

Judgment: 11 November 2022

JUDGMENT OF CHURCHMAN J

TABLE OF CONTENTS

Introduction	[1]
The Act	[5]
<i>Purpose</i>	[8]
<i>International obligations</i>	[14]
<i>Principles</i>	[19]
<i>Sustainability measures</i>	[22]
The TAC decisions	[23]
<i>The advice</i>	[30]
Positions of the parties	
<i>Applicants</i>	[41]
<i>The Minister</i>	[51]
<i>NZRLIC</i>	[59]
<i>RFBPS</i>	[64]
<i>NZSFC</i>	[66]
<i>Te Ohu</i>	[67]
The scientific evidence	[68]
<i>Consensus evidence</i>	[69]
<i>Dr Andrew Jeffs</i>	[70]
<i>Dr Nicholas Shears</i>	[73]
<i>Vincent Kerr</i>	[77]
<i>Carmen Hetaraka</i>	[80]
<i>Dr Stephen Wing</i>	[83]
<i>Dr Jean Win</i>	[88]
<i>Dr Paul Breen</i>	[91]

Relevant Law

Nature of the applicants' case [97]

Statutory decision-making [101]

Analysis [110]

Remedy [126]

Costs [131]

Introduction

[1] This is an application for judicial review of two decisions made by the Minister for Oceans and Fisheries (the Minister) setting a total allowable catch (TAC) under the Fisheries Act 1996. The applicants are the Environmental Law Initiative (ELI) and Carmen Hetaraka on behalf of Te Uri o Hikihiki Hapū (the applicants). The Minister and the New Zealand Rock Lobster Industry Council Limited (NZRLIC) are the respondents. There are three intervening parties, being:

- (a) the New Zealand Sports Fishing Council Incorporated (NZSFC);
- (b) the Royal Forest and Bird Protection Society Incorporated (RFBPS);
and
- (c) Te Ohu Kaimoana Trustee Limited (Te Ohu).

[2] The applicants challenge the lawfulness of two decisions in respect of the TAC for red rock lobster (*Jasus edwardsii*), in the Northland quota management area (the TAC decisions). The applicants allege that the advice received by the Minister for the purpose of making the TAC decisions contained statements that are inaccurate, misleading, and unsupported by peer-reviewed and published literature. They say that the advice did not adequately describe what they say is the scientifically established effect of the overfishing of rock lobster on the ecology of the area, particularly in relation to the development of kina¹ barrens. Their view is that rock lobsters are

¹ Kina are sea urchins (*Evechinus chloroticus*) endemic to New Zealand.

ecologically or functionally extinct in the CRA1 quota management area. They say that the TAC decisions are therefore unlawful because they do not accord with the requirements of the Fisheries Act 1996 (the Act).

[3] The respondents oppose the application. They say that the TAC decisions were consistent with the requirements of the Act, and were not made subject to any factual errors.

[4] For the reasons below, I am of the view that the application should be granted.

The Act

[5] The Minister is responsible for the administration of the Act, including the management of fisheries under the quota management system established by pt 4 of the Act (QMS). The QMS creates a scheme whereby stocks in different geographical areas are managed. Stocks are defined by the Act as “any fish, aquatic life, or seaweed of one or more species that are treated as a unit for the purposes of fisheries management”.² The Minister must make a determination that a stock or species become subject to the QMS if satisfied that its current management is:³

- (a) not ensuring the sustainability of the stock or species; or
- (b) not providing for the utilisation of the stock or species.

[6] Once a stock is subject to the QMS, the Minister is required each fishing year to set “in respect of the quota management area relating to each quota management stock a total allowable catch for that stock”.⁴ A TAC is the total weight of stock that may be taken every fishing year. A TAC must be at a level that maintains the stock at or above a level that can produce the ‘maximum sustainable yield’ (MSY) or enables the level of any stock whose current level is below MSY to be altered in a

² Section 2.

³ Section 17B.

⁴ Section 13.

way that results in the stock being restored to that level.⁵ MSY is defined in the Act as:

the greatest yield that can be achieved over time while maintaining the stock's productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock.

[7] When making decisions under the Act, the Minister must do so in a manner that is:

- (a) consistent with the Act's purposes;⁶
- (b) consistent with New Zealand's international obligations;⁷
- (c) consistent with the Act's environmental and information principles;⁸
and
- (d) cognisant of any effects of fishing on any stock and the broader aquatic environment.⁹

Purpose

[8] The purpose of the Act is to "provide for the utilisation of fisheries resources while ensuring sustainability".¹⁰ Ensuring sustainability means:¹¹

- (a) maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
- (b) avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.

⁵ Section 13(2).

⁶ Section 8.

⁷ Section 5.

⁸ Sections 9 and 10.

⁹ Section 11.

¹⁰ Section 8(1).

¹¹ Section 8(2).

[9] Utilisation means “conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being”.¹² The aquatic environment is defined as “the natural and biological resources comprising any aquatic ecosystem”, and includes “all aquatic life and the oceans, seas, coastal areas, inter-tidal areas, estuaries, rivers, lakes, and other places where aquatic life exists”.¹³

[10] Utilisation, and ensuring sustainability, are “two competing social policies”.¹⁴ In *New Zealand Recreational Fishing Council Inc v Sanford Ltd*, the Supreme Court stated:¹⁵

... The statutory purpose is that both policies are to be accommodated as far as is practicable in the administration of fisheries under the quota management system. But recognising the inherent unlikelihood of those making key regulatory decisions under the Act being able to accommodate both policies in full, s 8(1) requires that in the attribution of due weight to each policy that [the weight] given to utilisation must not be such as to jeopardise sustainability. Fisheries are to be utilised, but sustainability is to be ensured.

This ultimate priority is recognised in the two definitions. The first consideration in the definition of “utilisation” is the conserving of fisheries resources. Their use, enhancement and development, to enable fishers to provide for their social, economic and cultural wellbeing, are considerations which follow. The definition of “ensuring sustainability”, on the other hand, reflects the policy of meeting foreseeable needs of future generations which is concerned with future utilisation. These complementary definitions apply whenever those terms are used in the Act.

[11] The purpose of the Act therefore is broadly to create an environmental ‘bottom-line’ of sustainability and the key lever in ensuring sustainability is the administration of the QMS, through the setting of TAC, with sustainability as the “guiding criterion”.¹⁶ However:¹⁷

While sustainability is the guiding criterion, the Minister has some flexibility under s 13 to consider aspirations of the fishing sectors for utilisation of the resource. In considering the way in which, and rate at which, a stock is moved towards or above a level producing a maximum sustainable yield, the Minister must have regard to [such] “social, cultural and economic factors as he or she

¹² Section 8(2).

¹³ Section 2.

¹⁴ *New Zealand Recreational Fishing Council Inc v Sanford Ltd* [2009] NZSC 54, [2009] 3 NZLR 438 at [39].

¹⁵ At [39]–[40].

¹⁶ At [43].

¹⁷ At [44].

considers relevant”.¹⁸ This imports into the process for setting the total allowable catch a key aspect of the definition of “utilisation” in s 8(2).

[12] The definition of utilisation includes the concept of cultural wellbeing, which includes obligations of kaitiakitanga by iwi, hapū and whānau Māori, within their respective rohe, defined in the Act as:¹⁹

the exercise of guardianship; and, in relation to any fisheries resources, includes the ethic of stewardship based on the nature of the resources, as exercised by the appropriate tangata whenua in accordance with tikanga Maori.

[13] The Act requires that prior to setting TAC, the Minister shall consult with and provide for the input and participation of tangata whenua, and have particular regard to kaitiakitanga.²⁰

International obligations

[14] New Zealand is subject to the requirements of the United Nations Convention on the Law of the Sea (UNCLOS), from which certain aspects of the Act derive, as well as other international law instruments.²¹ Section 5 of the Act provides that:

This Act shall be interpreted, and all persons exercising or performing functions, duties, or powers conferred or imposed by or under it shall act, in a manner consistent with—

- (a) New Zealand’s international obligations relating to fishing; and
- (b) the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

[15] Both the applicants and respondents are agreed that there are two approaches to fisheries management that are identifiable at international law, being an ‘ecosystem approach’ and ‘precautionary approach’. The parties differ in their emphasis on these approaches, but both accept that they are relevant.

¹⁸ Section 13(3).

¹⁹ Section 2.

²⁰ Section 12(1).

²¹ See UNCLOS, art 61; United Nations Food and Agriculture Organisation (FAO) Committee on Fisheries’ Code of Conduct for Responsible Fisheries; and Rio Declaration on Environment and Development 1992.

