



FOREST
& BIRD

Ministry of Fisheries
PO Box 1020
Wellington

1st February 2008

Submission: Draft National Plan of Action for the conservation and management of sharks

Forest & Bird appreciates the opportunity to comment on the draft National Plan of Action for shark conservation and management (NPOA-Sharks). In our submission, the term ‘sharks’ is used to define all chondrichthyan fishes (sharks, rays, skates and chimeras).

Forest & Bird

The Royal Forest and Bird Protection Society (Forest & Bird) was established in 1923 and has campaigned for over 80 years for the protection of New Zealand's native species and the habitats on which they depend.

The constitutional purpose of Forest & Bird is:

“To take all reasonable steps within the power of the Society for the preservation and protection of the indigenous flora and fauna and natural features of New Zealand, for the benefit of the public including future generations.”

Forest & Bird has a long history of advocacy for the protection of New Zealand’s marine species and has been at the forefront of efforts to protect sharks in New Zealand waters. The Society submits the following general comments on the draft NPOA-Sharks:

1. We strongly support the IPOA Sharks and the development of an NPOA for the conservation and management of sharks in New Zealand waters.
2. The conservation of sharks is of particular importance to Forest & Bird.

3. Whilst voluntary, a NPOA-Sharks for New Zealand is overdue, as many other countries have already established such plans¹.
4. The NPOA-Sharks should be based on the best available information, good science and an ecosystem based management framework.
5. The draft NPOA-Sharks gives a good overview of the Quota Management Scheme (QMS) and its use in the current management of sharks.
6. The draft NPOA-Sharks inadequately meets the recommendations for NPOAs set out by the FAO's International Plan of Action for the conservation and management of sharks (IPOA-sharks) and largely fails to provide actions that will achieve its objectives.
7. The draft NPOA-Sharks is largely fisheries focussed, with little to no scope given to non-fisheries threats and conservation tools.
8. The draft NPOA-Sharks supports the status quo but does not go further to describe how vulnerable populations of sharks will be managed sustainably.
9. The draft NPOA-Sharks appears to have ignored recommendations from the Department of Conservation.
10. Under the Fisheries Act, Forest & Bird consider that greater emphasis should be placed on sustainability aspects of fisheries management in line with the FAO Code of Conduct for Responsible Fisheries.

Key Recommendations

Forest & Bird recommend that the draft NPOA-Sharks be re-drafted for public comment with new information and a new structure to make it easier to read and more reflective of the recommendations set out by the IPOA-Sharks. We recommend that the re-drafted NPOA-Sharks including the following additional information and proposed actions:

1. Give fully protected status to basking shark (*Cetorhinus maximus*), whale shark (*Rhincodon typus*), deepwater nurse shark or smalltooth sandtiger shark (*Odontaspis ferox*), manta ray (*Manta birostris*) and spinetail devilray (*Mobula japonica*).
2. Describe the management strategy for protected shark species to ensure long-term viability.
3. Implement effective management for sharks listed as threatened by the IUCN and provide specific management strategies on a species by species basis.

¹ Australia, Japan, UK, USA (2001); Mediterranean Sea (2003); Taiwan, Mexico (2004); Ecuador (2005); Malaysia (2006); Canada (2007).

4. Add all non-QMS shark species to the QMS, Schedule 4C until quantitative research and stock assessments are made.
5. Set the quota for shark species on the QMS without a comprehensive stock assessment at zero or move them to schedule 4C until further research is conducted.
6. Impose regulation that requires the retention of the whole shark carcass – landed whole and unprocessed.
7. Significantly increase observer coverage in all fisheries catching sharks, either as targeted catch or as bycatch.

Additional recommendations

- Describe the NPOA-Sharks evaluation program to be conducted initially following one year of operation and subsequently every 2 years.
- Require an initial review of the current management of all shark species to be completed by the end of 2008.
- Describe a comprehensive research program with clear targets, objectives, prioritisation and timeframes.
- Remove spiny dogfish from the 6th schedule.
- Make the prohibited utilisation process standard a high priority.
- Conduct and describe an assessment of shark species assemblage relative to closed areas and modify those that have little conservation benefit to sharks.
- Delete text supporting the value of BPAs for shark conservation and management unless evidence of their value can be shown.
- Require a comprehensive review of current gear limits and catch limits.
- Describe non-fisheries effects and management tools.
- Remove ambiguous text about the use of section 14B of the Fisheries Act by deleting the words ‘is unlikely to’ and replacing with ‘will not’.
- Show greater commitment to a review of incidental fishing mortality and implement measures to reduce this mortality to zero.
- State that the interdependence of shark stocks and the environmental factors that influence those stocks are unknown.
- Review the current management of sharpnose sevengill shark (*Heptranchias perlo*) under schedule 4C.
- Incorporate a wider review of existing and pending policies that will have effects on the conservation and management of some shark species and populations.
- Define shark finning as ‘the removal of fins from a shark and discarding of the remainder of the carcass’.
- Adopt an anti-finning position within international fora.

