Fisheries (Innovative Trawl Technologies) Notice 2017

New Zealand Government

Growing and Protecting New Zealand

Issuing Authority

This notice is issued under regulation 71C of the Fisheries (Commercial Fishing) Regulations 2001 by Martyn Dunne, Chief Executive of the Ministry for Primary Industries.

Introduction

The Fisheries (Trawling) Amendment Regulations 2017 amend the Fisheries (Commercial Fishing Regulations 2001 by (amongst other things) inserting new regulations about how the chief executive of the Ministry for Primary Industries approves new types of trawl nets. Those regulations (regulations 71A to 71C of the Fisheries (Commercial Fishing) Regulations 2001) come into force on 1 October 2017.

The regulations will allow for new trawl technologies that will provide for improved economic and environmental outcomes.

The new regulations provide for a person who wants to use a new kind of trawl net to apply to the chief executive for approval for the net (referred to as net A). The application must provide a comparison of the new net against an existing net (net B) in relation to four specified criteria.

This comparison will usually be carried out under trials authorised by a special permit issued pursuant to section 97 of the Fisheries Act 1996. In some very limited circumstances, trials may not be required to compare the innovative gear with existing nets.

The regulations allow the chief executive to issue a notice specifying certain technical details about how the comparison between net A and net B must be made, and the information to be included in any application. This notice sets out those details.

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1 Title

(1) This notice is the Fisheries (Innovative Trawl Technologies) Notice 2017.

2 Commencement

(1) This notice comes into force on 12 October 2017.

3 Purpose

(1) The purpose of this notice is—

a) to set out the requirements relating to an application to use a new type of trawl net (net A); and
b) to specify how comparisons between net A and a specified net (net B) must be made; and
c) to set out matters that the chief executive must have regard to when deciding whether or not information from trials is required; and
d) to set out the requirements for any trials required for the purposes of comparison.

4 Definitions

(1) In this notice—

Act means the Fisheries Act 1996

benthic species means invertebrate species that live on or in the sea floor

characteristics includes both physical characteristics and performance characteristics

MPI means the Ministry for Primary Industries

net A means a trawl net that is the subject of an application for approval, or an application to vary the conditions of approval, under regulation 71A

net B has the same meaning as **specified net** in regulation 71A(2), namely: a trawl net that, at the time of an application for approval of net A, or an application for a variation of an approval to use net A—

a) may be used for fishing under regulation 71 or under other regulations in force under the Act that relate to commercial fishing in a specified area of New Zealand fisheries waters; and
b) that the chief executive considers is appropriate to use for the purpose of comparison under regulation 71A(1), having regard to the kinds of net that are commonly used, or are approved for use under that regulation, for taking at least one of those species in at least one of those areas or in a similar area

QMS species means a fish stock or species subject to the quota management system established under the Act; and **non-QMS species** has a corresponding meaning

Regulations means the Fisheries (Commercial Fishing) Regulations 2001, and a reference to a regulation is a reference to a regulation in those Regulations

target species, in relation to a fishing event, means any QMS species that is intended or expected to be caught during that fishing event; and **primary target species** means the target species that the trawl is intended to catch most of.

(2) Any term that is defined in the Act or Regulations and used but not defined in this notice has the meaning set out in the Act or Regulations. (Key terms defined in the Act include **special permit**.)

5 Application for approval to use net A

(1) Every application for approval under regulation 71A to use net A for trawling must include the following:

a) details of the fisheries (ie, areas, seasons, primary target species, mid-water or bottom tow) in which net A is proposed to be used:
b) the specifications of net A, including a description (in words as well as by way of photos or diagrams) of—

i) each component (including any of the following that form part of the net: trawl doors, sweeps, bridles, ground gear, headline, body panel, lengthener, cod end, mesh type dimensions, rope (type, gauge, single braid, and colour), and liners); and
ii) the materials of which the components are made; and
iii) the configuration of the components:

c) an explanation of how the use of net A is consistent with the relevant fisheries plans approved under section 11A of the Act:
d) details of any practices or procedures proposed to be used to—

i) mitigate any adverse effects arising from the use of net A as compared with the use of net B, or
ii) improve the performance of net A as compared with net B:

e) a comparison of net A with net B, setting out the matters in subclause (2).