[16] The ecosystem approach requires decision-makers to incorporate wider ecosystem effects into fisheries management, instead of considering sustainability with a single-species focus. This approach is acknowledged in the Act through the requirement for the Minister to consider the interdependence of species when making a decision as to TAC, as well as through ss 9 and 11.²² The ecosystems approach requires that decisions as to the:²³

management of fishery resources are considered in the context of the functioning of the wider marine ecosystems in which they occur to ensure the long-term conservation and sustainable use of those resources and in so doing, safeguard those marine ecosystems.

[17] The precautionary approach stipulates that decision-makers are more cautious where information is uncertain, unreliable or inadequate, and that “The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures”.²⁴ As to the precautionary approach, the Rio Declaration on Environment and Development 1992 provides:²⁵

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

[18] This approach is acknowledged in the Act by s 10.

Principles

[19] Sections 9 and 10 contain principles that the Minister “shall take into account” when making decisions pursuant to the Act, these are:²⁶

²² Section 13(2).

²³ Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, SPRFMO (adopted 14 November 2009, entered into force 24 August 2012), art 3(2)(b).

²⁴ Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks 2167 UNTS 3. New Zealand ratified this instrument on 19 July 1996; see Joanna Mossop “Law of the Sea” in Alberto Costi (ed) *Public International Law: A New Zealand Perspective* (Lexis Nexis, Wellington, 2020) 687 at [13.4.2].

²⁵ Rio Declaration on Environment and Development (adopted 14 June 1992), principle 15.

²⁶ Section 9.

- (a) associated or dependent species should be maintained above a level that ensures their long-term viability:
- (b) biological diversity of the aquatic environment should be maintained:
- (c) habitat of particular significance for fisheries management should be protected.

[20] And:²⁷

- (a) decisions should be based on the best available information:
- (b) decision makers should consider any uncertainty in the information available in any case:
- (c) decision makers should be cautious when information is uncertain, unreliable, or inadequate:
- (d) the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.

[21] The Act defines “best available information” as “the best information that, in the particular circumstances, is available without unreasonable cost, effort, or time”.

Sustainability measures

[22] When setting or varying TAC the Minister must take into account any effects of fishing on any stock and the aquatic environment.²⁸ ‘Effect’ means the direct or indirect effect of fishing, including any positive, adverse, temporary, permanent, past, present, future, and/or cumulative effect.²⁹ ‘Fishing’ means the catching, taking, or harvesting of fish, aquatic life, or seaweed.³⁰

The TAC decisions

[23] The TAC decisions challenged by the applicants relate to the red rock lobster, which is subject to the QMS.

²⁷ Section 10.

²⁸ Section 11(1)(a).

²⁹ Section 2.

³⁰ Section 2.

[24] The applicants' focus is entirely on the Northland quota management area (CRA1). CRA1 extends from the Kaipara Harbour on the west coast, around Cape Reinga, and south to Te Arai Point.³¹ This area includes the rohe moana³² of Te Uri o Hikihiki. The TAC decisions challenged by the applicants in respect of CRA1 are:

- (a) the Minister's 16 March 2021 decision to retain the TAC for red rock lobster as 203 tonnes (2021/22 decision); and
- (b) the Minister's 29 March 2022 decision to decrease the TAC for red rock lobster to 193 tonnes (2022/23 decision).

[25] The CRA1 area is managed to the minimum target of the biomass that will produce MSY, referred to as B_{MSY}, an approach which the applicants say does not involve the application of any ecosystem considerations.³³

[26] In respect of the 2021/22 decision, two options were presented to the Minister. These were:

- (a) maintaining the TAC of 203 tonnes on the basis that the 2020 rapid assessment update projected that, as a result of the 2020 TAC decision vulnerable biomass and spawning biomass would increase within the next four years; or
- (b) decreasing the TAC to 180.5 tonnes in order to improve the likelihood that the vulnerable biomass would increase.

[27] The Minister chose the first option, retaining the TAC of 203 tonnes.

[28] In respect of the 2022/23 decision, four options were presented to the Minister, these were:

³¹ Schedule 1, Part 3.

³² The area of the sea with which they are customarily associated.

³³ Reply affidavit of Dr Andrew Jeffs at [19].

- (a) Option 1.1: maintaining the TAC of 203 tonnes on the basis that the TAC was recently decreased and the decrease had assisted in maintaining CRA1 above the B_{MSY} reference level, which was expected to allow rock lobster to continue to fulfil its role in the ecosystem;
- (b) Option 1.2: decreasing the TAC by five per cent (193 tonnes) recognising CRA1 is near the B_{MSY} level and aiming to increase the certainty that the stock will remain at or above this level, which was expected to allow rock lobster to fulfil its role in the ecosystem to an unknown but potentially greater level than option 1.1;
- (c) Option 1.3: decreasing the TAC by nine per cent (185 tonnes) recognising CRA1 is near the B_{MSY} level and aiming to increase the certainty that the stock will remain at or above this level, which was expected to allow rock lobster to fulfil its role in the ecosystem to an unknown but potentially greater level than options 1.1 or 1.2; or
- (d) Option 1.4: decreasing the TAC by 12 per cent (179 tonnes) recognising CRA1 is near the B_{MSY} level and aiming to increase the certainty that the stock will remain at or above this level, which was expected to allow rock lobster to fulfil its role in the ecosystem to an unknown but potentially greater level than the other options.

[29] The Minister opted for Option 1.2, reducing the TAC for rock lobster by five per cent to 193 tonnes.

The advice

[30] Prior to making the TAC decisions, the Minister received advice from National Rock Lobster Management Group (NRLMG), a multi-stakeholder group, and Fisheries New Zealand (FNZ), which is a business unit within the Ministry for Primary Industries (MPI). The advice included ‘rapid’ assessments, which are conducted to

determine the status of a stock, but are less thorough than ‘full stock’ assessments. NRLMG is a:³⁴

...national-level, multi-sector group composed of an independent chairperson, representatives of the customary, recreational, and commercial fishing sectors, environmental interests, Ministry for Primary Industries fisheries compliance, and FNZ.

Each year FNZ and the NRLMG review the best available information from updated stock assessments and monitoring of rock lobster and advise [the Minister] if changes are required to catch settings and regulatory controls to ensure they are appropriate.

[31] FNZ undertakes consultation with the Iwi Fisheries Forum (IFF) to support yearly reviews of stock levels, and inform advice received by the Minister. The IFF are regionally located and the CRA1 Forums are the Te Hiku o te Ika Fisheries Forum, and the mid-North IFF.³⁵ The rohe moana of Te Uri o Hikihiki is within the area of the mid-North Forum.

[32] Advice provided by FNZ and/or NRLMG is informed by research published in MPI’s ‘Aquatic environment and biodiversity annual review’ (AEBAR). The AEBAR is, according to FNZ, “the best scientific information as at the year published on the effects of fishing on the environment, marine biodiversity, and aquatic environments”.³⁶ Chapters in the AEBAR are reviewed and updated annually, and are “intended to assist decision makers...by providing the most up to date information on the interaction between fisheries and the aquatic environment”.³⁷

[33] At the time of the TAC decisions, the relevant version of the AEBAR was the 2019-2020 version, which was published in June 2020. Despite the indication that the AEBAR is reviewed and updated annually, it is common ground that the chapter on “trophic and ecosystem-level effects”, which discusses trophic cascades, rock lobsters and kina barrens, has not been updated since 2014.³⁸ Accordingly, there is research published subsequent to 2014, that is not included, and therefore did not inform advice

³⁴ Affidavit of Hon Minister David Parker, 11 July 2022, at [33]–[34].

³⁵ Affidavit of Monique Lisa Andrew, 6 July 2022, at [40].

³⁶ Affidavit of Dr Jean Pepper Win, 8 July 2022, at [11].

³⁷ At [20].

³⁸ At [23].

provided to the Minister. The passages of the chapter that are relevant to the effects of rock lobsters on kina barrens state:

In New Zealand, observations in a number of northern marine reserves showed an increase in the abundance and size of red rock lobsters and piscine predators of algal grazing invertebrates which coincided with a gradual decrease in urchin density and an increase in algal cover (Babcock et al. 1999, Shears & Babcock 2002, 2003, Salomon et al. 2008, Babcock et al. 2010). These changes, suggestive of a trophic cascade (see section 13.1.3.2) are consistent with the results of ecosystem models of the role of rock lobsters in New Zealand rocky reef ecosystems, using both qualitative (Beaumont et al. 2009) and quantitative frameworks (Pinkerton et al. 2008, Eddy et al. 2014, Pinkerton 2012). Shears et al. (2008) found that the occurrence of this trophic cascade in northern New Zealand was likely to vary at local and regional scales in relation to abiotic factors. From a New Zealand-wide perspective, Schiel (2013) concludes that urchin predators play a role in the dynamics of kelp beds only in some northern localities, and that environmental and climatic influences, species' demographics, and catchment-derived sedimentation are generally more important.

