



Whitebait Management Consultation  
Department of Conservation  
P. O. Box 10420  
Wellington 6143  
[whitebait@doc.govt.nz](mailto:whitebait@doc.govt.nz)

Submission by:  
Forest & Bird  
205 Victoria Street  
Wellington 6011  
[www.forestandbird.org.nz](http://www.forestandbird.org.nz)  
Contacts: [t.kay@forestandbird.org.nz](mailto:t.kay@forestandbird.org.nz) & [p.anderson@forestandbird.org.nz](mailto:p.anderson@forestandbird.org.nz)

27 February 2020

## **SUBMISSION ON THE WHITEBAIT MANAGEMENT CONSULTATION**

### **SUMMARY**

- 1) New Zealand's six whitebait species are at risk. If something urgent is not done to conserve these species, they could be lost forever.
- 2) The Department of Conservation's mandate is: "To preserve so far as is practicable all indigenous freshwater fisheries, and protect recreational fisheries and freshwater fish habitat". The Department is not performing adequately in this regard.
- 3) The only prudent management for fisheries is a precautionary approach. A combination of approaches is needed to halt and reverse the decline of whitebait, which should include the options put forward by the Department in the consultation document, but *must* include a license requirement, a catch limit (on both commercial and recreational fishing), and a method to collect data on the juvenile migratory galaxiid fish caught during the fishing season.
- 4) We therefore seek that the Department of Conservation correct its oversight by establishing, for whitebait fishing: a license requirement, a catch limit on both commercial and recreational fishing, and a data collection method.
- 5) With regards to the options provided in the consultation document,<sup>1</sup> Forest & Bird generally supports the recommended options as supplementary to the imperative management options outlined above. Additionally there are a few provisions where we seek clarification and changes. These items are addressed in the section: Consultation Document Options.

---

<sup>1</sup> Discussion Document "Improving whitebait management; Te whakapai ake i te whakahaere īnanga"; Department of Conservation. Jan 2020.

- 6) Forest & Bird warns that the failure to incorporate a precautionary approach in the management of this fishery will be detrimental to the fishery and the long term survival of the six native species. This is largely due to the fragile nature of population dynamics associated with freshwater diadromous fish, especially in the face of climate change (i.e. changes in ocean current dynamics, hydro thermodynamics, unanticipated disease and yet to be seen exotic species predation.)
- 7) We implore DOC to adopt our recommendations to ensure we do not lose these species forever.

#### **INTRODUCTION – FOREST & BIRD**

8) The Royal Forest & Bird Protection Society of New Zealand has been New Zealand’s independent voice for nature since 1923. Over generations the organisation has helped make New Zealand a better place to live by standing with communities to protect forests, lakes, and rivers from destruction, campaigning to create marine reserves and eco-sanctuaries, and working to save threatened species.

9) Forest & Bird’s constitutional purpose is:

To take all reasonable steps within the power of the Society for the preservation and protection of the indigenous flora and fauna and the natural features of New Zealand.

10) The protection of indigenous fish falls squarely within the scope of this constitutional purpose and is an important issue for Forest & Bird.

11) The Society has advocated for the 6 whitebait species (5 migratory galaxiid species and the common smelt) and the protection of their habitat for decades through advocacy at all levels of government, media releases, educational resources, and magazine articles.

12) The work of our staff, branches, and volunteers has been delivered through thousands of hours spent over the years restoring damaged and destroyed freshwater habitats which are critical for indigenous fish around the country.

13) In 2018-19, Forest & Bird took part in the Department of Conservation’s Whitebait Working Group, consulting on potential options for managing the fishery. The process culminated in an issues and options paper for the Minister’s consideration.

14) It is important to reiterate that Forest & Bird has been consistently critical of the management regime through this consultation process and the three decades prior, stating that the whitebait fishery is an unregulated black-market fishing industry which allows for endless fishing of endangered species, and that this in combination with current and future stresses is a recipe for population collapse in the near future.

#### **NATIVE FISH ARE IN DIRE STRAIGHTS**

15) The report from the former Prime Minister’s Chief Science Advisor, Professor Sir Peter Gluckman, titled *New Zealand’s fresh waters: Values, state, trends and human impacts* stated that “New Zealand’s fresh waters are under stress because of what we do in and around them.”