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- Re-word the NPOA-Sharks to correctly outline that the QMS ‘could’ rather than does satisfy the overarching goal of the IPOA-Sharks, illustrating current problems with the implementation of the QMS.
- Incorporate genetic identification of sharks and taxonomic research into the proposed research program.
- Give a detailed description on New Zealand’s position or intended position on key shark species within international fora.

Forest & Bird’s submission comprises three sections covering the proposed actions, the structure and specific comments on the text in the draft NPOA-Sharks.

1. Proposed Actions

Forest & Bird supports all of the actions outlined in the draft NPOA-Sharks:

- a) *Produce a field identification guide*
- b) *Reduce use of generic shark reporting codes*
- c) *Initiate a research and monitoring programme*
- d) *Participate in relevant Regional Fisheries Management Organisations (RFMOs) and other relevant international fora*
- e) *Develop and implement a prohibited utilisation process standard*
- f) *Protect basking shark*
- g) *Ensure fishers are aware that live finning of sharks constitutes ill-treatment and is an offence under the Animal Welfare Act*
- h) *Establish reporting protocol to enforce the Animal Welfare Act*

Recognising the value of some of these approaches, Forest & Bird considers that greater strength of measures is needed to ensure that the objectives of the NPOA-Sharks are met. In particular, the objectives emboldened are not adequately addressed by the current proposed actions:

- 1) ***Ensure that shark catches from directed and non-directed fisheries are sustainable.***
- 2) *Assess threats to shark populations, determine and protect critical habitats and implement harvesting strategies consistent with the principles of biological sustainability and rational long-term economic use.*
- 3) ***Identify and provide special attention, in particular to vulnerable or threatened shark stocks.***
- 4) ***Contribute to the protection of biodiversity and ecosystem structure and function.***
- 5) ***Minimise unutilised incidental catches of sharks.***
- 6) ***Minimise waste and discards from shark catches in accordance with article 7.2.2.(g) of the Code of Conduct for Responsible Fisheries.***
- 7) ***Encourage full use of dead sharks.***
- 8) *Facilitate improved species-specific catch and landings data and monitoring of shark catches.*
- 9) *Facilitate the identification and reporting of species-specific biological and trade data.*
- 10) *Improve and develop frameworks for establishing and co-ordinating effective consultation involving all stakeholders in research, management and educational initiatives within and between States.*

Here we comment on the areas that were inadequately addressed in the draft NPOA-Sharks to ensure sustainable fisheries for shark populations.

1.1 Threatened species (Objective 3)

Objective 3 of the draft NPOA-Sharks explicitly refers to the need to provide special attention to vulnerable or threatened shark stocks. However, the draft NPOA-Sharks largely omits to give such species any attention. Of the 26 species in New Zealand waters currently recognised as threatened

under the International Union for the Conservation of Nature (IUCN) (31 species if you include potential new listings), one species (great white shark, *Carcharodon carcharias*) is already fully protected and only one species (basking shark, *Cetorhinus maximus*) is proposed to be further protected (action f).

Forest & Bird undertook an assessment of shark species on the IUCN database. The following tables (Tables 1 and 2) present the findings of that research and suggested additional species for protection status based on IUCN red list reviews².

Table 1. Threatened shark species in New Zealand waters listed by the IUCN, showing New Zealand fisheries code and current management regime.