...

In moderately exposed coastal marine reserves in northeastern New Zealand, predation by recovering populations of snapper (*Pagrus auratus*) and spiny lobsters (*Jasus edwardsii*) have gradually decreased the abundance of the grazing sea urchin (*Evechinus chloroticus*) and allowed turfing algae and kelp (*Ecklonia radiata*) to replace urchin grazed rock flats (Babcock et al. 1999, Shears & Babcock 2002, 2003). This is indicative of top-down forcing in the ecosystem. In adjacent areas which are heavily fished there are more urchins, and areas free of turfing algae and kelp are common (Shears et al. 2008). It seems that the occurrence of this trophic cascade varies at local and regional scales in relation to abiotic factors, implying some interplay with larger-scale bottom-up forcing (Shears et al. 2008).

[34] The final advice paper prepared by NRLMG in respect of the 2021/22 decision contains a single reference to the relationship between rock lobster fishing and kina barrens, which states:

Some published literature suggests that decreased predation from large reef predators such as rock lobsters, snapper and other fishes is responsible for population increases in sea urchins and destruction of kelp forests. This hypothesis is controversial and the literature equivocal. There is research suggesting that on some rocky reefs in the north of New Zealand, recovery of predators such as rock lobsters and snapper inside marine reserves has led to the recovery of macro-algal habitat through predation on urchins. However, there is also contradictory evidence. Sea urchin populations are affected by factors other than predation, such as diseases and temperature effects on recruitment. In other parts of New Zealand, environmental and climatic influences, species' demographics, and catchment-derived sedimentation are generally more important.

[35] This statement was drafted by Dr Paul Breen, who also provided feedback on the final advice paper.³⁹ As to his decision to retain the TAC of 203 tonnes, the Minister stated that he understood this statement in the final advice paper to mean:⁴⁰

...that some research indicated a correlation between the removal of keystone predators, such as rock lobster, and the destruction of kelp forests (leading to urchin barrens – but:

that there was uncertainty about causation; and

in areas outside the north of New Zealand the other factors listed were generally more important.

[36] However, the Minister goes on to say:⁴¹

In preparation for this litigation, I have been advised by FNZ that although the statement [in the final advice paper] may be technically accurate (particularly when applied to New Zealand as a whole), there is (and was) a reasonably strong evidential basis for the hypothesis in the [north-eastern] region of New Zealand – especially in the adjacent CRA2 area where much of the research has been undertaken.

[37] As to the 2022/23 decision, the final advice paper provided to the Minister contained more detailed advice on kina barrens and trophic cascades, but stated:

Managing above BMSY may also have environmental benefits, as increasing rock lobster abundance may enable the species to fulfil its role in the ecosystem to a greater degree; however, the nature and magnitude of these benefits is uncertain. The impact of an increase in rock lobster abundance on the ecosystem is unknown. While rock lobsters are important as both a predator and prey species, trophic interactions are complex and not well understood. While the magnitude of these potential environmental changes is unknown, they are expected to be smallest for Option 1.1 and greatest for Option 1.4.

[38] FNZ also prepared an advice paper dated 8 March 2022, which stated, “FNZ considers a small TAC decrease would...address concerns regarding rock lobster abundance and the aquatic environment”.

[39] As to his decision to decrease the TAC, the Minister states that at the time of making that decision he noted that:⁴²

³⁹ Above n 35, at [66].

⁴⁰ Above n 34 at [52].

⁴¹ At [53].

⁴² At [73.1]–[73.4].

There is evidence from some locations in northern New Zealand that the lower abundance of predator species (including rock lobster) has enabled kina populations to increase and destructively graze on kelp – leading to urchin barrens.

The main evidence for decreased predation leading to kina barrens comes from trends in areas in northern New Zealand closed to fishing and comparative studies with nearby unprotected areas.

The formation of kina barrens appears to be affected by other environmental factors and the strength of the effects appears to vary with environmental context.

Kina barrens are less common in southern New Zealand, but not absent.

[40] He also recorded in his decision letter as to the 2022/23 decision that:

The exact nature of the relationship between rock lobster and urchin barrens is unknown and there is some evidence that other factors, such as sedimentation and wave action, are at play and seem to be important in other areas. I consider that the proposed change to the CRA1 TAC is sufficient to move the stock further above BMSY to realise benefits from increased abundance, while reducing the negative socio-economic impact on the fishing industry and associated businesses and communities.

Positions of the parties

Applicants

[41] The applicants submit that the advice received by the Minister in respect of the TAC decisions was misleading and materially inaccurate, and that therefore, the decisions were unlawful. They say that scientific evidence establishes that:

Rock lobster are a key predator of sea urchins, *Evechinus chloroticus* (**kina**). Through overfishing, rock lobster are now functionally or ecologically extinct within CRA1, meaning they no longer interact significantly with other species in the ecosystem, including in particular in their role as a predator of kina. Where kina populations are not controlled by predation, they can destructively graze down entire kelp forests, resulting in areas known as “kina barrens”, which are areas of bare rocky reef. This chain of events is known as a “trophic cascade”. Once established, a kina barren can take decades to reverse, even when kina numbers are reduced. Kina barrens are already present within CRA1, which is concerning given the significant ecological and economic value of kelp forests.

(footnotes omitted)

[42] Mr Salmon KC, counsel for the applicants, advances the following five grounds of review:

- (a) the 2021/22 decision was unlawful, as it was not based on the best available information and because the advice provided was materially inaccurate, and the Minister failed to consider mandatory relevant considerations or adopt a precautionary approach;
- (b) the 2022/23 decision was unlawful as it was not based on the best available information and because the advice provided was materially inaccurate, and the Minister failed to consider mandatory relevant considerations or ensure sustainability;
- (c) the Minister failed to consider the adverse effects of rock lobster fishing on abundance, as required under s 11;
- (d) the exercise of the Minister’s powers in making the TAC decisions was inconsistent with the Act’s purpose, in that it failed to ensure sustainability; and
- (e) the exercise of the Minister’s powers in making the TAC decisions was inconsistent with the Act’s purpose, in that it failed to provide for the cultural wellbeing of Te Uri o Hīkīhiki, or ensure the participation of tangata whenua.

[43] The applicants allege that the relevant AEBAR chapter did not represent the best scientific or most recent information on the “interaction between fisheries and the aquatic environment,” when it was published in June 2020. They say therefore that the Minister was advised incorrectly and unlawfully. They submit that the presentation of the four options to the Minister for the 2022/23 decision was also incorrect, in that it was represented to the Minister that all four options complied with the purposes of the Act.

[44] Mr Salmon submits that the Act requires the Minister to act in accordance with New Zealand’s international law obligations, particularly to take both an ecology-focused approach to fisheries management, and to favour precaution where information is unclear. He says that the international law instruments favour a

precautionary approach, and tempering that approach by consideration of utilisation is not appropriate. In this respect, Mr Salmon submits that the Minister did not adopt an ecology-based approach, as he was presented with no information as to what ecological effect each proposed option would have on the aquatic environment. He goes further and says that there was no evidence at all that any of these options would have an effect on the ability of rock lobster to fulfil its ecological role.

[45] Mr Salmon relies on the evidence of the various expert witnesses and submits that:

There is no scientific literature that questions the evidence for the hypothesis in north-eastern New Zealand, and no contradictory evidence or alternative explanations for the changes demonstrated that kina barrens have developed in the presence of healthy populations of rock lobsters.

[46] He describes Dr Breen's evidence and input to the decision-making process as "an overwriting of a poor summary of outdated science with non-science by an industry representative". Mr Salmon submits that Dr Breen's evidence is unpublished, untested, and presents as impartial when there is reason to suggest that it is not.

[47] Mr Salmon submits that the advice to the Minister was inconsistent with s 11 because it was confined to the direct effects of the fishing methods employed, and does not refer to the indirect, future and cumulative effects of removing rock lobster from the aquatic ecosystem on kina. He says that the Minister needed the relevant information before him in order to take into account mandatory relevant considerations. Because that information was not before him, the Minister failed to consider those relevant considerations.

[48] The applicants submit that the Minister acted inconsistently with the Act's purpose by failing to ensure sustainability, because the advice he received for the TAC decisions was inaccurate and misleading. They say that none of the options proposed to the Minister were sufficient to ensure sustainability.