And that changes are required that will not be cost-free. As Sir Peter puts it “potentially contentious and very challenging decisions will be needed”.<sup>2</sup>

- 16) The IUCN Freshwater Fish Specialist Group concluded in 2012 in an international assessment of New Zealand’s freshwater flora and fauna that New Zealand has “one of the most endangered freshwater habitats in the world”.<sup>3</sup>
- 17) The OECD’s country report on the state of New Zealand’s environment, released in March 2017, states that “New Zealand species extinction rate is among the highest in the world” and, more specifically, that New Zealand “has some of the highest levels of threatened freshwater species in the world”.<sup>4</sup>
- 18) New Zealand has over 50 indigenous freshwater fish and the majority of these fish are found nowhere else in the world. Unfortunately the majority of these fish are also in serious trouble; nationally, 76 per cent of freshwater fish species are threatened with extinction,<sup>5</sup> which is double the global average; and things are getting worse not better, with some species on the brink of extinction.<sup>6</sup>
- 19) This decline across dozens of species of native fish is comprised of reduced populations nationally and localised extinctions regionally.
- 20) There is no single cause to the decline of freshwater fish populations. Unfortunately, it is death by a thousand cuts for our indigenous freshwater fish.
- 21) The causes threatening indigenous fishes’ chances of survival are the degradation of water quality; barriers to migration; invasive fish; and loss of habitat due to water abstraction, land use changes, removal of riparian margins, wetland drainage, river modification, and piping of streams.<sup>7</sup>
- 22) Uniquely for the 6 native whitebait species, an unregulated fishing industry is an additional cause of decline for the juvenile populations migrating upstream.
- 23) Bioscience article, *Overfishing of Inland Waters*, states that unregulated fishing regimes are commonly to blame for population decline in inland fisheries.

Overfishing is being driven by overcapacity and excess effort, which in turn are due to the generally open access regimes of many inland fisheries and the effective use of fisheries as an occupation of last resort in developing economies.

- 24) The article goes on to say that overfishing is a significant global issue:

---

<sup>2</sup> Gluckman, P. Office of the Prime Minister’s Chief Science Advisor. *New Zealand’s fresh waters: Values, state, trends and human impacts*. April 2017. <https://www.pmcsa.org.nz/wp-content/uploads/PMCSA-Freshwater-Report.pdf>

<sup>3</sup> IUCN Freshwater Fish Specialist Group 2012 Annual Report (IUCN, 2012).

<sup>4</sup> <http://www.pmcsa.org.nz/wp-content/uploads/PMCSA-Freshwater-Report.pdf>

<sup>5</sup> Ministry for the Environment & Stats NZ (2019). *New Zealand’s Environmental Reporting Series: Environment Aotearoa 2019*. Available from [www.mfe.govt.nz](http://www.mfe.govt.nz) and [www.stats.govt.nz](http://www.stats.govt.nz).

<sup>6</sup> Joy et al *Decline in New Zealand’s freshwater fish fauna: effect of land use* Marine and Freshwater Research 2018 70(1) at 114-124

<sup>7</sup> Allibone et al *Conservation status of New Zealand freshwater fish* 2009 44 New Zealand Journal of Marine and Freshwater Research 44 at 271 to 287

Despite the challenge of evaluating the effects of fishing owing to complex system responses and the presence of other pressures, there is ample evidence that overfishing is a significant factor in the decline of numerous species and fisheries, and is of global importance as a threat to inland water biodiversity.<sup>8</sup>

- 25) The article adds that while the threat of overfishing is one of many threats that inland native fish face and may not be the top pressure faced, it can be the straw that breaks the camel's back:

A recent assessment of inland fisheries concluded that most inland capture fisheries that rely on natural stock reproduction were overfished or being fished at their biological limit, and that the principal factors threatening inland capture fisheries were habitat loss and environmental degradation. Overfishing, then, may not always be the sole or even primary threat, but in conjunction with other stresses can be a serious one.

- 26) It should be noted that 3 of the whitebait species are endemic to New Zealand; the giant kōkopu, the shortjaw kōkopu, and the banded kōkopu are found nowhere else in the world. Two of these fishes are listed as with the NZ Threat Classification as 'At Risk – Declining', with the shortjaw kōkopu being classed as 'Threatened - Nationally Vulnerable', and endangered by IUCN's Red List.<sup>9,10</sup> If any of the three species' populations were to collapse, these native species would be lost from the wild forever.
- 27) It is well known that fish populations are usually unable to independently recover from historical overfishing due to the long list of other pressures, and in their reduced state will be ultra-vulnerable to additional pressures like those expected with climate change.<sup>11</sup>
- 28) Effective action to address all of these impacts, including the pressure of overfishing, is urgently needed.