(2) The comparison of net A with net B must set out the following:

a) the specifications of net B, including the same details as are required for net A (see subclause (1) (b)):
b) details as to how net B meets the criteria for a specified net that are set out in regulation 71A(2):
c) a comparison of the characteristics of net A compared with those of net B:
d) a comparison of how the performance of net A compares with that of net B in providing for the utilisation of fisheries resources while ensuring sustainability, based on the matters listed in regulation 71B(2), namely:

i) species composition of the catch:
ii) size composition of the catch:
iii) impact on protected species:
iv) impact on benthic species:

e) if trials are conducted to compare net A with net B—

i) the information specified in the Schedules; and
ii) the raw data on which that information is based, or details of how to access that data; and
iii) a scientific description of the methodological approach used in the trials, and the methods used to analyse the data collected, in sufficient detail to allow scientific

review in line with the Research and Science Information Standard for New Zealand Fisheries; and

iv) the names, positions, and employers of each researcher used; and

v) details of special permits used when conducting the trials.

(3) The application may include—

a) any additional information relating to the sustainability benefits of net A compared to net B; and

b) any further information relating to the utilisation benefits of net A compared to net B.

6 When information from trials is required in an application

(1) This clause applies when an applicant is applying for—

a) an approval of net A; or

b) a variation to one or more of the terms or conditions of an approval of net A.

(2) In order to provide a comparison of net A with net B, every applicant must conduct trials for the purpose of comparing net A with net B, unless the chief executive waives, in writing, the requirement—

a) to conduct trials at all; or

b) to provide specified information relating to net B.

(3) When deciding whether to waive a requirement, the chief executive must have regard to the following:

a) the extent to which the characteristics of net A compare with those of net B:

b) the extent to which information about the characteristics of net B already exists:

c) in relation only to an application for variation of the terms or conditions of an approval, existing information about the characteristics of net A as provided by fisheries observers, electronic monitoring, or independent studies.

Schedule 1 – Questions to be addressed, and information to be obtained, from trials

The information provided by the applicant must represent the consolidated results from the complete trial. Comparisons between net A and net B must be statistically robust.

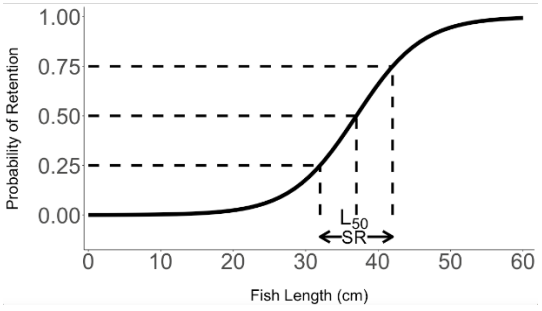
In table 1, **vulnerable fish species** means the species identified in the list of vulnerable fish species in Schedule 2.

In table 2, the **sizes deemed important for fisheries management purposes** are the sizes identified in a list of that name in Schedule 3.

1 Species composition

	Question	Information required		
1A	What is the primary target species and all other target species?	Identify by common name, scientific name, and species code		
1B	Which, and what amount of, fish species does each net catch?	a) Weight of each QMS species caught and combined weight of all QMS species b) Weight of non-QMS species caught by species or species groups and combined weight c) Ratio of each QMS species to total catch	Net A	Net B
1C	Which, and what amount of, vulnerable fish species does each net catch?	a) Total weight of vulnerable fish species caught b) Ratio of weight of vulnerable species caught to primary target species fish caught c) Ratio of weight of vulnerable species caught to combined target species fish caught		