[49] Finally, the applicants say that the Act's purpose requires the Minister to provide for utilisation in a manner that results in cultural wellbeing, which includes upholding kaitiakitanga over taonga species. The Minister must also provide for the

input and participation of tangata whenua. They say that in the making of the TAC decisions the Minister acted inconsistently with the Act by failing to provide for Te Uri o Hikihiki's cultural wellbeing, as they were not invited to participate in the mid-North IFF. They say the Minister also did not adequately grapple with the effects of his decision on kaitiakitanga.

[50] As to remedy, the applicants seek:

- (a) a declaration that the TAC decisions were unlawful, for the reasons noted in their submissions; and
- (b) an order requiring the Minister to remake the 2022/23 decision consistently with any declaratory relief.

The Minister

[51] Mr Anderson, for the Minister, submits that whether a stock ought to be maintained at a certain level is a matter that is wholly within the discretion of the Minister. He does not dispute the basis of the applicants' evidence, that the proliferation of kina can lead to kina barrens, but submits that the Minister did not act unlawfully.

[52] He submits that the TAC decisions are consistent with the requirements of the Act, in that they were both projected to increase the level of CRA1 stock further above BMSY. He submits that the alleged errors of fact may only be set aside if they are so untenable and unsupportable that they amount to an error of law, and that none of the alleged errors meet that standard.⁴³ Specifically, he submits that:

- (a) the statement that the trophic cascade hypothesis is 'controversial' and the literature is 'equivocal' is true as it relates to the entirety of New Zealand and therefore the 2021/22 decision was not unlawful;

⁴³ *Bryson v Three Foot Six Ltd* [2005] NZSC 34, [2005] 3 NZLR 721 at [26].

- (b) the Minister's statements in his decision letter for the 2022/23 decision cannot reasonably be expected to capture the nuance of the advice he received and he accepted that the relationship between lobster and kina barrens in northern New Zealand might be different to what existed elsewhere in New Zealand;
- (c) it is inappropriate for the Court to determine or resolve scientific questions demanding the evaluation of contentious expert opinion;⁴⁴
- (d) the applicants have misconstrued the references in the 2022/23 final advice paper as to the role of lobster in the ecosystem;
- (e) the TAC decisions were in fact based on the best available information in relation to kina barrens; and
- (f) the evidence does not show that the Minister failed to adopt the correct approach or act in accordance with the Act.

[53] Counsel submits that the Minister's decisions were appropriately cautious in the circumstances, and that uncertainty was not used as a reason for postponing or failing to take measures to achieve the purposes of the Act. He says that the Court should not engage in a thinly veiled merits review by assessing individual decisions against isolated aspects of the statutory purpose. Counsel submits that the Minister did not proceed on the basis of any erroneous facts, but rather made evaluative conclusions, which may only be challenged if they are clearly untenable. He says that the Minister was entitled to adopt the reasonable evaluative conclusions of his officials, notwithstanding the applicants' view.

[54] Counsel submits that the advice received by the Minister was prepared through a robust process with input from experts, including FNZ management and NRLMG, who included comments and consultation in the final advice. He says the AEBA represents the best scientific information on the effects of fishing on the aquatic

⁴⁴ *New Zealand Climate Science Education Trust v National Institute of Water and Atmospheric Research Ltd* [2012] NZHC 2297, [2013] 1 NZLR 75 at [46]–[47].

environment at the year published. He says that the relevant passages of the AEBAR are consistent with the advice given to the Minister, and that there is support generally for the content of the AEBAR. He says that the Minister's decision on that advice was an evaluative conclusion.

[55] Counsel submits:

...there is no reviewable error of fact in respect of the 2022/23 final advice paper because the Minister did not consider the TAC would allow kōura to arrest or reverse the formation of kina barrens. He was simply of the view that more kōura would allow them to play a greater role in the ecosystem and that there would be benefits from increased abundance. That was a reasonable position to take.

[56] Counsel further says that the TAC decisions are consistent with s 13(2) and the purpose of the Act as a whole – again submitting that as a decision-maker, the Minister is entitled to come to an evaluative conclusion. He submits that the Minister was aware of the environmental bottom-line, and acted in accordance with it. He says that fishing is not a 'no effects' activity and that the Minister is not required in any single decision to avoid or remedy all adverse effects on the aquatic environment. He submits that the Minister's decisions provide for the utilisation of the CRA1 stock while also ensuring its sustainability. He says:

While the Minister acknowledges the importance of kelp forest habitats and the biodiversity they support, the evidence indicates that the formation of kina barrens is constrained by environmental factors and reversible over time. In the circumstances, it must be open to the Minister to begin increasing the abundance of predator species...while appropriate management targets – taking into account broader ecosystem considerations – are developed.

[57] As to the fifth ground of review, relating to the cultural wellbeing of Te Uri o Hikihiki, the Crown submits that this must fail alongside the fourth ground of review, because the Minister did not fail to avoid, remedy or mitigate the adverse effects of lobster fishing on the aquatic environment. Counsel says that the allegations that the Minister failed to provide for the participation of tangata whenua or consult with Te Uri o Hikihiki were unpleaded and are unable to be raised in submissions. He submits that in any case the Minister considered the views of tangata whenua and made decisions that were projected to increase the abundance of stock.

[58] As to the possibility of relief, the Crown submits that any remedy should be only declaratory, and that if the applicants are successful:

The most sensible approach would be for the Court to grant declarations for the Minister to consider in his review of the settings for the CRA1 stock in future years.

NZRLIC

[59] Counsel for NZRLIC, Mr Scott, supports and adopts the submissions for the Minister. He submits that:

- (a) the Minister did not act inconsistently with the operative provisions of the Act, and made a broad evaluative decision having regard to all of the statutory criteria in the operative provisions;
- (b) the Minister was not wrongly advised on the trophic cascade hypothesis, and the advice he received was accurate, adequate, and reflected the best available information;
- (c) the applicants have not pleaded that the Minister failed to consider any criteria in the operative provision;
- (d) the purposes and principles of the Act provide a framework for decision-making for operational decisions, which are evaluative in nature, and which only in extreme circumstances may be overturned; and
- (e) the submissions as to lack of consultation and/or participation were not pleaded by the applicants, or provided an adequate foundation in evidence.

[60] Mr Scott says that purposes and principles provisions are not to be used as operative provisions in their own right, instead only to guide the exercise of decision-making powers. He says that guiding provisions do not provide a discrete set of separate mandatory relevant considerations which can be used as a basis for review separated from the operative provisions. Contrary to the position taken by counsel for

the Attorney-General, he submits that the purpose provisions of the Act do not create an environmental bottom-line.

[61] Like Crown counsel, Mr Scott submits that the applicants are seeking to review the merits of the Minister's decisions, rather than the lawfulness of the process that was followed. He says that the weight to be given to competing considerations is a matter for the decision-maker which, in the absence of irrationality, is unable to be reviewed.

[62] Mr Scott submits that the Act's specific inclusion of utilisation as a composite or dual purpose alongside ensuring sustainability recognises that fishing has effects, acknowledges that stock do not exist in isolation, and provides mechanisms for sustainable fishing. He says that over a longer period of time, the Minister has been increasing B_{MSY} in CRA1, that the TAC decisions support that theme, and therefore they cannot be unlawful, as they fulfil the Act's purposes.

[63] As to the evidence, he says that the science shows that there is no basis for the applicants' view that the advice received by the Minister was wrong. He says that it is a matter upon which the experts can legitimately disagree. He says that Dr Breen is adequately qualified and that his view is not erroneous. He says that there is controversy in the literature and that it is equivocal, especially in relation to extrapolating the evidence relating to marine reserves in CRA2 to CRA1 and also the rest of New Zealand. He submits that the evidence for alleging that rock lobster are the controlling predator of kina is limited, and the applicants' view does not adequately account for other predators, particularly snapper.

RFBPS

[64] Ms Wright in her submissions for RFBPS, focused on the 2022/23 decision, as that decision has superseded the 2021/22 decision. Primarily, she submits that the information provided to the Minister was not specific to CRA 1, and that therefore it was misleading, and failed to provide a fair, accurate or adequate report on material matters. She says that the Minister was required to give genuine attention to each environmental principle in s 9, and all of the matters contained in s 11. She says that he did not do so, and that the TAC decisions were unlawful.

[65] Ms Wright submits that the 2022/23 decision was not made in accordance with the Act’s purpose of ensuring sustainability, and that the Minister did not turn his mind to it. Likewise, she says that the Minister failed to consider the need to provide for the cultural wellbeing of tangata whenua in making that decision. She says that there was no evidence to support the conclusion that the 2022/23 decision would support cultural prosperity or advance kaitiakitanga principles.