#### **URGENCY TO MANAGE THE FISHERY**

- 29) Forest & Bird welcomes the 'Action for Healthy Waterways' which under the Government's Essential Freshwater Package has proposed reform to the National Policy Statement for Freshwater Management as well as puts forward a National Environment Standard for Fresh Water. Both the Policy Statement and the Environment Standard have proposed to protect habitat like wetlands and net stream length from further destruction, as well as provide pathways to ameliorate water quality with stricter standards, and consider fish passage in future consent applications.
- 30) If approved in the proposed forms, both the freshwater regulatory reform in tandem with the National Policy Statement for Indigenous Biodiversity, which is currently out for consultation, could go a long way to improving conditions for native freshwater fish.
- 31) While the regulatory changes are long overdue, they will need to take effect immediately to make meaningful improvements for native freshwater fish. It is well known that even with the fast-tracking process proposed with the RM Amendment Bill that the effects of the freshwater and biodiversity policies will not effectively improve conditions for native freshwater fish for at least a decade.

---

<sup>8</sup> ALLAN, J. DAVID et al. "Overfishing of Inland Waters." *BioScience* 55.12 (2005): 1041–1051. Web.

<sup>9</sup> IUCN Red List. Giant kōkopu. *Galaxias argenteus*. 2014. [www.iucnredlist.org/species/8817/314272](http://www.iucnredlist.org/species/8817/314272).

<sup>10</sup> IUCN Red List. Shortjawed kōkopu. *Galaxias postvectis*. 2014. [www.iucnredlist.org/species/8813/3147213](http://www.iucnredlist.org/species/8813/3147213)

<sup>11</sup> *Bioscience* p 1043

- 32) Given the timescale at which the effects of policy can be felt by the fish in rivers, in combination with the pressures, both present and future, it ought to be obvious that urgent mechanisms to address the pressures which fall outside of the scope of the policy statements are imperative.
- 33) Even when fishing pressure is eased, it is generally unknown how long it will take a fish species to recover. The rate of recovery will depend on the lifespan and reproductive nature of the fish and a number of environmental factors.<sup>12</sup>
- 34) It is well known that fish populations are usually unable to independently recover from historical overfishing due to the long list of other pressures, and in their reduced state will be ultra-vulnerable to additional pressures like those expected with climate change. (*repeated for emphasis*)
- 35) Effective action to address all of these impacts, including the pressure of overfishing, is urgently needed. (*repeated for emphasis*)

#### **DEPARTMENT OF CONSERVATION'S ROLE**

- 36) The Department of Conservation assumed responsibility of the whitebait fishery in 1987 when the Department was formed.
- 37) Despite holding the function of protecting recreational freshwater fisheries and freshwater fish habitats, under the Conservation Act section 6 (ab) the Department of Conservation is also obliged 'to preserve so far as is practicable' all indigenous freshwater fish species for their intrinsic values.<sup>13</sup>
- 38) In 1991, Dr. Robert McDowall, well known ichthyologist, and former scientist with Ministry of Agriculture and Fisheries wrote:
- The Department of Conservation is involved in both the management of the whitebait fishery and the conservation of the species. The fishery may exploit species for which there is a conservation concern, so the dual responsibilities of the Department could create conflicts which need to be identified and balanced when the fishery is managed.
- 39) As advised in Bioscience article *Overfishing of Inland Water* that "fishery management should be guided by a precautionary approach in setting management targets and limits." The Department should know this principle better than any other government body.
- 40) However, Forest & Bird considers the consultation document options offered only minimally challenge a largely unregulated fishing industry, leaving the public to conclude that the conflict which Dr. McDowall forewarned about has come to pass.
- 41) Forest & Bird asserts that the Department is failing in its responsibility to 'preserve so far as is practicable' the six species that make up the whitebait catch.
- 42) The options offered (season length shortened, export phase out, gear requirements, and refuges) amount to management that tinkers around the edges. These management proposals would more appropriately come as a second phase of management measures after the basic tenets of fishery management were in place (i.e. license, catch limit and data collection).

---

<sup>12</sup> Holmes, Bob. "Biologists Sort the Lessons of Fisheries Collapse." *Science*, vol. 264, no. 5163, 1994, pp. 1252–1253. *JSTOR*, [www.jstor.org/stable/2884054](http://www.jstor.org/stable/2884054). Accessed 20 Feb. 2020.