	Common Name	Scientific name	Fisheries Code	NZ Management regime
Vulnerable	1 Great white shark	<i>Carcharodon carcharias</i>	WPS	Protected
	2 Basking shark	<i>Cetorhinus maximus</i>	BSK	Schedule 4C
	3 Whale shark	<i>Rhincodon typus</i>		Schedule 4C *
	4 Porbeagle	<i>Lamna nasus</i>	POS	Section 14
	5 Spiny dogfish	<i>Squalus acanthias</i>	SPD	Section 13
	6 Leafscale gulper shark	<i>Centrophorus squamosus</i>	CSQ	Open access
	7 School shark, tope	<i>Galeorhinus galeus</i>	SCH	Section 13
	8 Oceanic whitetip shark	<i>Carcharhinus longimanus</i>		
Near Threatened	1 Bronze whaler	<i>Carcharhinus brachyurus</i>	BWH	Open access
	2 Galapagos shark	<i>Carcharhinus galapagensis</i>		
	3 Frill shark	<i>Chlamydoselachus anguineus</i>	FRS	Open access
	4 Sharpnose sevengill shark	<i>Heptranchias perlo</i>	HEP	Schedule 4C
	5 Prickly shark	<i>Echinorhinus cookei</i>	ECO	Open access
	6 Mandarin dogfish	<i>Cirrhigaleus barbifer</i>		
	7 Portuguese dogfish	<i>Centroscymnus coelolepis</i>	CYL	Open access
	8 Plunket's shark	<i>Proscymnodon plunketi</i>	PLS	Open access
Low Risk (nt/lc)	1 Port Jackson shark	<i>Heterodontus portusjacksoni</i>		
	2 Crocodile shark	<i>Pseudocarcharias kamoharai</i>		
	3 Mako, shortfin mako	<i>Isurus oxyrinchus</i>	MAK	Section 14
	4 Sixgill shark	<i>Hexanchus griseus</i>		
	5 Grey reef shark	<i>Carcharhinus amblyrhynchos</i>		
	6 Silky shark	<i>Carcharhinus falciformis</i>		
	7 Dusky shark	<i>Carcharhinus obscurus</i>		
	8 Tiger shark	<i>Galeocerdo cuvier</i>	TIS	Open access
	9 Blue shark	<i>Prionace glauca</i>	BWS	Section 14
	10 Smooth hammerhead shark	<i>Sphyrna zygaena</i>	HHS	Schedule 4C
Proposed listing	1 Longtail skate (VU)	<i>Arhynchobatis asperrimus</i>		
	2 Pale cat shark (VU)	<i>Apristurus exsanguis</i>		
	3 Smooth skate (NT)	<i>Dipturus innominatus</i>		
	4 Manta ray (NT)	<i>Manta birostris</i>		*
	5 Spinetail devil ray (NT)	<i>Mobula japonica</i>		*

* Being considered for addition to the Wildlife Act

² Data was sourced from www.iucnredlist.org and as such may contain errors.

Table 2. Threatened shark species in New Zealand waters listed by the IUCN, showing New Zealand fisheries code and current management regime.

	Common Name	Scientific name	Fisheries Code	NZ Management regime
Least Concern	1 Elephantfish	<i>Callorhinchus milii</i>	ELE	Section 13
	2 Pale ghost shark	<i>Hydrolagus bemisi</i>	GSP	Section 13
	3 Dark ghost shark	<i>Hydrolagus novaezealandiae</i>	GSH	Section 13
	4 Shovelnose dogfish	<i>Deania calcea</i>		
	5 Baxter's (lantern) dogfish	<i>Etmopterus baxteri</i>		
	6 Owston's / rough skin dogfish	<i>Centroscymnus owstoni</i>	SCM	Open access
	7 Longnose velvet dogfish	<i>Centroselachus crepidater</i>	CYP	Open access
	8 Pygmy shark	<i>Euprotomicrus bispinatus</i>		
	9 Cookie cutter shark	<i>Isistius brasiliensis</i>		
	10 Goblin shark	<i>Mitsukurina owstoni</i>		
	11 Carpet shark	<i>Cephaloscyllium isabellum</i>	CAR	Open access
	12 Slender smooth hound	<i>Gollum attenuatus</i>	SSH	Open access
	13 Rig	<i>Mustelus lenticulatus</i>	SPO	Section 13
Data Deficient	1 Whitetail dogfish	<i>Scymnodalatias albicauda</i>		
	2 Sherwood's dogfish	<i>Scymnodalatias sherwoodi</i>	SHE	Open access
	3 Broadnose sevengill shark	<i>Notorynchus cepedianus</i>		
	4 Bramble shark	<i>Echinorhinus brucus</i>	BRS	Open access
	5 Northern spiny dogfish	<i>Squalus sp. cf mitsukurii</i>		
	6 Southern sleeper shark	<i>Somniosus antarcticus</i>		
	7 Velvet dogfish	<i>Zameus squamulosus</i>	ZAS	
	8 Prickly dogfish	<i>Oxynotus bruniensis</i>		
	9 Seal shark, black shark	<i>Dalatias licha</i>		
	10 Smalltooth sand tiger shark	<i>Odontaspis ferox</i>		*
	11 Thresher shark	<i>Alopias vulpinus</i>	THR	Open access
	12 Dawson's cat shark	<i>Bythaelurus dawsoni</i>	APR/CSH	Open access
	13 McMillan's cat shark	<i>Parmaturus macmillani</i>		
	14 False cat shark	<i>Pseudotriakis microdon</i>		

* Being considered for addition to the Wildlife Act

Forest & Bird strongly supports the proposal to fully protect basking sharks. Whilst whale sharks (*Rhincodon typus*), deepwater nurseshark or smalltooth sandtiger shark (*Odontaspis ferox*), manta ray (*Manta birostris*) and spinetail devilray (*Mobula japonica*) are being considered for protection under the Wildlife Act, the NPOA-Sharks should explicitly support this review and propose full protection as one of the proposed actions.

