license resulted in a 4.7% decrease in license sales. I would urge caution when thinking of these figures in terms of the Taupō fishery, but I would think the basic premise holds. If you increase licence costs, sales go down.

While many agencies may be willing to accept a temporary decline in sales and participation for the increased revenue, the resulting sales drops are not necessarily temporary. The drop in license sales is often long-term. It is also important to consider the impact of decreased participation on future recruitment: Not only do some lapsed anglers never return to fishing, but those same lapsed anglers will not recruit or mentor young anglers to increase or maintain future license sales as desertion occurs for age and health reasons

Although license revenues are a primary funding source for all state fish and wildlife agencies, license fees are a very minor expense for sportsmen. Nonetheless, license cost increases still negatively impact sales. In a study of ex-anglers, 13% indicated that the cost of a license influenced their decision to quit.

General recommendations

Target markets

National research shows that one of the most important target markets for increasing fishing participation among active anglers as well as increasing participation among non-anglers are other outdoor activity groups, such as hunters, target shooters, boaters, campers, jet skiers, wildlife watchers, campers, hikers, national/state park visitors, water skiers, and mountain bikers.

Parents with children are also an important target market for fishing promotion efforts. Since both anglers and non-anglers report that they would be motivated to go fishing if a child asked them, parents with children become an important market segment for increasing fishing recruitment and retention efforts.

In addition to outdoor enthusiasts and parents with children, an important target market for freshwater fishing retention efforts includes the traditional angling constituent: rural males with middle incomes.

Information and outreach efforts targeted at the following groups in addition to other outdoor enthusiasts and parents with children will likely show a high return in enhancing and retaining interest in freshwater fishing: those aged 12 to 15, those with a college degree, those with incomes ranging from $20,000 to $39,999, and individuals aged 25 to 34

For women, regardless of ethnicity, it seemed that they were introduced to fishing as adults rather than as children, either through their husbands, boyfriends or other males. Participants in these groups also indicated that satisfaction from fishing occurs because the experience takes place innature. Women seemed to have high expectations about fishing (i.e. they were disappointed when they didn't catch any fish) and were concerned for the pain and suffering of the fish they caught — especially if the fish were not consumed.

Each of these groups indicated that it would be helpful to see more efforts directed at family participation either through a family license or stressing the values learned from fishing.

Useful messages

Focus groups tested 20 short, single sentence messages by having participants rate and discuss how they felt about each one. The following two types of messages resonated strongly and might be useful for the Department:

1. Messages that appealed to the value of recreational fishing and boating to fostering relationships among family and friends
2. The relaxation value of recreational fishing and boating. Images that stimulate memories of fishing as a child as well as memories of being with family and friends as a child might appeal to lapsed anglers as well

Several trends emerged from the groups that demonstrate what types of message will likely not resonate with lapsed anglers. Participants did not respond well to messages that link recreational fishing with "deeper" issues such as "legacy," "heritage" or "tradition." The economic contributions of recreational fishing to local economies and fishing as a contribution to the protection of natural resources did not resonate as well. This is interesting in the Taupō context, as these are messages which have been strongly repeated in TSF communication.

Youth participation

The future of fishing ultimately depends upon the commitment of future generations. The key to active participation in and commitment to fishing is fostering this commitment and participation among today's youth. Research clearly indicates that active participation in fishing as an adult is directly related to active participation as a youth, and adult anglers typically start fishing before the age of 20 (Responsive Management, 1996).

Research also shows that not only is active participation by an adult determined by early exposure to fishing, but the level of adult avidity is also determined by level of exposure as a child. Those who start fishing early in life and who fish frequently as a child are more likely to fish as adults, and fish frequently. Conversely, those who start fishing later in life and who fish less often when young are more likely to cease fishing altogether as adults.

Clearly, children's exposure to fishing is critical to their participation as adults. Further, participation by adults is critical to participation by children—adults take children fishing— continuing the cycle of fishing recruitment and retention.

Changing attitudes about licence fees

Public support, especially among sportsmen, for license fees is important in order for agencies to obtain funds that keep pace with inflation and to maintain fishing participation for maximizing revenue. To increase support, fish and wildlife management agencies need to change sportsmen's attitudes regarding license fees. Many view licenses as a regulatory mechanism when they should perhaps view licenses as a service agreement in which the fees for fishing are used to ensure that the opportunities to fish will continue to be available through proper fish and wildlife management. Education is the primary means by which sportsmen's attitudes can be changed and support for license fees increased.

Useful marketing approaches

All of the following approaches have shown to be successful in the American market in driving increased licence sales.

Outdoor programmes whose goal is to encourage participation in outdoor recreation (specifically shooting, archery, hunting, or fishing) through a mentoring arrangement.

These programmes help to coordinate events where active hunters and anglers take newcomers into the field to introduce them to the sports.
Comprehensive marketing campaigns focused on messages, target audiences, and featured promotions and services, utilising numerous marketing media outlets, including radio spots, televisions advertisements, billboards, bumper stickers, and print to increase public awareness.

Direct mail postcard campaigns aimed at increasing fishing participation and generating awareness among lapsed anglers. These campaigns need themes specifically designed to entice lapsed anglers back into the sport by emphasizing the overall enjoyment factor of fishing, and case studies in the report can point to some spectacular success.