<sup>13</sup> Conservation Act 1987. [www.legislation.govt.nz](http://www.legislation.govt.nz). Section 6.

43) The Department will also note the thousands of submitters to the Forest & Bird online submission who echo disappointment with the consultation options presented and support the management options that are put forward in the next section.

## MISSING MANAGEMENT OPTIONS

44) Before addressing the options presented in the consultation document, it is imperative that the missing management options are addressed, namely license, catch limit, and data collection method.

45) License and catch limit

- a) The Issues & Options paper published by the Department of Conservation summarises the results of multiple streams of consultation.<sup>14</sup> Table 8 on page 34 outlines the 'management options that were most supported by the Whitebait Working Group' participants in which license and catch limit are specifically named. In fact, we all agreed that these items were the next logical steps at a minimum.
- b) The results of DOC's 2018 Iwi stakeholder engagement survey showed that respondents agree or strongly agree with a license (49%) and a catch limit (68%) being put in place.
- c) DOC's general public survey performed well with nearly 3,000 respondents of which there was representative spread both geographically and by interest (i.e. fishing and conservation). The majority of survey respondents either agreed or strongly agreed that there should be a license (60%) and a catch limit (77%).
- d) In 2013, Lincoln University published in its Public Perceptions of New Zealand's Environment paper that there was support for a daily catch limit of 5kg with respondents ranking this management option at a score of 2.55 on a scale where 1 is the most preferred option and 7 is the least preferred option. This survey also indicated that whitebaiters were more likely than non-whitebaiters to rank a 5kg daily catch limit as more preferred.<sup>15</sup>
- e) In a paper by NIWA, titled "Potential options for regulation changes to the NZ whitebait fishery" published in June 2018, the authors concluded by "strongly recommending greater regulation of the whitebait fishery as a priority." While the authors do not recommend setting a catch limit, they do "recommend implementing a licencing system where a provision of a catch diary is required to renew a licence."<sup>16</sup>

46) Data collection

- a) Published data is available on whitebait catch records dates back to the 1930's and was collected under the Marine Department Annual Report on Fisheries. While the information

---

<sup>14</sup> New Zealanders' views on whitebait management, summary of findings from public engagement process. Department of Conservation. May 2019.

<https://www.doc.govt.nz/contentassets/da5167bae41e47c9a4a8b0805b523c87/report-2018-19/summary-of-feedback-for-release-7.2-14-may-2019.pdf>

<sup>15</sup> Hughey, K.F.D., Kerr, G.N. and Cullen, R. 2013. Public Perceptions of New Zealand's Environment: 2013. EOS Ecology, Christchurch. vi+115 pp. ISSN 2230-4967

<sup>16</sup> Baker et als. "Potential options for regulation changes to the NZ whitebait fishery." NIWA. Report no. 2018160HN. <https://www.doc.govt.nz/Documents/getting-involved/nz-conservation-authority-and-boards/nz-conservation-authority/whitebait-fishing-regulations-niwa-june-2018.pdf>

is thought to be of questionable reliability it is more information than is publically available today.

- b) The catch data was recorded until the 1970's and was obtained by querying the whitebait fish buyers. However, in 1960's as freezing became more readily available and the access to rivers grew, so did the number of fishers and buyers. At this point, the data became less complete as sellers circumvented buyers and sold directly to businesses – potentially in an attempt to avoid tax detection and deductions.
  - c) Regulations required catch records for two years and was found to fail as there were no powers of prosecution for non-compliance for non-registered fishers. This is a lesson from the past that backs up NIWA's recommendation to have a license and data collection structure in tandem.
  - d) There has been no Government attempt to measure whitebait catch since the 1970's and therefore the whitebait take is unknown.
  - e) While Bob McDowall speculates that “lack of records in part reflects the considerable difficulty in obtaining reliable data,” Forest & Bird would add that it also reflects the lack of political will to properly design a system and a culture which supports data collection for the public good.
  - f) NIWA's report defends the idea of a data collection method such as a diary attached to a license structure as a way to “provide a baseline of catch per unit effort for whitebait across New Zealand that can be used to monitor the response of the fishery to future management initiatives.” In other words, it would allow for an “adaptive management strategy” where “regulations can be changed/modified based on scientific knowledge”.
  - g) In addition, the report points out that a catch diary would allow for the amnesty in some cases of fishing as a pressure. That is to say if the adult population numbers are in decline while the catch rate is stable or increasing then it must absolve fishing as a contributing factor to the population decline. To this effect, the report states: “if whitebait catches are stable over time, reductions in adult population size may reflect variables other than declines induced through harvesting.”
  - h) In general, we cannot expect the Department of Conservation to have a full understanding of the effects (positive or negative) of its conservation efforts or newly implemented fishing controls if there is not long term data available both on the fish caught and the escapement.
- 47) Forest & Bird questions the incomplete offering of management options by the Department of Conservation. It is unclear if this oversight can be attributed to a political game of influence by members of Cabinet, a political fear of the vocal minority in an election year, or simply incompetence on behalf of the Department of Conservation at understanding the basics of managing a fishery. It is painfully obvious that a license and catch limit are non-contentious issues amongst fishers and conservationists. Forest & Bird further asserts that these along with a data collection system are the basics to meaningfully regulate the currently endless fishing of endangered fishes.