The characteristics and status of threatened species, including and in addition to basking shark, has not been covered in the draft NPOA-Sharks. There is also no description of the threats to these species in New Zealand waters, the current management of them, the risks of stock decline, collapse or extinction and no assessment of potential gaps in current management and improvements needed to adequately meet the intent of the NPOA-Sharks to manage and conserve them.

For many of the threatened species of shark in New Zealand, including those managed under the QMS, fishing may be at a level above that which is sustainable. For example, there is considerable global concern about current fishing levels on blue sharks (*Prionace glauca*). Recent reports have shown a 40% decline in blue sharks in the Tasman Sea over last decade (Department of Conservation, unpublished).

Just 5 shark species listed as threatened are managed under the QMS, with a further 4 listed on Schedule 4c (prohibiting further permits). The remaining 16 threatened sharks (21 including possible new additions to the list) are unprotected.

Of those species on the QMS, there is no critique of the quality of stock assessments or how up-to-date they are.

The following examples illustrate the status of threatened species on the QMS.

Porbeagle shark (*Lamna nasus*) (Ministry of Fisheries, 2007: p689):

“There is no assessment for this stock so it is not known if the stock is at or above a level capable of producing the maximum sustainable yield. Furthermore, it is not known whether current catches or the TAC are at levels that will allow the stock to move towards the biomass that would support the maximum sustainable yield. However, declining catches over a period when effort has increased rapidly, low CPUE [catch per unit effort] in recent years, combined with the low productivity of the species and a history of fishery collapses in the North Atlantic, are all cause for concern.”

Shortfin mako shark (*Isurus oxyrinchus*) (Ministry of Fisheries, 2007: p463):

“There is no assessment for this stock so it is not known if the stock is at or above a level capable of producing the maximum sustainable yield. Furthermore, it is not known whether current catches or the TAC are at levels that will allow the stock to move towards the biomass that would support the maximum sustainable yield. Due to its biological characteristics, mako shark is vulnerable to overexploitation.”

It is very clear that there is an urgent need to review all sharks listed by the IUCN as threatened on the QMS and to address the lack of management for those not on the QMS.

Forest & Bird recommends that the four species being considered for protection under the Wildlife Act (whale shark, smalltooth sandtiger shark, manta ray and spinetail devilray) be proposed for full protection through the NPOA along with basking sharks.

We also recommend that a comprehensive review of all threatened shark species be undertaken as a matter of urgency and that all species be added to the QMS as soon as possible. Until a robust assessment is undertaken and a sustainable catch level determined for each species, the quotas for threatened species of shark should be set at zero.

1.2 Quota Management System Review (Objective 1 and 2)

The draft NPOA-Sharks is largely focussed on fisheries management and gives a comprehensive (22 page) outline of the different tools under the existing fisheries management regime – the Quota Management Scheme.

Effectiveness of the QMS relies on:

- availability of accurate catch data (including discards) to determine fishing mortality
- understanding of biological productivity of the species
- knowledge of each stock's geographic range
- existence and application of suitable population monitoring tools
- stock assessment to determine current status of each stock and sustainable yields
- enforcement of quotas

Such information is very difficult to obtain even for highly targeted fish on the QMS. There is little to no information to sufficiently meet these requirements for any New Zealand sharks species. It is therefore not possible to adequately estimate the maximum sustainable yield of any shark species on the QMS.

This implies that the NZ QMS is not adequately managing shark stocks.

Of the 112 species of shark in New Zealand waters, of which 79 are reported as catch, it is not adequate that just 11 species (9%) are managed under the QMS and a further 4 are on schedule 4C. The remaining 97 (87%) of shark species occurring in our waters (including 64 species caught in fisheries) are totally unprotected.

Forest & Bird does not support “Open access” as a sustainable fisheries management tool. As very little is known about shark species in New Zealand on the QMS let alone outside of it, we face a very high risk of unknowingly causing severe adverse effects on populations of a wide number of our sharks.

We strongly support the proposal to implement a prohibited utilisation process standard (action e) and recommend that this action be given a high priority.

Appendix 3 and 4 are useful in presenting this information on current Fisheries management tools applied to sharks and the reported commercial catch of these species. However, there is no mention of the potential bias in these data, which is a consequence of low observer coverage and potential mis-reporting of shark bycatch. There is also no mention of which species have had a stock assessment, the quality and quantity of assessments, the risk of stock collapse, the impact on associated or dependent species and ecosystems (section 13 2(bii) of the Fisheries Act), or any detail on information gaps required to accurately assess their status and ensure sustainability.

Spiny dogfish (*Squalus acanthias*), managed under section 13 of the Fisheries Act, is listed as a threatened species on the IUCN Red list (category: vulnerable), yet it is widely assumed in New Zealand to be at sustainable levels. This assumption is based on continuous catches of spiny dogfish

and is reported as such in the draft NPOA-Sharks. However, the assessment of the status of spiny dogfish by the Ministry of Fisheries is far from convincing as there are no current or reference biomass estimates. The Plenary report (2007) concludes:

“It is unknown whether current catch limits are sustainable or whether they are at levels that would allow the stock to move towards a size that will support the maximum sustainable yield.”