NZSFC

[66] Counsel for NZSFC, Mr Ryan adopts the submissions made by Ms Wright for RFBPS. He submits that there “would appear no sound reason why available information could not have been provided to the Minister”.

Te Ohu

[67] Te Ohu did not file evidence or submissions for these proceedings, but supported the submissions provided by the respondents. Having reviewed the submissions of the other parties, they provided a memorandum which included the following statement:

- (a) there are no material issues arising which warrant specific response by Te Ohu having regard to its roles and responsibilities; and
- (b) it is unnecessary for it to take a substantive role in the proceedings.

The scientific evidence

[68] A large amount of expert evidence was filed with the Court for this proceeding. Much of this evidence was consensus evidence. However, for current purposes it is necessary to make some findings in respect of the evidence.

Consensus evidence

[69] I am satisfied that the evidence before the Court shows that:

- (a) rock lobsters have an important ecological role in coastal ecosystems;⁴⁵

⁴⁵ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [9]; and Affidavit of Monique Andrew, 6 July 2022 at [20].

- (b) their primary ecological role is as a predator in shallow water areas;⁴⁶
- (c) in New Zealand, rock lobsters prey upon sea urchins/kina;⁴⁷
- (d) kina are an important herbivore on rocky reefs in north-eastern New Zealand because they can consume entire kelp forests and other seaweeds;⁴⁸
- (e) generally, the ecological role of rock lobsters as a predator influences the ecological role of the species they prey on;⁴⁹
- (f) where there are fewer rock lobsters, there is an increased population of kina, thereby increasing the grazing activity of kina, and resulting in the loss of strands of seaweed, particularly kelp forests, in coastal areas, described as a “trophic cascade”;⁵⁰
- (g) trophic cascade has been reported in New Zealand, and areas affected by it are described as ‘kina barrens’, which take decades to reverse;⁵¹
- (h) loss of kelp forests is ecologically damaging for surrounding coastal systems, in fisheries production, biodiversity, and ocean carbon sequestration;⁵²

⁴⁶ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [9].

⁴⁷ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [9]; and Affidavit of Dr Nicholas Shears, 6 May 2022 at [12] and [18].

⁴⁸ Affidavit of Dr Nicholas Shears, 6 May 2022 at [11].

⁴⁹ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [12].

⁵⁰ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [12]; Affidavit of Dr Nicholas Shears, 6 May 2022 at [12]; Affidavit of Vincent Kerr, 6 May 2022 at [28] and [34(e)]; and Affidavit of Dr Stephen Wing, 8 July 2022 at [11].

⁵¹ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [12] and [14]; and Affidavit of Dr Paul Breen, 18 July 2022 at [47].

⁵² Affidavit of Dr Andrew Jeffs, 6 May 2022 at [16]–[19]; and Affidavit of Dr Nicholas Shears, 6 May 2022 at [10].

- (i) there is strong evidence that trophic cascade has significantly contributed to the presence of kina barrens in the north-east of New Zealand, within both CRA1 and CRA2;⁵³
- (j) there are other factors, such as water temperature, water depth, storm damage, sediment and kelp disease that may impact on the prevalence of kina barrens;⁵⁴ and
- (k) there is a lack of evidence as to this relationship around the remainder of New Zealand.⁵⁵

Dr Andrew Jeffs

[70] Dr Jeffs is a Marine Scientist at the University of Auckland, whose research interests include a focus on the biology and aquaculture of lobsters. Dr Jeffs' evidence was that over the course of his lifetime and career he has observed:⁵⁶

[a] decrease in the abundance of rock lobsters as a result of fishing, increase in sea urchin numbers, the loss of seaweed habitat and the corresponding increase of what is known as urchin barrens. This widespread pattern of ecosystem change that I have witnessed is entirely consistent with the trophic cascade described by the research of other scientists. The only instances of reversal of this phenomenon that I have witnessed first-hand are in three marine reserves in north-eastern New Zealand (at Leigh, Tāwharanui and Hahei), where prevention of fishing has increased rock lobster abundance and produced a corresponding decrease in urchins, and a marked increase in the extent of seaweed habitats.

[71] His view is that the loss of seaweed habitats is of significant ecological concern, and there is evidence which establishes that the phenomenon is largely a result of a decrease in rock lobster abundance.⁵⁷ Dr Jeffs' evidence is that the material

⁵³ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [12]; Affidavit of Dr Nicholas Shears, 6 May 2022 at [12]; Affidavit of Vincent Kerr, 6 May 2022 at [28] and [34(e)]; and Affidavit of Dr Stephen Wing, 8 July 2022 at [11].

⁵⁴ Affidavit of Dr Stephen Wing, 6 July 2022 at [11]; Affidavit of Dr Paul Breen, 18 July 2022 at [28]; and Reply Affidavit of Dr Nicolas Shears, 15 August 2022 at [15].

⁵⁵ Affidavit of Dr Stephen Wing, 6 July 2022 at [24]; and Affidavit of Dr Paul Breen, 18 July 2022 at [14.2]–[14.3].

⁵⁶ Affidavit of Dr Andrew Jeffs, 6 May 2022 at [14].

⁵⁷ At [21].

provided to the Minister in respect of the TAC decisions “have been, and remain, inadequate and wrong”.⁵⁸ He says that:⁵⁹

...there is no scientific literature that questions the evidence for the hypothesis in north-eastern New Zealand, and no contradictory evidence or alternative explanations for the changes observed in marine reserves. Further, while many factors influence kina population and where they occur, there is no scientific evidence demonstrating that kina barrens have developed in the presence of healthy populations of rock lobster.

...

In my view, the advice provided to the Minister in respect of his 2021/22 decision is misleading as it understates the body of available scientific evidence supporting the contention that rock lobster fisheries are resulting in widespread and adverse ecological changes in the coastal environment. Furthermore, the ecological significance and extent of these changes are also not included in the advice to the Minister.

[72] Dr Jeffs says that the options presented to the Minister as to proposed adjustment to TAC are based entirely on the management of rock lobster population for maintaining fishing activities.⁶⁰ They do not refer to or include any environmental considerations, for example, the need to mitigate against ongoing adverse ecological change in coastal environments. This is consistent with the methodology applied to decisions relating to rock lobster TAC, and stock adjustments generally, the consensus being that the lens applied is one of balancing utilisation with sustainability, without (as yet) detailed consideration of ‘ecosystem-based fisheries management’.⁶¹ Dr Jeffs expressed agreement with the evidence of Dr Shears and Vincent Kerr.

Dr Nicholas Shears

[73] Dr Nicholas Shears is an Associate Professor at the University of Auckland. He is involved in long-term monitoring of coastal areas in the northeast of New Zealand. Dr Shears’ evidence addresses the same matters as Dr Jeffs, and is in agreement with him and Mr Kerr.

⁵⁸ At [22].

⁵⁹ At [24]–[27].

⁶⁰ At [31].

⁶¹ See Affidavit of Dr Leyla Knitweis-Mifsud, 8 July 2022 at [28]; and Reply Affidavit of Dr Andrew Jeffs, 28 July 2022 at [19].

[74] Dr Shears evidence is that kina barrens have become a prominent habitat on rocky reefs in the north-east of New Zealand, particularly in the CRA1 area.⁶² He says that studies of marine reserves in that area reveal that the recovery of rock lobster and other predators (such as snapper) has led to decline in kina, and an eventual recovery of kelp forests.⁶³ However, kina barrens persist where rock lobsters are rare.⁶⁴ He says:⁶⁵

The importance of rock lobster as predators of kina has been demonstrated through numerous field and laboratory experiments. This research, along with the chronology of kina barren development (in terms of its relationship to industrial-scale removal of rock lobster), unequivocally demonstrates the role that rock lobster historically played in controlling kina populations and preventing urchin barren development.

(footnotes omitted)

[75] Dr Shears' view is that without predatory control of kina populations by rock lobsters, kina numbers will increase in locations where they can form barrens.⁶⁶ He says that the Minister's view that the literature suggests that the effect on kelp beds is more complex than solely top predator abundance is misleading. In response, he says:⁶⁷

While many factors influence kelp forests, this framing obscures the causal link between fishing of predators and kina barrens...There is no literature demonstrating that kina barrens have developed in the presence of healthy populations of rock lobster. By contrast, the casual relationship between the removal of rock lobster through fishing and the development of kina barrens is well documented and understood.

[76] He says that the "only known factor to promote kina barren formation in northern New Zealand is the loss of predators", and that on that basis, the advice received by the Minister suggesting that the causes of kina barrens are complex and/or unclear, is misleading and/or incorrect.⁶⁸

⁶² Affidavit of Dr Nicholas Shears, 6 May 2022 at [12].

