

**BEFORE THE ENVIRONMENT COURT  
Auckland Registry**

**ENV 2015 AKL 0000134**

<b>IN THE MATTER</b>	of the Resource Management Act 1991
<b>AND</b>	of an appeal under Clause 14 of the First Schedule of the Act
<b>BETWEEN</b>	<b>TRUSTEES OF MOTITI ROHE MOANA TRUST</b>
	<b>Appellant</b>
<b>AND</b>	<b>BAY OF PLENTY REGIONAL COUNCIL</b>
	<b>Respondent</b>

---

**JOINT STATEMENT OF ECOLOGICAL EXPERTS  
IN LIEU OF CAUCUSING**

26 November 2017

---

This document commenced as a table in Dr De Luca’s evidence and was added in the evidence of Dr Stirnemann. To assist the Court, in lieu of caucusing, all experts have added comments to the table. The “Agreement” column is not necessarily a complete reflection of the areas of agreement and disagreement, and reference should be made to the comments section for a complete understanding of the witnesses’ views.

The status of this document will be as directed by the Court.

#	MATTER	AGREEMENT	COMMENTS
1	The full range of habitats and ecological values within the proposed MNEMA are represented elsewhere in the Bay of Plenty.	Agreed, Drs De Luca and Ross.	<p><u>Dave Guccione:</u> I do not agree that the MNEMA is no more important than other areas in the Bay of Plenty. The ecological values of the MNEMA are unique to the ecosystem of the MNEMA and carry out an ecosystem function that is relevant to the MNEMA and its surrounds.</p> <p><u>Roger Grace:</u> Even if some of the habitats are represented elsewhere, the principles for networks of MPA’s require replication as well as representation.</p> <p><u>Phil Ross</u> I agree with the matter as set out but this does not negate the MNEMA value as a no-take area.</p> <p><u>Sharon De Luca</u> I agree with Dr Grace that the principles for networks of MPA’s require replication as well as representation. I agree with Dr Ross that just because the habitats and ecological values are represented elsewhere does not negate their value as potential no-take areas. Mr Guccione has taken my statement out of context. I am not suggesting that the habitats and ecological values within the MNEMA are more or less important than habitats and ecological values elsewhere. I do not agree with Mr Guccione’s interpretation of uniqueness, as all sites are basically inherently unique because there is not identical replication of sites.</p>

			<p><u>Debbie Freeman</u> The particular species and habitats that occur within MNEMA are likely to also occur in the wider Bay of Plenty. However, it has been documented that at least some areas within MNEMA have particularly high biodiversity value relative to other sites surveyed in the region.</p>
2	The MNEMA and wider Bay of Plenty marine environment has been significantly adversely affected by fishing.	Agreed, Ross, Grace, Shears and Messers Kerr, Guccione and Dr <u>Stirnemann</u>	<p><u>De Luca</u> Whilst fishing has affected marine ecological values within the MNEMA and the wider Bay of Plenty through a significant reduction in the abundance of key predators and flow-on effects from that, some parts of the MNEMA and the wider Bay of Plenty remain in a relatively healthy ecological state (e.g. more distant islands and reefs, such as Otaiti).</p> <p><u>Debbie Freeman</u> The MNEMA and wider Bay of Plenty marine environment have been affected by fishing. The spatial distribution and degree of impact both within the MNEMA and across the wider Bay of Plenty varies.</p>
3	In order to restore the marine ecological values of the MNEMA and wider Bay of Plenty marine environment the establishment of no-take areas are required.	Agreed, Drs De Luca, Ross, Grace, Shears and Messers, Kerr, Guccione and Dr <u>Stirnemann</u>	<p><u>Rebecca Stirnemann:</u> Seabirds need large areas without particular fishing methods occurring. Particularly banning purse seining which is resulting in high mortality of seabirds. The need is urgent. Agreed by: Grace and Kerr</p> <p><u>Vincent Kerr:</u> Agree and the need is urgent. MNEMA</p>