#### **CONSULTATION DOCUMENT OPTIONS**

- 48) In this section, Forest & Bird outlines its general support and details specific concerns regarding the options provided in the Whitebait Management Consultation.

#### 49) Proposed management goal

- a) In 1996, the Department of Conservation asked NIWA to “critically assess the department’s philosophical, managerial (policy and action) and scientific approach to management of the whitebait fishery” in which the authors relayed that DOC had committed in a 1990 public discussion document to:

“Have some areas where fishing is not permitted; protect and where possible enhance, adult habitat and spawning areas; and have clear and understandable regulations which control how, when and where whitebait can be taken.”<sup>17</sup>

- b) Fast-forward 30 years and the current consultation document presents more of the same solutions. After the cumulative national effort in conservation and advocacy over the last three decades, it is bewildering to think we are back to the same place where this whole process began. It is beyond frustrating to think that despite the pressures on freshwater ecosystem health society has made no traction on the need to properly manage a fishery of endangered species.

- c) The author of the report adds his own opinion by stating that:

“given that DOC was established primarily to conserve, it seems to me that whitebait fishing (an activity that might be regarded as largely at variance with DOC’s primary goal, i.e. conservation of natural resources), has been well served.”<sup>18</sup>

- d) In this vein, Forest & Bird evaluates the proposed management goal, which is to “[e]nsure healthy and restored whitebait populations and provide for a sustainable fishery.”

- e) We take issue with this management goal for two reasons:

- i) Firstly, the Department is obliged ‘to preserve so far as is practicable’ all indigenous freshwater fish species for their intrinsic values. This sentiment does not come through clearly with this goal. It reads as though the fishes’ populations’ purpose is to provide for a sustainable fishery. It does not read that there is recognition for the intrinsic values the fishes hold.
- ii) Secondly, ‘healthy and restored’ does not clearly indicate measurable outcomes. Forest & Bird would like to see the goal include reference to whether the species will be thriving such that they are no longer considered threatened or at-risk nationally, and are abundantly found in places where they are currently and historically have been found.

- f) Forest & Bird recommends that the goal be rewritten as follows:

- i) Ensure all six native whitebait fish species:
  - qualify to be and are classified as not-threatened
  - have safe and healthy habitat
  - have connected passage for migration through entire migratory range, and

---

<sup>17</sup> McDowall, R.M. “Managing the New Zealand whitebait fishery: a critical review of the role and performance of the Department of Conservation.” NIWA. Science and Technology Series no. 32(1996). NIWA Library 29281-13001.

<sup>18</sup> Ibid.



- are present and abundant in habitats where they are historically expected to be found.
- g) If the populations are healthy and thriving then the fishery will follow suit. The converse however is not guaranteed. This is why Forest & Bird urges DOC to adopt a management goal which prioritises the fishes for their intrinsic value not their economic or industry values.

