

Supplemental Material

1.0. Story: Tunaⁱ Saved My Life. By Millan Ruka.

Tena Koe.

Ko Whatitiri te maunga. E tu nei I te āo I te pō. Ko Waipao e Wairua te awa I rukuhia, I inumia e ōku mātua tupuna. Ko Maungarongo te marae. Hei tangi kit e hunga mate. Hei mihi kit e hunga ora. Ko Te Uriroi. Ko Te Parawhau. Ko Te Māhurehure ki Whatitiri ngā hapū. Ko Ngāpuhi-Nui-Tonu te iwi. Ko Millan Ruka ahau.

You know your backyard when you haven't moved out of it too often. Although I was born in Auckland, the Wairua and Mangakahia rivers are my turangawaewae
Thirteen of my father's brothers and sisters come from here, Porotī.

Born on the river...

A lot of them buried... on the side of the river including my
grandfather...

So that's my place.

Millan's whakapapa relationships with humans and more-than-humans (be sky, soil, river, land, gods and biota) are incorporated into Millan's mihimihi. Millan is watching, listening and imagining. He is standing at the source of te awa o Mangakahia one of the largest rivers that flow over 80 kilometres to the Kaipara moana. "I can look at the water all day like this." He is speaking about his genealogical home; the places he was born and raised. Millan wonders where the water comes from and ponders on the fact that it keeps coming. "[I want] to walk right up in [to the awa] and just see where it comes from," he says. Millan knows where it goes. This place derives mātauranga, tribal wisdom and knowledge, that enlightens different aspects of the world around Millan. Through a process, Millan has taken to learn, understand and know and practice this mātauranga.

I can remember the days of the Wairoa and the Mangakahia rivers being crystal clear, and swimming in, and drinking from the river. You never thought twice to have a drink from the river...and streams. We'd sit on the bank of the river at home and just look down and spot an eel if you sat there long enough. Well, you couldn't see anything. It's... like a green soup.....They are nitrate laden. *E.coli* [bacteria] laden. Way past the drinkable stage, so taking your health into your own hands. Just seeing the depletion and the non-sustainability of the rivers,

just in my time....

Just a few metres on the other side of the bank. [Whole herd of cows] having a mimi everywhere. Excrement. Because they do that when they're curious and just standing around, may as well have a crap while I'm here.

I started to cry.

Realising the enormity of it. This is unbelievable, knowing my rivers and even that place as a kid, and hard places to get too...

you won't... **see**... the Wairua river unless you take a side road. So, you don't even... **see** ... these rivers — the Wairoa, the northern Wairoa, feeding into the Kaipara — you won't... **see** ... that until you get down to Dargaville. So, you don't... **see** ... these rivers. You don't... **see** ... what's happening on them. Unless you're ... **on**... them.

The switch just went on...I'm going to report on... our **rivers**.

I couldn't believe how much it had changed in a very short time because [of] the impact of dairying. Fonterra had evolved from being just rural dairy companies to amalgamate into the huge giant they are now. Even in the [ten years] I was away, I saw many, many farms where it was one farmer just on the 220 acres or so, to being, that farmer had gone, or his son had taken over, and it amalgamated with the farm next door, left and right, to make it a bigger farm with 500 cows and 600 acres sort of thing. Intensification started there because they had big mortgages, but to me, they were relying on the capital gain as much as gain from the product. The intensification was huge. It was overnight.

Millan thinks about the (slow and invisible) violent journey of disruption, degradation and manipulation the wai takes before it reaches the Kaipara moana. He explains te mana o te wai is denigrated, usurped, disconnected, and extracted. He describes his responsibility and obligation to protect the mauri of the Mangakahia and Wairua for current and future generations [1-4]. Te mana o te wai has not been protected or ensured, so Millan, a responsibility as kaitiaki of the rivers, reports on the status of the awa. He creates GPS maps, photographs cattle stock movements, stock defecation and urination along the edges and in the awaⁱⁱ. He submits the reports to the Council. His first report was September 2011 on the Wairua power station canal at Titoki. Sometimes reports include up to 140 photos that have GPS information attached. The report does not identify (landowner) names. It is not improving. Millan cannot drink and eat safely from the awa like he used to do as a young man. The physical devastation and degradation of his awa runs deep for Millan knowing that as a young man he could access and see the awa, drink from the awa, swim and get a feed of tuna from the awa; and financially support himself and his family. "Tuna saved my life," Millan says. First, as a boy when his father returned, a WWII prisoner of war veteran and then as a man during the 1987-88 financial depression when no-one needed a builder, just food.

We're talking on the phone today. He is downloading. Millan's day job is reporting on the state of the Kaipara rivers, particularly the Mangakahia and Wairua, in the northeastern parts of the catchment (Figure 1). Millan's night job involves writing reports, emails, and submissions on resource consent applications, cultural evaluation reports, going to hui and hosting hui. This mahi is a responsibility to care for the awa and wai. "Easier to keep all Māori out," he says, referring to the Resource Management Act (RMA) and the "crawl process" he, his whanau and hapū have to go through to protect their most sacred region, Porotī Springs [5]. This fight has been ongoing since 1959 when nonMāori wanted to take water from the spring. To keep Porotī Springs spiritually intact and maintained by the hapū is a battle that involves Millan. It is a responsibility. A calling.