2 Size composition

	Question	Information required		
2A	For each target species, what size fish does each net catch?	For each target species caught, calculate the length specific selectivity, and set it out as a figure such as in the following example:  Note: In this example L_{50} represents the length at which 50% of fish are retained by the gear and SR represents the difference between L_{75} and L_{25} (lengths at which 75% and 25% of fish are retained).	Net A	Net B

2B	For each target species, what proportion were at sizes less than the size deemed important for fisheries management purposes?	Weight of each target species caught that is within a specified size range		

3 Impact on protected species

	Question	Information required		
3A	Which, and what amount of, protected species does each net catch?	Number of captures of each protected species. Record by common name, scientific name, and species code. In relation to each protected species caught, the number, and proportion of total captures of that species that were dead, injured, or alive and released uninjured.	Net A	Net B
3B	Any mitigation devices or procedures used to mitigate the adverse effects on protected species for each net?	Describe devices and procedures. Include photographs or diagrams (or both, if available) of devices.		

4 Impact on benthic species

	Question	Information required		
4A	What area of seafloor is affected by each net?	Estimate the area of seafloor contacted by the trawl gear per weight of QMS species caught	Net A	Net B
4B	What amount of benthic species does each net catch?	Total weight of benthic species caught. Proportion (by weight) of benthic species to all target species, and to all QMS species, caught.		

Schedule 2 – List of vulnerable species

Species common name	Scientific name	Species code
Silvertip shark	*Carcharhinus albimarginatus*	ALS
Pelagic thresher	*Alopias pelagicus*	APL
Cat shark	*Apristurus spp.*	APR
Eaton's skate	*Bathyraja eatoni*	BEA
Electric ray	*Typhlonarke spp.*	BER
Bigeye thresher	*Alopias superciliosus*	BET
Antarctic dwarf skate	*Bathyraja sp.*	BHY
Blacktip reef shark	*Carcharhinus melanopterus*	BLR
Short-tailed black ray	*Dasyatis brevicaudata*	BRA
Blue skate	*Brochiraja leviveneta*	BRL
Bramble shark	*Echinorhinus brucus*	BRS
Seal shark	*Dalatias licha*	BSH
Notoraja asperula	*Notoraja asperula*	BTA
Deepsea skates	*Notoraja spp.*	BTH
Notoraja spinifera	*Notoraja spinifera*	BTS
Bronze whaler shark	*Carcharhinus brachyurus*	BWH
Dark-belly skate	*Bathyraja meridionalis*	BYE
Bignose shark	*Carcharhinus altimus*	CAA
Silky shark	*Carcharhinus falciformis*	CAF
Sandbar shark	*Carcharhinus plumbeus*	CAP
Carpet shark	*Cephaloscyllium isabellum*	CAR
Bull shark	*Carcharhinus leucas*	CCE
Blacktip shark	*Carcharhinus limbatus*	CCL
Deepsea sharks	*Centroscymnus spp.*	CEN
Galapagos shark	*Carcharhinus galapagensis*	CGA
Purple chimaera	*Chimaera lignaria*	CHG
Chimaera spp.	*Chimaera spp.*	CHI
Chimaera, purple	*Chimaera sp.*	CHP
Leopard chimaera	*Chimaera panthera*	CPN
Crocodile shark	*Pseudocarcharias kamoharai*	CRC
Cat shark	*Other than Apristurus spp.*	CSH
Leafscale gulper shark	*Centrophorus squamosus*	CSQ
Portuguese dogfish	*Centroscymnus coelolepis*	CYL
Smooth skin dogfish	*Centroscymnus owstoni*	CYO
Longnose velvet dogfish	*Centroscymnus crepidater*	CYP
Dalatiidae	*Dalatiidae*	DAL
Pelagic stingray	*Dasyatis guileri*	DAS
Dawson's cat shark	*Halaelurus dawsoni*	DCS
Deania quadrispinosum	*Deania quadrispinosum*	DEQ
Dusky shark	*Carcharhinus obscurus*	DSH
Deepwater spiny skate	*Amblyraja hyperborea*	DSK
Pygmy shark	*Euprotomicrus bispinatus*	EBI