Social media marketing options

At the time the Washington report was written, there would appear to be little data available to examine with regard the effectiveness of Social Media Marketing with regards to fishing. However, given the strong uptake of anglers of blogs and other web based information, it would stand to reason that a well-designed social media marketing campaign would have great merit. Companies, agencies, and organizations are increasingly turning to social media to market concepts or products to the general public. Social media marketing often involves the initiation of a kind of dialogue with a target audience, the objective being an establishment of credibility and trust that goes beyond traditional marketing, which relies on advertising. Social media marketing can make an agency or company visible among a target audience, build credibility among followers, and turn trust and relationships into revenue.

Recommended marketing plan

At about page 124, the report delivers an extensive marketing plan for Washington State. It is worth a read, but for our purposes I have picked out the key points which I think add value in a Taupō context.

Marketing goals

The plan identifies 4 key goals;

Goal I: Increase Freshwater Fishing Participation 5% over the Next Five Years
Goal II: Increase Public Awareness of Fishing Opportunities
Goal III: Improve Freshwater Fishing Recruitment and Retention Efforts
Goal IV: Optimize Use of License Records and Related Data

Marketing mix

The 4 'P's of marketing should be central to any thinking about taking the Taupō fishery forward.

Product

A product or service is what the Taupō fishery offers its market. To understand the success of products or services, it is important to focus on their benefits to constituents and customers. This should be a primary filter when considering management options for the future.

Place

Place refers to the physical location where the product or service is offered. In this case, place is not only the locations where licenses are sold, but access to fishing opportunities throughout the Taupō district. How can the Taupō fishery open up opportunities to purchase licences, as well as other fishing opportunities in the district?

Price

The price of a fishing license is crucial to fishing participation. It is imperative that management use caution when developing their fishing license structures and fees, due largely to the compounding impact of lapsed anglers on future recruitment.

Promotion

Taupō fishery currently communicates with various media across the country on an as-needed basis. The Department uses general information, news releases, and Target Taupō to communicate about fishing opportunities and events. Perhaps the most reliable and cost-effective method of promotion is the Department's website, which provides an abundance of key information about fishing in Taupō. While these efforts may be impacting certain markets, real success needs to be measured in attitude changes, total sales, increased awareness and knowledge, and ultimately, increased fishing participation. Additional market research is necessary to identify what messages, themes, and media resonate with various target markets.

Strategies

The report details a number of strategies which should be put in place to achieve the 4 goals described above. Much of the reasoning for them is based on detailed research of the Washington situation, and as such is perhaps less pertinent to Taupō. I have lifted out the strategies without the supporting reasoning, as they are definitely worthy of consideration with regards Taupō.

Based on my experience with the fishery, there are a number of strategies described here which we have not employed at all, or perhaps not to their best advantage in others.

Goal I: Increase Freshwater Fishing Participation 5% over the Next Five Years

Objective 1: Increase fishing participation among active, occasional, and lapsed anglers.

Strategies to achieve this:

- Maintain and increase the current number of active anglers.
- Increase the frequency of fishing among occasional anglers.
- Focussed marketing efforts targeting lapsed anglers.

Objective 2: Increase fishing participation among other target markets.

Strategies to achieve this:

- Increase fishing participation among non-anglers and other outdoor enthusiasts.
- Increase outreach to and participation among urban and suburban residents.
- Increase outreach to and participation among minorities.

Goal II: Increase public awareness of fishing opportunities

Objective 1: Conduct primary research and develop messaging and outreach strategies.
Strategies to achieve this:

- Conduct market research with target markets.
- Develop messaging strategies and outreach techniques.

Objective 2: Evaluate marketing and promotional efforts.
Strategies to achieve this:

- Wherever possible, conduct follow-up research to measure the effectiveness of messages and campaigns, and refine and develop messages as necessary.

Goal III: Improve recruitment and retention efforts

Objective 1: Ensure that adequate agency attention is being devoted to recruitment and retention activities.
Strategies to achieve this:

- Consider a full-time recruitment and retention coordinator.
- Consider assistance from outside public relations and advertising firms.
- Conduct regular follow-up on recruitment and retention efforts to determine what works and what doesn't.

Objective 2: Maximize partnerships with other agencies and organizations.
Strategies to achieve this:

- Create new and expand existing freshwater fishing programs and events for youth.
- Base outreach and educational programs for youth on the principals of cognitive development.
- Create new and expand existing freshwater fishing programs and events for women and minorities.
- Use marketing and promotional tools from partners to expand promotional outreach.

Objective 3: Recruit and retain anglers through a variety of media outlets.
Strategies to achieve this:

- Advertise and promote fishing participation through traditional media including newspapers, radio, and television.
- Advertise and promote fishing participation through non-traditional media, including social networking tools.
- Educate anglers and the general public on where money from license sales goes.

Objective 4: Whenever possible, continue proven methods of recruitment and retention.
Strategies to achieve this:

- Engage a lapsed angler direct mail campaign.
- Continue youth fishing programs, tournaments, and mentoring programs
- Continue to promote fishing participation in schools as an environmental education tool.
- Track the progress of continuing efforts to determine long-term efficacy over multiple years.

Goal IV: Optimise use of licence records and related data

Objective 1: Improve tracking and recordkeeping in agency databases.

Strategies to achieve this:

- Ensure consistency in agency recordkeeping and internal database.
- Utilize records and reports to refine target markets and messages.