Forest & Bird does not support inclusion of Spiny dogfish on the 6th Schedule, which provides an exception to the current rule that QMS species be landed if taken. We support the listing of species that are caught alive and likely to survive so that they can be released. However, Forest & Bird does not support inclusion of Spiny dogfish. The draft NPOA-Sharks (para 78) states that spiny dogfish are often an unwanted bycatch species and that survival of those caught is limited. The current management and inclusion of spiny dogfish on the 6th schedule therefore condones the unnecessary mortality and discarding of this species. This is in direct conflict with objectives 5, 6 and 7 of the draft NPOA-Sharks.

School shark (*Galeorhinus galeus*), another species managed under section 13 of the Act, is one of the most abundant large predatory fishes found on the New Zealand shelf (Department of Conservation, unpublished). If the stock were to collapse, there would likely be unknown ecological consequences. The Ministry of Fisheries (2007) reports for the status of this stock:

“Estimates of current absolute biomass are not available.

School shark TACs were originally set at half the 1983 catch because of apparently declining catch rates and concern about the undoubtedly low productivity of the species. However, catches and actual TACCs have steadily increased since 1986–87. CPUE indices are characterised by high uncertainty. However, there are no indications that current catches are not sustainable in the short-term. However, it is not known whether recent catch levels or the current TACCs are sustainable in the long-term, or if they are at levels that will allow the stocks to move towards a size that will support the maximum sustainable yield.”

School sharks have very low productivity and most fisheries for the species in other countries have collapsed after sustaining high catches for variable periods (Department of Conservation, unpublished). Currently, reported landings in New Zealand are around the same levels as those reported in Australia’s Southern Shark Fishery prior to its collapse. The Australian Southern Shark Fishery is one of the most well studied shark fisheries, yet stock collapse took place and there has been no recovery of the population.

Forest & Bird recommend that spiny dogfish is removed from the 6th schedule.

We recommend that the implementation of a prohibited utilisation process standard (action e) be given a high priority.

Forest & Bird recommends that the NPOA-Sharks bring all non-QMS shark species into the QMS under schedule 4C, that there be a review of the current stock assessment process and that an initial assessment of all shark species be completed by the end of 2008.

Unless there is robust scientific data available to adequately assess MSY for shark species on the QMS, species should be managed under Schedule 4C and/or the quota set at zero.

A comprehensive assessment of all shark species should be factored into the research program.

1.3. Shark finning, use of shark livers and issues of waste and discard (Objectives 5, 6 and 7)

There are three very clear objectives to reduce the waste of sharks in the IPOA-Sharks:

- 6. Minimise unutilised incidental catches of sharks;*
- 8. Minimize waste and discards from shark catches in accordance with article 7.2.2.(g) of the Code of Conduct for Responsible Fisheries (for example, requiring the retention of sharks from which fins are removed);*
- 9. Encourage full use of dead sharks;*

The draft NPOA-Sharks objectives exactly match those recommended by the IPOA-Sharks, with one exception. New Zealand's draft NPOA-Sharks omits to include the text in brackets for objective 7 in the IPOA-Sharks – *'for example, requiring the retention of sharks from which fins are removed'*.

Forest & Bird does not support the rewording of IPOA objective 8 and consider that it should be adopted in full.

Shark finning, the removal of fins from a shark and discarding of the remainder of the carcass, has been banned in the following regional fisheries management organisations: International Commission for the Conservation of Atlantic Tuna, Inter-American Tropical Tuna Commission, Indian Ocean Tuna Commission, Northwest Atlantic Fisheries Organisation, Southeast Atlantic Fisheries Organisation and North East Atlantic Fisheries Commission. A number of countries have also banned shark finning: Australia, Italy, South Africa and the USA.

Proposed actions in the draft NPOA-Sharks do not meet its stated objectives 6 and 7 to minimise waste and discard and encourage full use of dead sharks. Rather, the draft NPOA-Sharks appears to condone current finning practices and considerable waste of sharks in New Zealand waters. Table 3 of appendix 5 shows that finning is the predominant practice for carpet sharks, basking sharks, blue sharks and porbeagle sharks, where percentage of total catch reported as finned (with the rest of the shark discarded) is 94%, 92%, 90% and 84% respectively. Percentage of catch discarded for spiny dogfish (55%), carpet shark (63%) and sharks classified as 'other sharks and dogfish' (64%) also exemplifies unacceptable waste of sharks in New Zealand.

These figures are unacceptable and there should be explicit actions proposed to immediately reduce this wastage.