			<p>will make a good contribution to building a regional network of marine protection as well as the positive local benefits.</p> <p><u>Roger Grace:</u> Also need some big MPA's to allow recovery of pelagic fish like trevally so they can push krill to the surface when the seabirds need them for feeding their young.</p> <p><u>Debbie Freeman</u> No take areas are an effective mechanism for restoring ecological values, although establishment of no-take areas is not the sole solution. No-take areas alone will not achieve restoration of the wider Bay of Plenty.</p>
4	An integrated, holistic approach to the establishment of marine protected areas within the Bay of Plenty region should be undertaken.	Opinion of Dr De Luca.	<p><u>Rebecca Stirnemann</u> Yes, however we can't wait for research if we are to reduce impacts on the seabirds.</p> <p><u>Dave Guccione</u> Agree, but there is no proposal foreseeably being implemented within the next 5-8 years for this type of management.</p> <p><u>Vincent Kerr</u> I completely agree. But however the regional planning process evolves going forward what is proposed for MNEMA will greatly contribute to that larger process and network and this is really across all benefits ranging from ecological to process, education and increased awareness of marine protection/restoration and how you achieve it.</p> <p><u>Ross Phil</u> From the evidence of MRMT that I have reviewed, my understanding is that this</p>

			<p>proposal is for a network of no-take areas. It is a network at the scale of Motiti and surrounds, it is part of the BoP network which includes Tuhua and Volkner Rocks, it is part of the NE coast network which includes Poor Knights, CROP, Long Bay, Hahei, Tuhua, Volkner, plus the other reserves.</p> <p><u>Roger Grace</u>  What is proposed will be a step in the right direction. We should proceed with the best information available now.</p> <p><u>Sharon De Luca</u>  I agree with Dr Ross that at the scale of the MNEMA, the proposed no take areas form a network. I also agree that the proposed no take areas are additional to the two existing MPAs in the BOPRC, but note that the existing and proposed no take areas have not been designed as a network to maximize ecological function and benefits.</p> <p>I also agree with Dr Grace that the proposed no take areas are a step in the right direction. However, I consider that there is time for scientists, BOPRC, DOC, tangata moana and other stakeholders to consider the marine environment of the region as a whole, consider all of the existing data and information, perhaps add to the data to close any important gaps, and develop a robust network of MPAs that will maximize ecological benefits.</p> <p><u>Debbie Freeman</u></p>
--	--	--	---

			Agreed.
5	There are gaps in the science on the abundance and distribution of priority restoration species .		<p><u>Vincent Kerr</u>  When we talk about the ocean- it is a given that there will be knowledge gaps - that will never change. This does not prevent restorative methods being implanted on what we do know. There is an important principle here to emphasise. The 'natural' condition, its health, its productivity, diversity, stability etc. is not something that must be proven. We are interested to track the recovery and restoration afforded by protecting the area from disturbance (fishing), but it should not be a case where a proposal such as the MRMT proposal is required to pass some scientific hurdle to demonstrate that the ocean left alone can restore its natural balances and productivity before restorative action may be implemented. Where we know that eco-system decline is in large part due to a known activity. The control of that activity will slow down the decline of that eco-system.</p> <p><u>Rebecca Stirnemann</u>  Yes. However, the lack of research should not stop action on reducing fishing pressure sustainably so ecological pathways can be maintained. This would result in a perverse outcome.</p> <p><u>David Guccione</u>  There will always be gaps. If one waits for perfect knowledge, no restorative action to maintain and enhance the sustainability of fish stocks will ever be taken. It's reasonable to say that we understand enough about the depressed state of target populations to say that management action is necessary if there is a goal of higher abundance.</p> <p><u>Phil Ross</u>  There will always be gaps. We can't not establish an MPA because there isn't enough information. CROP (goat island) was established with no information - it</p>

			<p>is a success, the Poor Knights were established with none of this information and it is a success.  Agreed by: Grace</p> <p><u>Roger Grace</u>  De Luca talks about needing information on connectivity and dispersal but this isn't true<sup>1</sup>. If you want to protect a specific species than yes. This would be useful information to ensure connectivity within your network of MPAs. But each species has different dispersal capacities and the truth is that it is almost impossible to determine dispersal/connectivity distances. The one thing we know is that fishing kills fish and that there are flow-on effects. We also know that no-take areas prevent fish being killed in those areas.</p> <p><u>Sharon De Luca</u></p> <p>It is not my opinion that we should spend a large number of years closing every gap in scientific understanding of the marine ecological values and functioning of the marine environment in the BOP. However, it is my opinion that there is sufficient time to collate and analyse all of the existing information and data, determine where the gaps are, address important gaps if necessary, consider the objectives of all stakeholders and design a network of MPAs across the region in a holistic and integrated manner.</p> <p><u>Debbie Freeman</u>  Agreed.</p>
6	A well-designed network of MPAs should be established.	Agreed, Drs De Luca and Ross	<p><u>Vincent Kerr</u>  Agree. The MRMT proposal is based on the state of the environment in the MNEMA now and the need to restore it before it gets worse. The MNEMA can be integrated into any future MPA planning process as a positive contribution.</p>