Prickly shark	*Echinorhinus cookei*	ECO
Eagle ray	*Myliobatis tenuicaudatus*	EGR
Blackbelly lantern shark	*Etmopterus molleri*	EMO
Electric ray	*Torpedo fairchildi*	ERA
Baxter's lantern dogfish	*Etmopterus baxteri*	ETB
Lucifer dogfish	*Etmopterus lucifer*	ETL
Etmopterus spp.	*Etmopterus spp.*	ETM
Smooth lanternshark	*Etmopterus pusillus*	ETP
Etmopterus villosus	*Etmopterus villosus*	ETV
Winghead shark	*Eusphyra blochii*	EUB
Blue-eye lantern shark	*Etmopterus viator*	EVI
Frill shark	*Chlamydoselachus anguineus*	FRS
Great hammerhead	*Sphyrna mokarran*	GHH
Goblin shark	*Mitsukurina owstoni*	GOB
Grey reef shark	*Carcharhinus amblyrhynchos*	GRS
Sharpnose sevengill shark	*Heptranchias perlo*	HEP
Sixgill shark	*Hexanchus griseus*	HEX
Giant black ghost shark	*Hydrolagus sp. d*	HGB
Smallspine spookfish	*Harriotta haeckeli*	HHA
Hammerhead shark	*Sphyrna zygaena*	HHS
Black ghost shark	*Hydrolagus sp. A*	HYB
Hydrolagus spp.	*Hydrolagus spp.*	HYD
Pointynose blue ghost shark	*Hydrolagus trolli*	HYP
Cookiecutter shark	*Isistius brasiliensis*	IBR
Long-nosed chimaera	*Harriotta raleighana*	LCH
Longfin mako	*Isurus paucus*	LMA
Megamouth shark	*Megachasma pelagios*	LMP
Long-tailed skate	*Arhynchobatis asperrimus*	LSK
MacCain's skate	*Bathyraja maccaini*	MCS
Manta rays and Devil rays	*Mobula spp.*	MNT
Mandarin shark	*Cirrigaleus barbifer*	MSH
Northern spiny dogfish	*Squalus griffini*	NSD
Bigeye sand tiger shark	*Odontaspis norohai*	ODH
Sharks & Dogfish not otherwise specified in Sch3, Part2 Reporting Regs 2001	*Selachii (Order)*	OSD
Skate, Other	*Rajidae (Family)*	OSK
McMillan's cat shark	*Parmaturus macmillani*	PCS
Prickly dogfish	*Oxynotus bruniensis*	PDG
Pelagic stingray	*Pteroplatytrygon violacea*	PES
Port jackson shark	*Heterodontus portusjacksoni*	PJS
Plunket's shark	*Centroscymnus plunketi*	PLS
False cat shark	*Pseudotriakis microdon*	PMI
Longnosed deepsea skate	*Bathyraja shuntovi*	PSK