The draft NPOA-Sharks chooses only to address the unethical issue of finning live sharks, a practice already prohibited under the Wildlife Act:

“Ensure fishers are aware that live finning of sharks constitutes ill treatment and is an offence under the animal Welfare Act.” (Proposed action point g)

This is totally inadequate and contradicts the NPOA-Sharks objectives. It also does little other than to promote the status quo given the lack of adequate observer or compliance monitoring in fisheries practicing shark finning.

The issue of shark conversion factors is not commented on by Forest & Bird. We could outline at length the gross inaccuracies and uncertainties surrounding their use both in New Zealand and worldwide, plus the considerable compliance and reporting problems associated with fisheries that catch sharks. However, debate around conversion factors is irrelevant if the NPOA-Sharks objectives are to be correctly met - shark finning is prohibited and retention of whole carcasses is made mandatory.

The draft NPOA-Sharks outlines that the Ministry of Fisheries supports and encourages the utilisation of shark livers as it has recently been made aware of commercial opportunities related to its use (para 194). In a similar manner to shark fins, use of shark livers may actually encourage the utilization of many sharks (both QMS and non-QMS species) and so increase waste and discard from shark catches. To state that *“there is a risk in regulating to avoid waste in that such regulations may merely transfer the disposal site from the sea to the land”* (para 155) is unrealistic and an invalid argument in relation to the objectives of the NPOA-Sharks. It is clear from Table 5 in the draft NPOA-Sharks that there are multiple uses for sharks and that there is value in using the whole carcass.

Landing of shark carcasses whole and unprocessed would avoid complex fin conversion factors and ensure accurate reporting of species codes further satisfying objectives 8 and 9.

Forest & Bird does not support the utilization of shark species for which there is considerable uncertainty or a complete lack of information to adequately assess maximum sustainable yield.

We note that the Ministry of Fisheries will shortly be consulting on proposals to require the retention of whole shark carcasses in fisheries outside the New Zealand EEZ. There is no mention of this position in the draft NPOA-Sharks. An anti-finning approach should be adopted domestically to meet the IPOA-Shark recommendations and to ensure consistency.

To minimise waste and discard and encourage full use of sharks, Forest & Bird recommends that the NPOA insert the missing text from IPOA-Sharks objective 7. The NPOA-Sharks should explicitly state that all sharks retained in New Zealand waters (and by New Zealand flagged vessels) are to be landed whole and unprocessed.

Forest & Bird also recommends that this position be encouraged by New Zealand to other states within international fora.

1.4 Research (Objectives 1, 3, 4, 8, 9 and 10)

Forest & Bird supports the proposed research and monitoring program outlined in the draft NPOA-Sharks. However, there are no targets and timeframes specified, no evaluation of current management of sharks in New Zealand waters and no attempt to identify and prioritise research needs for species or specific aspects of the program.

The NPOA-Sharks should at least undertake a simple review of current information. The Australian NPOA-Sharks (Shark Plan) provides a useful template.

To adequately conduct research on sharks in New Zealand and to assess the efficiency of current fisheries management in meeting the objectives of the NPOA-Sharks, it is essential that observer coverage is adequate.

Research by Griggs *et al* (2007), demonstrates that current observer coverage in New Zealand tuna longline fisheries alone is very low, particularly for the domestic fleet, which constitutes the majority of vessels fishing in pelagic longline fisheries.

Table 1. Observed number of hooks as a percentage of those set by the tuna longline fishery (Griggs *et al*, 2007).

Fishing year	Domestic	Foreign+ charter	Total
1988-89	0.0	2.4	2.4
1989-90	0.0	5.2	5.2
1990-91	0.0	2.8	2.7
1991-92	3.6	4.9	4.8
1992-93	0.0	17.7	15.2
1993-94	0.1	39.3	19.5
1994-95	2.2	49.7	19.0
1995-96	5.3	0.0	4.9
1996-97	3.4	60.6	25.4
1997-98	2.4	77.5	25.1
1998-99	0.7	70.0	15.8
1999-00	0.5	57.4	8.4
2000-01	2.7	86.8	10.8
2001-02	1.5	78.5	8.4
2002-03	0.0	85.2	17.4
2003-04	2.2	90.8	19.8
2004-05	4.9	87.7	19.0
Total	1.8	20.3	11.1

Such low observer coverage is inadequate to assess the effects of fishing on shark stocks.

Observer coverage in other fisheries that catch sharks (commercial and recreational set net, inshore trawl, inshore longline fisheries and some middle depth and deep water trawl fisheries) is not discussed. Coverage is at very low levels in these fisheries.

The draft NPOA-Sharks references the need to increase observer coverage, but this action is not presented in section 5 – proposed actions of the NPOA-Sharks.

Forest & Bird recommends that a review of information on current management of shark species be included in the NPOA-Sharks.

A comprehensive research program should be outlined with clear targets, objectives, prioritisation and timeframes.