<sup>1</sup> Statement of Evidence of Dr de Luca (7 November 2017) at [33].

			<p><u>Dave Guccione</u>  Agree. However, there currently is not a well designed network plan working its way through the political and legal process to be implemented in the foreseeable near future. This argument just means delaying mitigation. In the end delaying a response usually means the cost of the response will increase. There is no reason that the MNEMA couldn't be integrated into a network of MPAs established in the future. Especially as this proposal allows for changing management regimes, whereas areas established under the Marine Reserve Act do not.  Agreed by: Ross and Grace</p> <p><u>Sharon De Luca</u>  There is an opportunity for BOPRC to facilitate and drive a working group of scientists, stakeholders, tangata moana, DOC, MPI etc to develop a network of MPAs for the BOP region.</p> <p><u>Debbie Freeman</u>  Agreed.</p>
7	MPAs should be fully, not partially, protected.	Opinion of Dr De Luca.	<p><u>Dave Guccione</u>  There are an infinite variety of possible protections and allowed activities and levels of those activities. I believe that management should be able to adapt to the changing uses and needs of society, although some areas should always be no take for fishing. There will be exceptions. For example, if there were to be an eradication or control attempt at an invasive species there needs to be a mechanism to allow for removal of that organism even in a "no-take" area.</p> <p><u>Phil Ross</u>  For the protection of biodiversity and ecological function than yes. No take is the best (maybe only) option. The proposal caters for this need through the waahi tapu areas. These areas will achieve ecological gains regardless of what happens in the waahi taonga areas.</p>

			<p>The waahi taonga areas cater for different purposes - enhanced fishing experiences maybe one of those benefits as well as a bunch of other benefits.</p> <p><u>Grace</u> Agreed.</p> <p><u>Vincent Kerr</u> Yes, basically agree with Ross' statement, but I might add where partial protection measures are considered the trick is in the detail - there is no given, there basically has to be a clear objective and a clear method of monitoring effectiveness whereas with full protection, we are simply removing the whole set of disturbances and allowing the nature to restore. These two management approaches therefore are fundamentally different and that needs to be always clearly explained.</p> <p><u>Rebecca Stirnemann</u> Protections should not only be species specific and should cover ecosystems.</p> <p><u>Sharon De Luca</u> In order to maximize benefits to marine ecological values, MPAs should be fully protected.</p> <p><u>Debbie Freeman</u> This depends on the protection and management objectives that the MPAs are intended to meet. A no-take area provides an opportunity for comprehensive biodiversity protection, but other protection and management tools can also provide for biodiversity protection while meeting other objectives simultaneously.</p>
8	MPAs should be established in perpetuity.	Opinion of Dr De Luca.	<p><u>Rebecca Stirnemann</u> We need to develop a better method than MPAs and these eco-systems require restorative action now not in a few years. Agreed by: David Guccione</p>

			<p><u>Phil Ross</u> I agree the MPAs do work however, it is the process of creating MPAs that hasn't worked as well as we would have hoped. No -take areas should be established in perpetuity. The waahi taonga areas are a different story as they have different objectives.</p> <p><u>Vincent Kerr</u> I think in reality we have yet to resolve this in New Zealand. There is an idealised answer from marine ecological science that permanent reserves are desired, but we also have to do more work on resolving this in a maori cultural context as well as gain acceptance across our society. From the ecological perspective there needs to be clarity about goals. If we are focused on restoration of biodiversity than certainly the term of a reserve/the time period needs to be long enough to allow for restoration and this at a minimum will be generational but it might not need to be in perpetuity. Regardless of this debate, given the current state of the environment, it is essential to begin restorative processes now. I do not see why we couldn't review any reserve in a generation from now.</p> <p><u>Sharon De Luca</u> From a marine ecological perspective, no-take MPAs will achieve maximum benefit if established in perpetuity and as a network.</p> <p><u>Debbie Freeman</u> Long term protection provides for enhanced ecological and scientific value. However, adaptive management and regular review of MPAs are becoming more commonplace domestically and internationally.</p>
--	--	--	--