50) Timing of the whitebait season (i.e. season dates/length)

- a) Forest & Bird supports the initiative to shorten the fishing season as this will reduce the number of days fishing can pressure the migrating shoals of juvenile migratory galaxiids.
- b) When choosing amongst the three options proposed in the consultation document, Forest & Bird supports the Department's recommendation of 15 August to 14 October. This option is preferred on the basis that:
  - i) it would reduce the number of fishing days from 107 days for most of New Zealand (excluding Chatham Islands) to 60 days and also down from 76 days on the West Coast to 60 days.
  - ii) Additionally this option would provide greater protection for the six whitebait species by alleviating pressure during some of their national peak migration.
- c) There are two issues that Forest & Bird would like to raise as a caveat to this preference:
  - i) In the interest of national policy consistency the consultation document describes species migration as a national average.<sup>19</sup> It is well known that migratory galaxiids species will experience unique peak migration times by species and also by latitude around the country. It is unknown as to whether migration is stimulated by ocean temperatures, spring tides, biomass availability (food consumption) or days of maturation at sea. However it is understood that peak migration rates do not occur consistently across the country (i.e. not all fish in a species will simultaneously migrate nationally).
  - ii) In this regard, we feel that the management option put forward addresses a systematic convenience rather than a science-based management option which would address the needs of the individual species in the locations where they are vulnerable.
  - iii) For this reason, Forest & Bird would prefer to see locally relevant season dates which are understood to be flexible based on emerging scientific understanding and incorporate a willingness to change localised dates with regards to future influences of climate change (as this will also effectively change the peak migration times).

51) Whitebait fishing practices (i.e. fishing gear restrictions)

- a) Forest & Bird supports regulation on fishing gear which would result in a reduction of bycatch. The consultation document specifically mentions sock nets as resulting in bycatch,

---

<sup>19</sup> See table 6. Page 34. Discussion Document "Improving whitebait management; Te whakapai ake I te whakahaere inanga"; Department of Conservation. Jan 2020.

such that bycatch is traditionally not released immediately as the nets are not manually operated/attended.

- b) Other than a concern for bycatch outlined above, the Department emphasizes that the gear used for fishing will have less effect on the amount of fish caught than a catch limit could. In this regard, Forest & Bird is less concerned with the details of the regulation pertaining to fishing gear and more adamant that a catch limit will provide the best outcome for escapement.
- c) Regardless, Forest & Bird supports all of the provisions put forward to restrict fishing gear as this is a proxy available in the consultation document options to provide an increase in escapement.

#### 52) Phasing out export of the whitebait species

- a) How a 'phase out' of whitebait export will occur is not clear in the consultation document. In one regard, the words 'phase out' implies that the action will take some interim steps to achieve a final end to export. However the consultation document states that "the export of the whitebait species would end when new legislation for this comes into effect."
- b) Forest & Bird supports an end to whitebait export and we want to see this achieved as soon as possible in a single stage, as the consultation document states in the text quoted above.
- c) While the exact quantity of whitebait caught in New Zealand is unknown it can be assumed to be in the tens of thousands of kilograms at minimum. Assuming that it is around 100,000 kg/ year, it seems that by addressing a 1,000 kg/year export market (or an estimated 1% of the industry) this management option will have a minor influence on the pressure of overfishing.
- d) Forest & Bird agrees with the Department that addressing the export market while it is small is easier than regulating a potential future market which is larger by proportion.
- e) However, Forest & Bird can't help but point to this provision as a political win with little to no real effect on the current stress of overfishing of migratory galaxiids.

#### 53) Creation of whitebait refuges in selected waterways (fishing excluded)

- a) There are two parts to the creation of refuges which Forest & Bird would like to address: closure timeframes and refuge locations.
- b) Closure timeframes
  - i) The consultation document indicates that there are three options for possible time periods which could pertain to a closure: 1 year, 5-10 years or 10 years.
  - ii) The document does not indicate the selection criteria associated with the length of time chosen. The criteria should be a list of items that the Department will evaluate in making its decision about which of the three timeframes are appropriate.
  - iii) Forest & Bird would like to consult on this selection criteria. We believe that the closure criteria need to pertain to the life history of the target species and the other management actions planned to take effect in the relevant river or catchment.