We also recommend that the NPOA-Sharks proposed actions explicitly commit to dramatic increases in observer cover across all fisheries with both target and non-target bycatch.

An evaluation program for the review of the NPOA-Sharks effectiveness in relation to its objectives should also be proposed. Forest & Bird recommends that NPOA-Sharks reviews be conducted initially following one year of operation and subsequently every 2 years.

1.5 Other management measures (Objectives 2 and 4)

Section 11 of the Fisheries Act allows for closed areas, closed seasons and gear restrictions, yet there is little attention paid to the value of these tools in the draft NPOA-Sharks and no proposals for implementing such tools. This is potentially an important oversight.

A review of current literature shows that gear restrictions, catch limits and area closures are important tools for the conservation of sharks.

There is considerable praise in the draft NPOA-Sharks for the Benthic Protected Areas (BPA) initiative and its value in protecting sharks. However, the BPAs are far offshore, difficult to reach and mostly unfished. They will therefore have very little impact on the current effects of fishing on shark species and do little if anything to avoid, remedy or mitigate those impacts. To state that *‘habitats of particular importance to sharks will be incorporated in the BPAs’* (para 152) is totally unfounded. If such a statement is to be made, it must be justified by a robust analysis of shark species assemblage. Such a review would be easy to do using numerical models of occurrence and abundance of demersal fishes developed by Leathwick *et al* (2006).

Other closed areas that do overlap with shark distribution, such as fisheries closed areas and marine reserves are given very little mention in the draft NPOA-Sharks and have not been assessed in relation to the value they bring to different shark species. Such tools could greatly improve the conservation and sustainability of sharks in New Zealand, particularly for species that aggregate in certain areas to breed and for some of the deepwater species taken in southern and central New Zealand (Department of Conservation, unpublished).

The draft NPOA-Sharks illustrates a lack of consistency in set net mesh sizes and unsustainable bag limits across different regions (paras 73-75). There should be an analysis of existing gear restrictions and whether these are sufficient to sustain biomass and a healthy stock structure.

The draft NPOA-Sharks lacks an assessment of non-fisheries activities, the benefits or threats they may pose to shark species and the management tools that may be applicable in reducing any impacts.

Forest & Bird recommends that an assessment of shark species assemblage is conducted relative to the BPAs and other closed areas. On the basis of findings from this research, we recommend that the NPOA-Sharks specify an objective to review and modify the current BPAs and to implement more seasonal restrictions or closed areas to give better effect to avoiding, remedying or mitigating the adverse effects of fishing on sharks.

We also recommend that there be a comprehensive assessment of current gear limits and catch limits and that modification to current management practices is implemented where applicable. Also, a review and description of non-fisheries effects and management tools should be provided.

2. Structure of NPOA-Sharks

The current structure of the draft NPOA-Sharks could be improved to make it easier to read and to better reflect the recommended scope in the IPOA-Sharks.

The IPOA-Sharks recommends that NPOAs adopt the following structure:

A. Description of the prevailing state of:

- *Shark stocks, populations;*
- *Associated fisheries; and,*
- *Management framework and its enforcement.*

B. The objective of the Shark-plan.

C. Strategies for achieving objectives. The following are illustrative examples of what could be included:

- *Ascertain control over access of fishing vessels to shark stocks*
- *Decrease fishing effort in any shark where catch is unsustainable*
- *Improve the utilization of sharks caught*
- *Improve data collection and monitoring of shark fisheries*
- *Train all concerned in identification of shark species*
- *Facilitate and encourage research on little known shark species*
- *Obtain utilization and trade data on shark species*

Whilst the draft NPOA-Sharks section 5 outlines the proposed actions (strategies for achieving objectives), the objectives themselves are somewhat hidden within section 4 titled ‘Alignment of fisheries management in New Zealand with the IPOA-Sharks’. A description of shark species, stocks, populations and associated fisheries is minimal. A meaningful analysis including enough detail to determine threats and risks should be included.

Building on the existing structure of the draft NPOA-Sharks, we recommend the following information and structure is adopted:

Executive Summary

Introduction

Outline the purpose of the NPOA-Sharks in relation to IPOA, the legal framework under which it resides and the intended management and review of the NPOA-Sharks in the future (including specific timeframes).

1. NPOA-Sharks Objectives

2. New Zealand shark species

A detailed description of the shark species in New Zealand waters, their conservation status, life history traits, known distributions, population and stock status, threats to short-term and long-term sustainability.

3. New Zealand fisheries in which sharks are targeted or caught as bycatch

A detailed description of species caught by fisheries in New Zealand waters, fishing methods, effort and percentage take, discard and processing state.

4. Current shark Management in NZ

An overview and assessment of current management relative to the objectives of the NPOA-Sharks. This section should cover:

- *QMS*
- *Shark finning*
- *Non-QMS*
- *Threatened sharks – priorities for their management*
- *International agreements*
- *Non fisheries management*

This section of the NPOA-Sharks needs to clearly state New Zealand’s position and priorities on sustainable management of sharks in New Zealand fisheries and provide consistency in approach across international and domestic fisheries.