⁶³ At [12].

⁶⁴ At [12].

⁶⁵ At [12].

⁶⁶ At [14].

⁶⁷ At [20].

⁶⁸ At [28]–[50].

Vincent Kerr

[77] Vincent Kerr is a principal science advisor at Kerr & Associates, which engages in environmental consulting, focusing on marine ecology mapping, habitat planning, and marine protected area design and planning. He has been involved in scientific investigation and research at Mimiwhangata from 2002 onwards, and has recently provided expert evidence in Environment Court proceedings.⁶⁹ Mr Kerr agrees with the evidence of Dr Shears and Dr Jeffs.

[78] Mr Kerr says that his research at Mimiwhangata showing very low levels of rock lobster abundance is indicative of what is being observed along the remainder of the east coast of Northland.⁷⁰ The research undertaken at Mimiwhangata since the early 1970s also indicates that the effect of overfishing on ecology has been a concern in Northland for approximately 50 years.⁷¹ That research has been undertaken in collaboration with kaumātua of Te Uri o Hikihiki, a relationship that is currently held with Carmen Hetaraka.⁷²

[79] Mr Kerr's research illustrates that the abundance of lobster in Northland other than in 'no-take areas', has significantly decreased since the 1970s.⁷³ He says that this "certainly contributes to the formation and persistence of kina barrens".⁷⁴ He remains of the view that rock lobster are "ecologically extinct" within the CRA1 area.⁷⁵ Mr Kerr says that the options presented to the Minister were inadequate given that "only the application of no-take areas or fishing moratoriums can support recovery effectively".⁷⁶ His view is that the advice presented to the Minister that the science is controversial, hypothetical, equivocal or complex, is incorrect.⁷⁷

⁶⁹ *Motiti Rohe Moana Trust v Bay of Plenty Regional Council* [2018] NZEnvC 67.

⁷⁰ Affidavit of Vincent Kerr, 6 May 2022 at [13].

⁷¹ At [15]–[19].

⁷² At [24]–[26].

⁷³ At [43]–[46].

⁷⁴ At [46].

⁷⁵ At [48].

⁷⁶ At [54].

⁷⁷ At [55].

Carmen Hetaraka

[80] Carmen Hetaraka represents Te Uri o Hikihiki, a hapū of Ngāti Manaia and Ngāti Wai, and has been involved in the management of the rohe moana of Te Uri o Hikihiki from a young age. Their rohe moana is within CRA1, from Motu Kōkako Island at the northern tip of Rakaumangamanga/Cape Brett Peninsula to Mimiwhangata.

[81] Mr Hetaraka's evidence addresses the importance of Te Rohe Moana o Te Uri o Hikihiki, particularly in relation to rimurimu (kelp) and kōura (lobster/crayfish), which are a taonga to them. He states:⁷⁸

Rimurimu

Rimurimu are the forest of the sea...Rimurimu holds the same significance and importance as Kauri and Tōtara forests of the land. If they are over harvested, it has negative impacts on the weather and the environment. We are seeing the violation of our moana and the loss of our kelp forests through the overharvesting of kōura and tāmure (snapper), leading to the proliferation of kina barrens. The kina barrens are the tohu (sign) of the imbalance.

Kōura

Our kaumātua Eta Haika was not a scientist or marine biologist, but he knew in the 1950s where the reefs and abundant areas of large kōura and tāmure were. This abundance had turned to scarcity by the mid-1970s...Traditionally, when you harvest crayfish in season [it] can be found in the seaweed, but now there is no seaweed in [our] tauranga moana...

In accordance with our mātauranga in observing our fisheries, we know that commercial fishing has severely depleted kōura in our rohe and this has had negative effects on the biodiversity of the coastal part of our rohe.

[82] Mr Hetaraka says that Te Uri o Hikihiki have not been properly consulted as to the effects of TAC on their rohe moana, in that they have not participated in the discussions of the mid-North IFF. They would support a rāhui to allow for the regeneration of rock lobster and kelp forests.⁷⁹

⁷⁸ Affidavit of Carmen Hetaraka, 16 November 2021 at [28]–[30].

⁷⁹ At [38].

Dr Stephen Wing

[83] Dr Stephen Wing is a Professor of Marine Science at the University of Otago. Dr Wing's evidence addresses the scientific evidence for the existence of trophic cascades in north-eastern New Zealand kelp forest ecosystems, decision-making processes around setting TAC, and the evidence of the applicants.

[84] Dr Wing considers that some of the advice provided to the Minister in the final 2020/21 advice paper was misleading and incomplete. He states:⁸⁰

...it does not recognise that there can be multiple causality in ecological systems. The fact that other factors can influence sea urchin populations does not negate the important role that large predators can have. The scientific research on trophic cascades using marine reserves contrasted with fully fished areas highlights the fact that populations of rock lobsters outside of the marine reserves in some cases have lost the ability to regulate sea urchin populations....The mismatch of B_{MSY} to achieving ecosystem based objectives in fisheries management is a well understood problem...

Accordingly, evidence that some areas lack sea urchin barrens and also have low rock lobster biomass does not contradict the conclusion [above]. Similarly, correlations between rock lobster biomass, or indices of biomass without data on size structure, and presence of sea urchins is inadequate to resolve the effect because small lobsters, even if abundant, are ineffective predators on adult sea urchins once those adult sea urchins become established.

[85] Dr Wing considers that there is substantial scientific evidence that rock lobsters can reduce the abundance of sea urchins, thereby influencing the distribution and abundance of kelp forest habitats.⁸¹ He says that some of Dr Shears' work is the "best available information on the subject" in the north of New Zealand.⁸² He also says that the size of the impact is modulated by local environmental conditions.⁸³ Further, he says that it is true that sea urchins are affected by other factors other than predation, but that:⁸⁴

There is good evidence that maintenance of a mature size distribution and relatively high abundance of rock lobsters can be insurance against the probability that development of an outbreak of adult sea urchins will occur...

⁸⁰ Affidavit of Dr Stephen Wing, 6 July 2022 at [12]–[13].

⁸¹ Affidavit of Dr Stephen Wing, 6 July 2022 at [14].

⁸² At [15].

⁸³ At [16].

⁸⁴ At [18].

[86] Dr Wing’s view is that despite evidence being clear in the north-east of New Zealand, there is no data that indicates what the status of the relationship between rock lobsters and kina barrens throughout New Zealand is.⁸⁵ He also says:⁸⁶

However, recognition of the complexity of the interaction [between rock lobster abundance and kina barrens] is not grounds for its dismissal (which would not be consistent with the precautionary principle of managing complex ecological systems)...The science indicates that top-down controls by predators on sea urchin populations can be the dominant driver in situations where rock lobsters are abundant and have mature size distributions. Additional environmental influences on [the] formation of sea urchin barrens does not negate this potential effect...

[87] Dr Wing broadly agrees with the evidence of Dr Jeffs, Dr Shears, and Mr Kerr.

Dr Jean Win

[88] Dr Jean Win is a Senior Scientist of aquatic environments within FNZ/MPI. Her evidence addresses the Aquatic Environment and Biodiversity Annual Review (AEBAR) and its role in the Minister’s decision on TAC, the role of rock lobster in the ecosystem, and the status of research within FNZ on the ‘trophic cascade hypothesis’.

[89] Dr Win’s evidence is that the AEBAR is intended to assist decision-makers with the complexity and interconnectedness of oceanic systems, by providing the most recent information on the relationship between fisheries and aquatic ecology.⁸⁷ Dr Win considers that the chapter on trophic cascades “provides a fair summary of the research in existence at the time it was written”.⁸⁸

[90] In respect of the advice received by the Minister for the 2022/23 TAC decision, Dr Win says that as a matter of logic, statements regarding lobster fulfilling a greater role in the ecosystem under options that would decrease TAC are reasonable, because those decisions would increase the abundance of lobster.⁸⁹ She also says that FNZ’s trophic cascade research project will be commencing as soon as practicable following

⁸⁵ At [24].

⁸⁶ At [30].

⁸⁷ Dr Jean Win, 8 July 2022 at [19]–[20].

⁸⁸ At [26].

⁸⁹ At [29].

the completion of this proceeding.⁹⁰ Dr Win does not dispute the evidence of Dr Jeffs, Dr Shears, Mr Kerr, or Dr Wing.

Dr Paul Breen

[91] Dr Paul Breen is a semi-retired independent fisheries stock assessment scientist based in Wellington, with approximately 50 years' experience working for the Canadian and New Zealand governments, and NIWA, as an independent consultant. His research interests have included work on the role of lobsters in forming sea urchin barrens. Dr Breen has provided evidence for the second respondent, the New Zealand Rock Lobster Industry Council Inc.