- iv) Additionally, it is unclear if the three options were based on consideration of any such criteria. It feels as though these timeframes are arbitrary figures which do not pertain to freshwater ecology in any way.
  - v) Nearly all native freshwater fish have different life histories, for example the giant kōkopu can live between 21-27 years and reaches sexual maturity after 3 years,<sup>20</sup> kōaro live a maximum age of up to 15 years,<sup>21</sup> and the īnanga is 1-2 years. This is just one factor affecting the length of time necessary for a fish to rebound from near extinction.
  - vi) Forest & Bird does not see any number of years suitable for the provision. While we think it is reasonable to indicate a timeframe for the intended length of a refuge, we seek to remove the maximum time period of 10 years.
  - vii) We do not wish to see any number attributed as a maximum limit due to the need to evaluate the dynamic and individual nature of the specific fish species (i.e. life histories, conservation status, effects of climate change, etc.) and conditions of the river or catchment. This information could only be assessed individually and at the time the closure is considered.
  - viii) In this regard, we would like to see DOC maintain that through predefined criteria like the ones listed above, it will formulate the basis for the appropriate length of closure.
  - ix) It is also recommended that the Department commit to a list of indicators which relate to the specifics of the initial criteria. The indicators should be regularly monitored at meaningful intervals to assess progress against the selection criteria.
  - x) The aim of this recommendation is to achieve scientific rigour nationally in this provision. Additionally, we would expect that successive governments would need to have a process in place which reinforces evaluation of failure or success.
  - xi) Finally, Forest & Bird would ask that the option of an additional closure period be a part of the concluding evaluation. It cannot be assumed that at the completion of a closure period that the desired results will have been achieved. The process must incorporate clear expectations that an evaluation as to whether the river should be re-opened or re-closed is written into the process framework.
- c) Refuge locations
- i) The consultation document indicates that using data from the National Freshwater Fish Database over the last 20 years:

“Both individual species abundance and an analysis of the overlap of the six species were mapped, to visually assess the distribution (spread) of populations. The overlap of sites in which one or more of the six whitebait species occurred was conducted to identify rivers that could act as refuges for multiple species.”

---

<sup>20</sup> New Zealand Government, Department of Conservation, M L, et al. “Critical Habitats for the Conservation of Giant Kōkopu, *Galaxias Argenteus* (Gmelin, 1789).” *Critical Habitats for the Conservation of Giant Kōkopu, Galaxias Argenteus (Gmelin, 1789)*, Department of Conservation, 2002.

<sup>21</sup> “Whitebait - Migratory Galaxiids.” *Freshwater Fish*, New Zealand Government, Department of Conservation, [www.doc.govt.nz/nature/native-animals/freshwater-fish/whitebait-migratory-galaxiids/](http://www.doc.govt.nz/nature/native-animals/freshwater-fish/whitebait-migratory-galaxiids/).

- ii) While this information is useful, it isn't clear from this paragraph or anywhere else in the document what will be the final criteria used to select refuge locations.
- iii) Forest & Bird reiterates its concern indicated above in part b): there must be scientific rigour in the criteria for choosing specific refuges. Public opinions or popular requests are not sufficient criteria in selecting locations for refuges meant to conserve or improve a population of fish.
- iv) We note that the criteria included in selecting the short list was: presents/absence, abundance, regional boundaries, and biogeographic units. The weight to which each criterion created the shortlist is also not made clear in the document.
- v) Forest & Bird believes it would have been more appropriate for the public to be consulted on the selection criteria rather than individual waterways as the waterways fitting the criteria will change over time.
- vi) Additionally we would expect the process which includes the criteria would be up for consultation as well. For example, how often will the country be assessed for the need to assign additional refuges. In this regard, Forest & Bird asks if this exercise is a one-off?
- vii) Given that the effects of climate change will play a part in changing ocean dynamics and inland freshwater dynamics, it should be assumed that a regular interval of reassessment be written into a process for evaluating new tranches of refuges nationwide. Climate change and the anticipated effects on the ecosystems in which the 6 species inhabit should be considered in the original assessment as well.
- viii) Finally, Forest & Bird would like to raise the importance of the precautionary principle when identifying the criteria that would be included in the timeframe and refuge location selection process.
  - (1) The shortjaw kōkopu is ranked in New Zealand as threatened and nationally vulnerable. Internationally, it is ranked as endangered on the IUCN Red List. Refuge selection locations should prioritise habitats where this species can be found both in present day and historical records.
  - (2) Next we would expect that the same consideration is taken for the other three species which are ranked as at-risk declining under the NZTCS, putting giant kōkopu first as this species is also ranked on the Red List as vulnerable.
  - (3) It should be emphasized that refuge locations should not exclude sites that are absent of a fish species in the last 20 years. In fact, it may be of specific interest to reintroduce a species back to an environment where it has historically been found (beyond the 20 years of data used for the short list) if and only if the habitat can be secured and it is safe to do so. This point is moot if the habitat is too far destroyed for a fish to thrive (i.e. concrete/urban environment).

#### 54) Nationwide upstream limits on whitebait fishing

- a) Forest & Bird agrees with the back-peg system which proposes marking limits to how far upstream from the river mouth that fishing must occur. We also agree with the use of tidal limits where back-pegs are not in place.