9	The Bay of Plenty marine environment is not at a crisis point where immediate action must be taken, without sufficient information to arrest a decline in ecological values	Opinion of Dr De Luca.	<p><u>David Guccione</u> It depends on your definition of “crisis point”, which is too ambiguous to be meaningful in setting management targets. What is a crisis to one sector is not to another, should commercial crayfishers be able to catch their quota with high effort and a low standing stock biomass, they may not consider this situation a crisis, but that same situation may be unbearable to recreational, charter and customary fishers. From an ecological perspective, I disagree that the level of biomass of target species in the Bay of Plenty is high enough not to trigger more stringent management than current levels. However, this is a red herring as it’s not an argument about whether we have reached a crisis level. It is rather an argument about restoring biodiversity and ecological balances to more natural states. The evidence is clear that ecological restoration can’t co-exist with industrial fishing methods.</p> <p><u>Rebecca Stirnemann</u> I disagree; I consider that we have reached crisis point for reasons discussed in my evidence.</p> <p><u>Roger Grace:</u> We know it is in a bad way, for snapper, crayfish, pelagic schools, loss of kelp and widespread kina barrens.</p> <p><u>Phil Ross</u> I don’t think we are at a tipping point. If we do nothing now we will probably see a continued slow decline. But, this could be exacerbated by climate change. However, I don’t think we are at the point of if we do nothing now then the opportunity is lost.</p> <p><u>Vincent Kerr</u> From an ecological perspective we are in a “crisis”. It is unknown whether or not we are reaching tipping points with many species and whether their ecological roles are depleted to a point</p>
---	---	------------------------	---

			<p>where irreversible damage or negative change is occurring in the marine environment. Generally speaking, when a species is reduced to 10-20% of its natural population things are going to be affected. Our surveys and observations show decline in critical habitats with very low numbers of keystone predator species. Across the board there are seriously depleted fish stocks. Indications show that the sort of areas we are talking about that are very accessible to both recreational and commercial fishers are hardest hit and the greatest concern. This spatial impact is not monitored or managed under the Fisheries Act.</p> <p><u>Sharon De Luca</u> I agree action should be taken due to the significant decline of key species. However, it is my opinion that there is time to determine the most effective way to enhance marine ecological values across the region in an integrated, holistic manner.</p> <p><u>Debbie Freeman</u> I agree immediate action is not required, but do consider that if additional protection or management measures are not implemented, objectives relating to ecological restoration and recovery will not be able to be achieved. In relation to information availability, I would note that the use of best available information and a precautionary approach are relevant to protected area consideration.</p>
10	Resumption of fishing within the MNEMA, once certain trigger levels have been achieved, is a risk to the future marine ecological values restored through establishment of a no-take area.	Opinion of Dr De Luca.	<p><u>Phil Ross</u> Waahi Tapu allow for the restoration of ecological bottom-lines in the MNEMA and on-going protection of those bottom-lines. Waahi taonga areas cater for human experiences (fishing) subject to baseline levels for ecological restoration of the MNEMA being achieved. From an ecological perspective I do not agree that resumption of fishing in the Waahi Taonga areas will</p>

			<p>jeopardise the ecological restoration of the Waahi Tapu areas.</p> <p><u>David Guccione</u>  Agree that future management of these areas will need to be both evidenced and precautionary. But disagree that any take from the Waahi Taonga area will jeopardise the Waahi Tapu areas.</p> <p><u>Vincent Kerr</u>  As per my previous comments about partial protection, clear and specific management objectives and monitoring of effectiveness are a requirement of partial protection approaches otherwise they can easily and often are achieving very little.</p> <p><u>Rebecca Stirnemann</u>  Depends on the type and extent of fishing-e.g. Purse seining and trawling must be banned to reduce seabird, dolphin and leatherback turtle mortality  Agreed by: Grace and add fishing in the Waahi Taonga must reduce effects to benthic in order to prevent jeopardising ecological integrity of the entire MNEMA area.</p> <p><u>Sharon De Luca</u>  The statement at point 10 seems to have been misinterpreted by some of the other marine experts. My opinion is that opening up the waahi taonga areas to fishing again (subject to consent) after a period of no take, risks undoing the enhancement within the waahi taonga areas achieved during the period of no take.</p> <p><u>Debbie Freeman</u>  Fishing within the Waahi Taonga may influence the ecological state of the Waahi Tapu, but this will depend largely on aspects such level of biomass removal, fishing method and the particular species being targeted.</p>
--	--	--	---