Rays	*Torpedinidae, Narkidae, Dasyatidae, Myliobatidae, Mobulidae (Families)*	RAY
Widenosed chimaera	*Rhinochimaera pacifica*	RCH
Richardson's skate	*Bathyraja richardsoni*	RIS
Requiem shark	*Carcharhinidae (Family)*	RSH
Roughskin dogfish	*Scymnodon macracanthus*	SCM
Broadnose sevengill shark	*Notorynchus cepedianus*	SEV
Sherwood's dogfish	*Scymnodalatias sherwoodi*	SHE
Scalloped hammerhead	*Sphyrna lewini*	SHH
Skates	*Rajidae arhynchobatidae (families)*	SKA
Whitetail dogfish	*Scymnodalatias albicauda*	SLB
Somniosus microcephalus	*Somniosus microcephalus*	SMI
Shovelnose dogfish	*Deania calcea*	SND
Rough shovelnose dogfish	*Deania histricosa*	SNR
Little sleeper shark	*Somniosus rostratus*	SOM
Pacific sleeper shark	*Somniosus pacificus*	SOP
Squalus spp.	*Squalus spp.*	SQA
Knifetooth dogfish	*Scymnodon ringens*	SRI
Amblyraja georgiana	*Amblyraja georgiana*	SRR
Slender smooth-hound	*Gollum attenuatus*	SSH
Blind electric ray	*Typhlonarke aysoni*	TAY
Thresher shark	*Alopias vulpinus*	THR
Tiger shark	*Galeocerdo cuvier*	TIS
Whitetip reef shark	*Triaenodon obesus*	TRB
Oval electric ray	*Typhlonarke tarakea*	TTA
Whiptail ray	*Dasyatis thetidis*	WRA
Velvet dogfish	*Zameus squamulosus*	ZAS

Schedule 3 – List of species and sizes deemed important for fisheries management purposes

Sizes deemed important for fisheries management purposes in the consideration of innovative trawl technology relate to any applicable minimum legal size and the approximate length at which 50% of the population are mature (noting that in reality this quantity varies by sex and area).

Species common name	Scientific name	Species code	Minimum legal size (cm) (measured in fork length)	Approximate length at 50% maturity (cm) L50	Measurement type relating to L50
Barracouta	*Thyrsites atun*	BAR	-	55	Fork length
Black flounder	*Rhombosolea retiaria*	BFL	25	25	Total length
Brill	*Colistium guntheri*	BRI	25	25	Total length
Lemon sole	*Pelotretis flavilatus*	LSO	25	25	Total length
NZ sole	*Peltorhamphus novaezeelandiae*	ESO	25	25	Total length
Greenback flounder	*Rhombosolea tapirina*	GFL	25	25	Total length
Turbot	*Colistium nudipinnis*	TUR	25	25	Total length
Yellowbelly flounder	*Rhombosolea leporina*	YBF	25	25	Total length
Blue moki	*Latridopsis ciliaris*	MOK	40	-	-
Red gurnard	*Chelidonichthys kumu*	GUR	-	25	Fork length
Jack mackerel	*Trachurus declivis, T. murphyi, T. novaezelandiae*	JMA	-	30	Fork length

Kahawai	*Arripis trutta, A. xylabion*	KAH		40	Fork length
Kingfish (yellowtail)	*Seriola lalandi*	KIN	65	90	Fork length
Leatherjacket	*Meuschenia scaber*	LEA	-	20	Total length
School shark	*Galeorhinus galeus*	SCH	-	90	Total length
Sand flounder	*Rhombosolea plebeia*	SFL	23	25	Total length
Snapper	*Pagrus auratus*	SNA	25	25	Fork length
Spiny dogfish	*Squalus acanthias*	SPD	-	70	Total length
Rig, spotted dogfish	*Mustelus lenticulatus*	SPO	-	95	Fork length
Tarakihi	*Nemadactylus macropterus, Nemadactylus sp. ("King Tarakihi")*	TAR	25	30	Fork length
Trevally	*Pseudocaranx dentex*	TRE	25	35	Fork length
Black oreo	*Allocyttus niger*	BOE	-	35	Total length
Alfonsino & Long-finned beryx	*Beryx splendens, B. decadactylus*	BYX	-	30	Fork length
Pale ghost shark	*Hydrolagus bemisi*	GSP	-	65	Chimaera length
Hoki	*Macruronus novaezelandiae*	HOK	-	75	Total length
Ling	*Genypterus blacodes*	LIN	-	75	Total length
Orange roughy	*Hoplostethus atlanticus*	ORH	-	31	Standard length
Smooth oreo	*Pseudocyttus maculatus*	SSO	-	40	Total length
Silver warehou	*Seriolella punctata*	SWA	-	45	Fork length