- b) This provision is supported as it can enable an increase in escapement and allow a threshold to the distance by which a shoal of whitebait fishes can be affected by fishing pressures.
- c) It is unclear, however, from the consultation document where the back-pegs will be placed and, where there is no back-peg in place, how the threshold of 'tidal influence' will be determined.
  - i) Forest & Bird would like to see a clear description of criteria for evaluating where back-pegs will be placed, and how 'tidal influence' will be defined so that it can be evaluated by fishers and compliance officers without ambiguity.

#### 55) Implementation

- a) When do you think any regulatory changes that are carried forward after the consultation should be introduced?
  - i) Forest & Bird recommends that the regulatory changes are carried forward as soon as possible. Given the threat conservation status of indigenous freshwater fish, and especially four of the species in the whitebait catch, there is no time to waste in implementing provisions which will reduce pressure from overfishing.
- b) What do you think about the proposed monitoring arrangements?
  - i) The proposed monitoring arrangements on indigenous freshwater fish species appears to be well-intentioned, however there is insufficient information to assess if the monitoring intentions will translate into action and be effective.
  - ii) With regards to compliance, it is concerning that there is no increase in compliance monitoring resources indicated in the document. There was mention that a license or catch limit would be too difficult to monitor, however there is no specific strategy or resourcing in place to monitor the other provisions such as fishing gear restrictions, season length, refuges, and back-peg fishing restrictions.
  - iii) Regardless of the final management options adopted it is clear that DOC must put more resource into compliance monitoring. It could be as simple as partnering with other Government organisations like Ministry for Primary Industries, Fish & Game, or Regional Councils.
- c) How should the results of monitoring be reported?
  - i) Forest & Bird expects that the monitoring results would be published annually or every 2 years, which relate to an evaluation of: the monitoring performed, the compliance with all management options, the status of the refuges with respects to the indicators identified for monitoring, and any other monitoring program outside of refuges that pertain to the 6 species at all life stages.

#### **CONCLUSION**

- 56) The consultation document outlining management options for managing the whitebait fishery pertaining to the Whitebait Fishing Regulations 1994 and the Whitebait Fishing (West Coast) Regulations 1994 provides well-intentioned yet insufficient options for public consultation.

- 57) Forest & Bird finds that the Department of Conservation has done an inordinate amount of work to consolidate regulations nationwide without actually protecting the fishery from over-fishing or ensuring any meaningful steps toward a sustainable fishery let alone thriving fish populations.
- 58) Forest & Bird asks that the Government take immediate steps to ensure that New Zealand doesn't follow in the footsteps of the Tasmania whitebait fishery which had to close for 15 years due to a crash in the fish populations. They describe in a scientific report that fishers were unable to meet the catch limit as the fish populations had seriously declined. When re-opened, they were unwilling to open it up to commercial fishing.<sup>22</sup>
- 59) The Government can put into place proper management options now, preventing the likelihood of a population collapse, especially where overfishing is an undetected leading stress for migratory galaxiids and the common smelt.
- 60) If the Department could add one thing to the management options, it should add a license with associated mandatory data collection, as NIWA has suggested in its report commissioned by the New Zealand Conservation Authority.<sup>23</sup>
- 61) In addition, Forest & Bird cannot support limitless fishing of endangered species and will not rest until there is a catch limit for whitebait fishing in New Zealand.
- 62) The options provided in the consultation document are not obtuse or unreasonable. Forest & Bird believes that they will make a small difference and therefore supports them as an addition and secondary to the recommendations included here in this submission.
- 63) Forest & Bird wishes to take advantage of any opportunity to speak with policy or ministerial staff associated with this regulatory reform while drafting the final provisions.
- 64) If the Minister or her staff has any queries about the contents of this submission, please contact Tom Kay or Peter Anderson at Forest & Bird.

Nāku noa iti, nā,



Annabeth Cohen  
Freshwater Conservation Advocate

---

<sup>22</sup> Fulton, W. et als. *'The Tasmanian Whitebait Fishery, Summary of present knowledg and outline of future management plans.'* Inland Fisheries Commission Ocasional Report 88-01. May 1988.

<sup>23</sup> Baker et als. "Potential options for regulation changes to the NZ whitebait fishery." NIWA. Report no. 2018160HN. <https://www.doc.govt.nz/Documents/getting-involved/nz-conservation-authority-and-boards/nz-conservation-authority/whitebait-fishing-regulations-niwa-june-2018.pdf>