11	Measurement of kelp cover, urchin barren area, reef fish diversity and size and abundance of snapper and rock lobster can be used as appropriate triggers for management of the ecosystem.	<p>Agreed Dr Grace and Messers Kerr and Guccione.</p> <p>Disagreed Dr De Luca.</p>	<p><u>Phil Ross</u> I think they can be used but I feel this is problematic from a logistical point of view. Who is going to pay for it? Who is going to monitor it? What happens if the funding dries up or the surveyor moves on? It's messy. I need to be convinced that it will work.</p> <p><u>Roger Grace</u> Cost of monitoring is a big problem. Theoretically we don't need to monitor Waahi Tapu as they are already protected as well as possible. Waahi Taonga will only work with a lot of monitoring and feedback into management.</p> <p><u>Vincent Kerr</u> I refer to my earlier statement on monitoring in Waahi taonga. There is no need to prove that 'nature' works or that nature is successfully restoring ecology. But partial protection will require some form of monitoring to inform management of this area. Monitoring is often limited by budgetary concerns. Defining simple and clear monitoring is desirable.</p> <p><u>Sharon De Luca</u> The triggers proposed for resumption of fishing within waahi taonga areas, such as kelp cover or area of urchin barrens, are too simplistic in my opinion. All trophic levels should be monitored, if the objective is to restore marine ecological values and functioning. A robust monitoring programme would need to be put in place in order to determine when the ecosystem is sufficiently restored to allow fishing and also monitored after fishing resumes to determine if the ecosystem can withstand fishing or if ecological decline occurs again.</p> <p><u>Debbie Freeman</u> I think these may be useful as indicators, but have doubts about the utility of some of these as triggers for</p>
----	--	--	--

			management action, given uncertainty around how ecological interactions may play out at this particular location and over what time scale. The location and large size of the MNEMA may mean that some monitoring approaches may be logistically difficult and/or costly.
12	Appropriate management, monitoring and enforcement are required to ensure successful MPA outcomes.	Agreed, Dr De Luca and Shears.	<p><u>Phil Ross:</u> To some extent it will be self policed.</p> <p><u>David Guccione</u> Agree - The trend at Tuhua was for very little increase in snapper abundance and size within the reserve until enforcement became more stringent.</p> <p><u>Roger Grace</u> Agree that this is the case with Waahi taonga. Waahi Tapu areas, however, should look after themselves. But agree there was a problem at Tuhua before enforcement improved.</p> <p><u>Vincent Kerr</u> I agree.</p> <p><u>Debbie Freeman</u> Agreed.</p>
13	The Marine Reserves Act provides for the establishment, management, monitoring and enforcement of MPAs.	Opinion of Dr De Luca.	<p><u>Phil Ross</u> It does provide for it but the Act has not achieved its purpose because we don't have a network of replicated and representative MPAs.</p> <p><u>David Guccione</u> It does, but the practical outcome of the attempts to put these measures in place have not been successful.</p> <p><u>Roger Grace</u> Frustration with progress through Marine Reserves Act and Fisheries Act has contributed to the move to establish protection under the RMA.</p> <p><u>Sharon De Luca</u> The existence of the Marine Reserves Act</p>