5. Proposed actions

This section needs to be expanded to include additional actions consistent with the IPOA and a detailed research program. Actions should be correctly related to the NPOA-Sharks objectives, prioritised according to importance and be assigned target timeframes.

Forest & Bird recommend that the draft NPOA-Sharks be re-drafted with new information and a new structure to make it easier to read and more reflective of the recommendations set out by the IPOA-Sharks.

3. Specific Comments

71.

Forest & Bird does not support the use of section 14B, which allows a stock to be managed below the level that can support MSY, for any species where there is uncertainty in the status of the stock. We support the sentiment of para 71 but recommend that wording should be strengthened to explicitly state that section 14B will not be used for the management of sharks rather than ‘unlikely’ to be used.

Forest & Bird recommend that the NPOA-Sharks should remove ambiguous text about the use of section 14B of the Fisheries Act by deleting the words ‘is unlikely to’ and replacing with ‘will not’.

45-47.

Great white sharks are now protected under the Wildlife Act 1953. However, fishing related mortality of great white sharks is only likely to have been reduced by a few percent as most incidences are from bycatch in set nets and bottom longliners.

Forest & Bird recommend that greater commitment be given to a review of incidental fishing mortality and implement measures to reduce this mortality to zero.

57

Section 13 of the Act is applied to the management of 11 species of shark on the QMS. However, as noted in para 57:

Under section 13 there is a requirement to maintain the biomass of a fish stock at, or above, a level that can produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks. MSY is defined, in relation to any fish-stock, as being the greatest yield that can be achieved over time while maintaining the stock’s productive capacity, having regard to the stock’s population dynamics and any environmental factors that influence the stock.

Both the interdependence of stocks and the environmental factors that influence the stock are either not known or not considered when estimating MSY for sharks. Requirements under section 13 are therefore not being adequately met.

Forest & Bird recommend that the NPOA-Sharks state that the interdependence of shark stocks and the environmental factors that influence those stocks are unknown. We recommend a review of all shark

species managed under section 13 and proposals to correct current uncertainty in the management of these species.

87-89

Catch of sharpnose sevengill shark (*Heptranchias perlo*) has increased over the last few years. This suggests that protection under schedule 4C may not be appropriate.

*Forest & Bird recommend a review of sharpnose sevengill shark (*Heptranchias perlo*) management under schedule 4C as catch levels are increasing.*

121

Three broad policy groups are identified in the draft NPOA-Sharks for the management of sharks. However, there are a number of omissions from Table 2 and the NPOA-Sharks itself. For example, the seabird and benthic protection standards and the Hector's dolphin Threat Management Plan will each have effects on some shark species.

Forest & Bird recommends that the Ministry of Fisheries undertake a review of existing and pending policies and incorporate them into the NPOA-Sharks as tools that will have effects on the conservation and management of some shark species and populations.

153

The NPOA-Sharks needs to clearly define shark finning.

Forest & Bird recommends the NPOA-Sharks define shark finning as:

“The removal of fins from a shark and discarding of the remainder of the carcass.”

172

Forest & Bird does not agree that New Zealand's current management system – the Quota Management – satisfies the overarching goal of the IPOA-Sharks. The QMS *could* satisfy the goal if it were to be correctly and appropriately implemented. However, current management of sharks under the QMS is grossly inadequate and fails to ensure any form of conservation or long-term sustainable use.

Forest & Bird recommends that the draft NPOA-Sharks be re-worded to correctly outline that the QMS ‘could satisfy the overarching goal of the IPOA-Sharks’, illustrating current problems with the implementation of the QMS.

201

There is no evidence to support the statement that BPAs may make a significant contribution to protecting shark habitat, the protection of shark biodiversity and overall ecosystem structure and function.

Forest & Bird recommends that text supporting the value of BPAs for shark conservation and management be deleted unless evidence of their value can be shown.

208-210

A new, comprehensive fish identification guide will be a useful tool to improve the identification of some shark species. However, there should also be reference to the fact that some shark species, particularly deepwater sharks, require specialist taxonomic identification and genetic analysis and that such research should be supported.

Forest & Bird recommends the proposed research planning program incorporate genetic identification of sharks and taxonomic research.

224-233

New Zealand already participates in a number of relevant RFMOs and other international fora. The detail on the position New Zealand takes at these meetings is not presented. The action to be involved in these meetings, whilst supported by Forest & Bird, does not appear to change from the status quo.

Forest & Bird recommends that a detailed description is given in relation to New Zealand's position or intended position on key shark species within international fora.

Should you have any queries regarding our comments, please do not hesitate to contact me.

Yours sincerely,

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