[92] Dr Breen acknowledges that the applicants' trophic cascade hypothesis is supported by evidence in two marine reserves south of CRA 1, but says that other support is limited, and that it is speculative to extrapolate from those marine reserves to other locations.⁹¹ He says:⁹²

The evidence for rock lobsters being the controlling predator of sea urchins, to the exclusion of other predators, is very limited. There are few, mostly old and not very detailed, rock lobster feeding studies. Medium-sized rock lobsters were shown to eat all sizes of sea urchins, but all sizes preferred smaller sea urchins...there is very limited experimental study of the feeding of other predators, such as snapper. It is speculative to suggest that, if predator depletion has allowed sea urchin barrens to form, rock lobster fishing is the cause.

[93] Dr Breen says that Dr Shears' view is not sufficiently supported by the available evidence, and that the ecological issues of trophic cascades are complex and poorly understood.⁹³ He says that Dr Jeffs' view that international literature supports the trophic cascade hypothesis in New Zealand is speculative, given that there is "serious controversy in the international literature".⁹⁴ He says that the advice given to the Minister was correct.⁹⁵

⁹⁰ At [32].

⁹¹ Affidavit of Dr Paul Breen, 18 July 2022 at [14.2]–[14.3].

⁹² At [14.4].

⁹³ At [14.8] and [14.9].

⁹⁴ At [14.10].

⁹⁵ At [14.11].

[94] Dr Breen acknowledges that there is strong support for the trophic cascade hypothesis based on research undertaken at the Leigh and Tāwharanui marine reserves, but that it ignores the roles of other predators in reducing kina abundance.⁹⁶ He says also that the absence of longitudinal studies as to the location and size of kina barrens over time, creates uncertainty as to the relative size of barrens now, compared to historically.⁹⁷

[95] Dr Breen's view is that the assertion that rock lobsters are functionally extinct is misleading as it is not based on any quantitative operational meaning or assessment.⁹⁸ He however accepts that:⁹⁹

...it is apparent that barrens comprise a variable proportion of the available reef within CRA 1...

Although the overall extent of sea urchin barrens coverage within CRA 1 is unknown, the various surveys suggest it is significant in some areas. Because of the very high ecological productivity of kelp and high species diversity within kelp forest, any anthropogenic loss of kelp forest comprises a serious problem.

[96] I note that the literature review upon which his evidence is based remains unpublished, unlike the research of Dr Shears. Dr Shears asserts that Dr Breen's literature review was not published, because "it did not provide a balanced, accurate, and constructive review of the available literature."¹⁰⁰ As noted, the evidence of Monique Andrew also shows that Dr Breen's literature review was relied on to develop advice to the Minister.¹⁰¹

Relevant Law

Nature of the applicants' case

[97] Mr Salmon was at pains to characterise the applicants' case as not attempting to relitigate the merits of the Minister's decision, but rather as "a reasonably standard form of judicial review" seeking to interrogate the advice and information the Minister

⁹⁶ At [18.3].

⁹⁷ At [20.2].

⁹⁸ Affidavit of Dr Paul Breen, 18 July 2022 at [34].

⁹⁹ At [47]–[48].

¹⁰⁰ Reply Affidavit of Dr Nicolas Shears, 15 August 2022 at [28].

¹⁰¹ Affidavit of Monique Andrew, 6 July 2022 at [66] and [87].

received. He submitted that the applicants were not attempting to substitute their decision for the Minister's.

[98] The respondents differed on this point, attempting to cast the applicants' case as one going to the merits of the Minister's evaluative conclusion, a matter the Court is not required, or able to consider. The matter is relatively finely balanced, however, I accept Mr Salmon's submissions on this point. I note that the relief sought by the applicants, being declaratory in nature, does not seek to substitute the Minister's decision for their own. As will also be seen below, there is authority illustrating the ability of the Court to determine factual errors on the basis of a lesser standard than that of *Bryson*, in a fisheries context.

[99] The reality in the present case is that the Minister will be required to reconsider the 2022/23 decision in light of the best information available, and in accordance with the purposes and principles of the Act. However, the result of that decision, and the weight to be accorded to the various factors will remain a decision for the Minister.

[100] It is not correct to say that the applicants seek to substitute the Minister's decision for their own, but rather, they seek to establish that the decision was made without the best available information, and was therefore unlawful. I accept that submission and the applicants' claim is one that the Court may inquire into.

Statutory decision-making

[101] It is well established that the exercise of statutory powers must be consistent with the purposes and principles of the empowering legislation, and that a decision will be unlawful if it is premised on materially incorrect advice.¹⁰² As stated by Richardson J, a "duty to exercise the statutory discretion on reasonable grounds necessarily requires that the Minister be adequately informed as to the relevant considerations and that he take them into account".¹⁰³

[102] While I am of the view that this principle does not add much to the requirements of the Act that the Minister must make decisions in reliance on the best

¹⁰² *CREEDNZ Inc v Governor-General* [1981] 1 NZLR 172 (CA) at 200.

¹⁰³ *Auckland City Council v Minister of Transport* [1990] 1 NZLR 264 (CA) at 303.

available information¹⁰⁴, it is clear in the authorities that “An improperly informed exercise of a discretion is not a proper exercise”.¹⁰⁵ As stated by McGechan J.¹⁰⁶

Essentially, if a decision-maker ignores or acts in defiance of an incontrovertible fact or an established and recognised body of opinion, which is plainly relevant to the decision to be made – in a sense that Parliament must have intended it to be taken into account – the decision may be invalidated. Two points, however, require emphasis. First, the fact “must be an established one or an established and recognised opinion”; and “it cannot be said to be a mistake to adopt one of two different points of view of the facts, each of which may be reasonably held”. This is judicial review; and not a statutory appeal on [the] facts with [the] power to substitute a preferred view. Second, as Tipping J put it, the fact or opinion must have been “actually or constructively within the knowledge of the Minister or the Ministry”, constructive knowledge being in the sense that the Minister “should have been aware of the fact [or] opinion”; or as Cooke P put it (in the context of mandatory statutory considerations) facts “which were or ought to have been known to himself or the Ministry”. Third, the matter is to be looked at as at the date of the impugned decision. Facts which come to light subsequently, and which it cannot be said the Minister or Ministry should have known at the time, are excluded. Administration does not require clairvoyance.

(citations omitted)

[103] Mr Salmon referred me to several cases in which the best information available principle had been applied in a fisheries context, the first of which was *Antons Trawling Company Ltd v Minister of Fisheries*.¹⁰⁷ Mr Salmon relied upon these cases to establish that the information principles in the Act are “not a light-touch obligation”. He expressed the view that having regard to the best available information in a scientific context is an incident of lawful decision-making, which is elevated in a fisheries context. I accept that submission.

[104] In *Antons Trawling*, when setting TAC for orange roughy in the ORH1 area, the Minister was not advised that a topographical survey could have been undertaken to access stock levels more accurately. Miller J stated:¹⁰⁸

...The future availability of information that might allow stock estimates was a relevant consideration in his decision to set a new TAC at that time. The Final Advice Paper invited the Minister to discount it completely. When he

¹⁰⁴ Section 10.

¹⁰⁵ *Heretaunga Residents Association Inc v Hutt City Council* HC Wellington CIV-2003-485-1158, 17 February 2004.

¹⁰⁶ *Taiaroa v Minister of Justice* HC Wellington CP99/94, 4 October 1994, at 42–43.

¹⁰⁷ *Antons Trawling Company Ltd v Minister of Fisheries* HC Wellington CIV-2007-485-2199, 22 February 2008.

¹⁰⁸ At [61].

inquired, the Minister was told unequivocally that no further information was expected at any time. That justifies the inference that he did not take the availability of a topographical survey into account in his decision.

Underlying this omission was a decision by officials to discount a topographical survey because it would not produce “conclusive” information. That overlooked s 10. A TAC-setting decision should begin by identifying the best available information, being information that is available without unreasonable cost, effort, or time, and decisions may be based on such information although it is incomplete or inadequate or unreliable. To overlook this was an error of law that has apparently led officials to conclude too readily that it will not be possible to estimate B_{MSY} in the near future.

[105] Mr Salmon cited *Northern Inshore Fisheries Company Ltd v Minister of Fisheries*, in which the Minister incorrectly used calculations designed to predict the possibility of population growth, to predict the possibility of the extinction of the Hector's dolphin. As to s 10, Ronald Young J stated:

Here, however, s 10(a) reinforces any common law obligation to discover all the relevant facts. The section is a legislative direction to decision-makers. And the difficulty in this case is compounded by the proposition that the May 2000 information was clearly out of date by August 2001. As to relevance of this see *Mum v Attorney-General* [1994] NZAR 457 HC.