			<p>does not provide MPAs. People, organisations or stakeholders have to actively use the Marine Reserves Act to develop MPAs. It may be that many regions don't have a network of MPAs because there is no-one (or organisation) driving their establishment with sufficient momentum. In my opinion, BOPRC has an opportunity to facilitate and drive the establishment of a regional network of MPAs. Another contributing factor could also be issues with the Marine Reserves Act legislation itself. I understand that the Ministry for the Environment is considering a new piece of legislation (Marine Protected Areas Act) to overcome any shortcomings in the Marine Reserves Act.</p> <p>In my opinion, BOPRC has an opportunity to facilitate and drive the establishment of a regional network of MPAs through the existing Marine Reserves Act or through the Marine Protected Areas Act when put in place.</p> <p><u>Debbie Freeman</u> The Marine Reserves Act provides for the establishment and enforcement of marine reserves (not MPAs more generally) and does not provide for monitoring.</p>
14	The Fisheries Act provides mechanisms for Tangata whenua to control fishing within their rohe moana.	Agreed Dr De Luca and Mr Hill.	<p><u>David Guccione</u> It does, however, attempts to implement these controls have not been consistently applied, nor can they be expected to in the future. What are the issues....??These issues with the Act are still prevalent.</p> <p><u>Roger Grace</u> Failure to progress the fisheries ban around Otaiti through the mechanism of the Fisheries Act contributed to the RMA move.</p> <p><u>Sharon De Luca</u> I am not familiar with the Fisheries Act</p>

			<p>beyond that it does provide mechanisms for tangata whenua to control fishing within their rohe moana. I am not familiar with the reasons why an application for a fishing ban at Otaiti under the Fisheries Act was not successful. However, I agree that it was disappointing that the ecological benefits arising from the placement of the Exclusion Zone around Otaiti during salvage works were not retained through continued protection.</p> <p><u>Debbie Freeman</u> Agreed.</p>
--	--	--	---

**Additional Matters of MRMT and F&B**

15	The MNEMA is ecologically significant in the Bay of Plenty.	<u>Dr Stirnemann, Grace, Guccione, Ross</u>	<p><u>Sharon De Luca</u></p> <p>The MNEMA contains areas of ecological significance in the Bay of Plenty.</p> <p><u>Debbie Freeman</u> There are areas of ecological significance within the MNEMA.</p>
16	The MNEMA could be integrated into a network of MPAs established in the future.	<u>Dr Stirnemann, Grace, Guccione, Ross</u>	<p><u>Stirnemann</u> The MNEMA should be part of a larger system of marine protection which will decrease pressure on the higher tropic levels</p> <p><u>Sharon De Luca</u> The MNEMA could for part of a network of MPAs in the future. In order to maximise ecological benefits, it is necessary to determine the most appropriate sites and habitats to include in an integrated regional network.</p> <p><u>Debbie Freeman</u> Agreed.</p>

17	<p>The Waahi Taonga areas provide an ecological buffer to the Waahi Tapu areas. The inclusion of both no-take (Waahi Tapu) and prescribed take areas (Waahi Taonga) provides for greater ecological gains than only providing no-take areas and allowing all forms of fishing to continue right up to the edge of these area.</p>	<p><u>Dr Stirnemann, Grace, Guccione, Ross</u></p>	<p><u>Stirnemann</u> Agreed for seabirds. See my evidence for details.</p> <p><u>Guccione</u> There would also need to be extensive consultation with the public if all areas were to be no take. It is doubtful that the recreational fishing public would buy in to total no-take regulation.</p> <p><u>Sharon De Luca</u> The waahi tapu areas proposed as no take areas will provide ecological benefit. However, I have concerns about resumption of fishing within waahi taonga areas affecting ecological values in the waahi taonga areas.</p> <p><u>Debbie Freeman</u> Agreed.</p>
18	<p>Immediate action to control fishing is required to prevent the continuous decline of ecological values in the MNEMA.</p>	<p><u>Dr Stirnemann, Grace, Guccione.</u></p>	<p><u>Guccione</u> As above, delaying mitigation usually increases response cost and time to recovery.</p> <p><u>Sharon De Luca</u> I disagree that immediate action through the BOP coastal plan review is necessary in order to prevent continuous decline of ecological values. It is my opinion that there is time to collate existing data, close important gaps in the data if required, define objectives with all stakeholders, develop and implement a robust integrated network of MPAs.</p> <p><u>Debbie Freeman</u> I am interpreting “control” as “change” (rather than “control” in the governance sense), and agree such management should be considered to achieve restoration goals, but it does not need to be immediate.</p>

Dated 26 November 2017