The Defendant submitted that if the Ministry properly carried out the s 12 consultation then that effectively satisfied the s10(a) requirements. I accept that proposition if and only if the consultation in fact results in the best information being available to the Minister. But if the thrust of the Defendant's submission is that consultation alone is sufficient, whatever information results, then I reject that interpretation. Section 10(a) is a clear statement about the quality of the information to be available to decision-makers. No doubt this reflects the substance and importance of the decisions being made under the Act. They may affect the livelihoods of many and the extinction or continued existence of animal species.

[106] Finally, Mallon J has also stated:¹⁰⁹

I consider that the “take into account” and “should” wording in s 10 was intended to achieve a balance. As with s 9, the decision maker retains a discretion but is directed as to his or her responsibility. In the usual course decisions are to be based on best available information (because they should be). Before making his or her decision the Minister is required to consider this (because he or she is required to take this into account). To consider this the Minister must know what information is available and at what cost and in what timeframe. If he or she decides not to base his decision on the best available information there would have to be a reason for not doing so. Such a decision might, of course, be open to review as being “unreasonable”.

¹⁰⁹ *New Zealand Federation of Commercial Fishermen Inc v Minister of Fisheries* HC Wellington, CIV-2008-485-2016 at [39].

[107] These considerations need to be construed within the broader context of the Act. That includes its purposes as described in *Sanford* by the Supreme Court, the international law position, and the various principles the Minister was required to take into account when making the TAC decisions.

[108] Accordingly, I accept Mr Salmon's submission that the importance of the requirement relating to the use of the 'best available information' in a fisheries context, is somewhat elevated. Indeed, the purposes of the Act appear to create what could be described as an 'environmental bottom-line'¹¹⁰, and are accordingly complemented by a scheme that favours precaution.¹¹¹ I also consider that the fact that the Ministry is currently engaged in developing a greater focus on the ecological approach to fisheries management as a factor weighing heavily in the exercise. I am drawn to this conclusion as it evidences an acknowledgment by the Ministry that it is required to adopt such an approach.

[109] I note also the Supreme Court's view that international instruments do not assist in the interpretation of the information principles in s 61 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.¹¹² However, the fisheries context is sufficiently different to warrant a different conclusion that the precautionary principle does apply and Crown counsel appeared in submissions to accept that point.

Analysis

[110] The issue of whether the Minister's decision was based on the best available information, and therefore whether it constitutes an error in law, requires a consideration of the scientific evidence summarised between [69] and [96] above.

[111] As I have set out above, there is agreement between Dr Jeffs, Dr Shears and Mr Kerr in respect of the existence and importance of trophic cascade in the north-eastern part of New Zealand. Dr Wing is also in broad agreement with their evidence

¹¹⁰ Above n 13, at [39]–[40].

¹¹¹ See s 13(b).

¹¹² *Trans-Tasman Resources Ltd v Taranaki-Whanganui Conservation Board* [2021] NZSC 127, [2021] NZLR 801 at [108]–[109].

and Dr Win does not dispute that evidence. The contrary evidence comes from Dr Breen. Beyond acknowledging that the applicants' trophic cascade hypothesis was supported by evidence from the two marine reserves south of CRA1, he suggests that the conclusions reached by the other experts were speculative, not sufficiently supported by the available evidence, and related to a topic that was poorly understood and complex.

[112] I find that it is significant that Dr Breen's literature review has not been published. I do not need to resolve the question of whether, as asserted by Dr Shears, the reason for the non-publication is because it did not provide a balance, accurate and constructive review of the available literature. Irrespective of the reason for non-publication, that fact indicates that the research has not been peer reviewed and found suitable for publication.

[113] It is undisputed that Dr Breen's literature review had been relied upon to develop advice given to the Minister. Based on the evidence of the scientists called by the applicants, I accept that the information provided to the Minister and upon which he based his decision, was not the best available information and was materially inaccurate.

[114] The relevant AEBAR chapter does not represent the best scientific or most recent information on the interaction between fisheries and the aquatic environment when it was published in June 2020. It had not been updated in this regard since 2014.

[115] The scientific information provided to the Minister misleadingly conflated the information in relation to kina barrens and trophic cascade in the subject area with the situation pertaining to the rest of New Zealand. I reject the submission advanced on behalf of the first respondent that, as it relates to the entirety of New Zealand, the trophic cascade hypothesis might be described as "controversial" and the literature "equivocal" making the 2021/22 decision "not unlawful". The focus in this case is not on "the rest of New Zealand" but on the decision as it related to CRA1.

[116] For the reasons advanced by Mr Salmon, I reject submission that the Minister's decisions were consistent with the purposes of the Act insofar as those purposes require a consideration of both utilisation and sustainability.¹¹³

[117] I reject Mr Scott's submission that the Act does not contain an environmental bottom-line. Section 9 sets out mandatory environmental principles. It says:

Environmental principles

All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:

- (a) associated or dependent species should be maintained above a level that ensures their long-term viability;
- (b) biological diversity of the aquatic environment should be maintained;
- (c) habitat of particular significance for fisheries management should be protected.

[118] Because of the deficiencies in the information provided to the Minister, his decision did not comply with the mandatory environmental principles.

[119] In the amended statement of claim dated 29 April 2022, the applicants pleaded that the two decisions made by the Minister were inconsistent with the purpose of the Act in that they failed to provide for the cultural wellbeing of Te Uri o Hikihiki Hapū.

[120] During the course of the hearing, this submission was developed to focus on what was said to have been a failure to provide for the participation of tangata whenua in the decision-making process generally, or a failure to consult with Te Uri o Hikihiki. Both Mr Anderson and Mr Scott objected to this argument on the basis that it had not been specifically pleaded. I accept that submission.

[121] I also note that the obligation on the Minister is set out in s 12(1)(b) which is to provide for the input and participation of tangata whenua who have:

- (i) a non-commercial interest in the stock concerned; or

¹¹³ See s 8.

- (ii) an interest in the effects of fishing on the aquatic environment in the area concerned –

and have particular regard to kaitiakitanga.

[122] The Minister's position is that the obligation to consult with tangata whenua set out in s 12 was, in this case, discharged by consultation through the IFF. The rohe of Te Uri o Hikihiki falls within the mid-North IFF. Each IFF is encouraged to develop an IFF plan that describes how the members exercise kaitiakitanga over the fisheries of importance to them, but the mid-North IFF has not yet finalised its plan.

[123] The applicants acknowledged that, in respect of both decisions, the IFF made submissions. In respect of the 2022/23 decision, the Minister noted the concerns of tangata whenua regarding the effects of low abundance of rock lobster. The obligation on the Minister is not to accept whatever submissions tangata whenua make but to consult with them and consider their submissions.

[124] In his affidavit in reply, the second applicant acknowledges that his hapū did not make a submission in respect of either the 2021/22 or 2022/23 CRA1 TAC decisions, or participate in the IFF meetings in relation to these decisions. He appears to argue that there was an obligation on the Crown to invite his hapū or him personally to attend the mid-North IFF meetings. He says that his hapū does not agree with the decisions reached by the mid-North IFF. He also says that the hapū is not represented by Te Uho Kaimoana (TOKM).

[125] In circumstances where the Minister has clearly sought and obtained the input of both the mid-North IFF and TOKM, and the second applicant did not make any submissions about the 2021/22 or 2022/23 decisions, I am not prepared to hold that this amounts to a breach of s 12.

Remedy

[126] Having concluded that the Minister's decisions involved errors of law and are therefore unlawful, I turn to the question of remedy.

[127] As noted at [58] above, the Minister's position was that if the decisions were found to be unlawful, the appropriate remedy would be to grant declarations which the Minister could consider when reviewing the settings for the CRA1 stock in future years.

[128] The applicants sought declarations and also an order requiring the Minister to remake the 2022/23 decision in accordance with the declarations.

[129] I have found the first four grounds of review established and make declarations of unlawfulness in relation to both decisions on the basis of those four grounds.

[130] The appropriate remedy is a direction that the Minister reconsider the 2022/23 decision in accordance with the findings in this judgment and I direct that occurs.

Costs

[131] I invite the parties to resolve costs themselves but if they are unable to do that within 14 days, the applicants are to file and serve a memorandum on costs. The respondents are to reply within 14 days from receipt of that memorandum. I will then deal with the matter on the papers.

Churchman J

Solicitors:
Te Aro Law, Wellington for Applicants
Crown Law, Wellington for First Respondent
Chapman Tripp, Wellington for Second Respondent