"We see ourselves after much study being the sentinels on the river for Ngāpuhi. One of my cousins pointed out we've always been a fighting line, Te Mahurehure. Where there are other hapū [that are] growers eh, harvesters of kaimoana or growers of food eh, gardens, but not us. Predominantly we're just fighters."

Millan utilises this fighting metaphor to describe the resource management act, Aotearoa's environmental development legislation. The "trenches of the RMA", he says. The many volunteer hours mentally, physically and spiritually involved in his approach making it more of an intellectual-spiritual journey rather than a collection of facts or an 'archive of

information' [6: 306]. Moving between the Māori world of knowing, being, doing, and the Pākehā/European ways of knowing and doing as represented by the RMA, these are different worlds, "not one world viewed differently" [7], and like he says to me on the phone a "crawl process".

The inequalities' and cruelty of the RMA run deep for Millan, Porotī Springs, and whanau. Below is an excerpt from a letter written by Whatitiri Resource Management Unit (WRMU)¹ responding to the renewal of a water extraction consent for the power station on the Wairua river. The letter is one of many that Millan and WRMU have written to settler-colonial institutions such as Northpower and the Northland Regional Council (NRC). They are outlining mana whenua concerns regarding the incompatibility of the activity with their relational ontology held with Porotī and the ongoing violence towards their identity, practices and values.

- We received this consent application from NRC on 02.08.2018. This gave our WRMU 11 working days to respond. We wrote to NRC to request 20 days response time and were given at Northpower's discretion till the 31.08.2018 to reply.....giving us 24 days.
- This has been a common scenario where NRC transfers the pressure onto those that wish to reply. We have experienced this with NRC several times over applications to do with Porotī Springs waters. We now have 22 days to reply and to form our Cultural Impact Report. This is way too shortto prepare a submission for this power station application. In this time, we have had to make hastily [sic] contact with Ngāpuhi Runanga, department of conservation, ngā kaitiaki o ngā wai Māori, walking access commission, Fish & Game, Tangitiroia Marae, Korokota Marae and then hui back with our own Maungarongo Marae. We have no financial resources for this mahi. We were severely dis-advantaged when NRC and Northpower declined our invitation to attend our WRMU organised Waimarie hui on 14th August meeting over the power station access and our pending Tuna survey on the Wairua River. Both NRC and Northpower, together with Korokota environmental reps did not attend our hui despite our pānui to have consultation. We were fortunate to have Korokota kaumatua and Tangitiroia kuia in attendance along with Whatitiri hapū and Fish & Game rep & Walking Access Commission rep. All up 17 persons in attendance.
- We sent a letter of resolution requesting more time to NRC for the preparation of our reply submission. Already the RMA "due process of consultation" [carried out] by NRC and Northpower has been bypassed by those that should be well aware [of how to follow the] RMA process.

Later in the day, Millan emails his latest Environment River Patrol Aotearoa (ERP-A) report. Recipients include local government staff and politicians, industry sector for dairy farming, beef and lamb farming, hapū, department of conservation, research agencies and interested individuals and parties. Over 30 email recipients receive ERP-A reports. He just finished report number 169: "NRC #169 Beef cattle and apparent dairy farm cattle graze unfenced on the river riparian at many locations over 19km of the Wairua river....":

RMA Law - The farmers still come under the "**Resource Management Act 1991**" Section 15 and Section 17, i.e., "***Duty to avoid, remedy, or mitigate any adverse effect on the environment***" (waterways). This is current law and must be applied till such time as new by-law is put in place. GPS Picasa photos are attached to this report, clearly show the adverse effects caused by unfenced cattle on the riparian of the

¹ A hapū resource management unit that holds mana whenua status in the Porotī area and have lodged to the NRC their hapū environmental management plan. Under the RMA, NRC are required to 'consider' the plan which outlines hapū concerns, values and aspirations.

Wairua River banks. Most other regional councils fully utilise this “existing law” where need be, and particularly in their dairy regions.

Our hapū and many others who are impacted by these adverse effects consider that the Wairua River and the Kaipara Harbour are of “National Importance” and the above RMA clauses and the freshwater management policy apply. Most other regions use the existing RMA with a rigorous approach to deal with those that are negligent with cattle of any sort, i.e., dairy and beef.

NRC & WDC - please apply the current RMA law to the farmers concerned in this report.

NRC & WDC - please also reply to advise what action is taken in regard to this report, thank you.

Requests and Recommendations

Request that the tidal and freshwater waterways (mentioned) are fenced with “stock exclusion fencing”.

Request that average riparian to be no less than 10 metres from high tide and minimum 6 metres for freshwater.

Recommend that “independent assessment” be adopted as part of the process to investigate this waterway (and all other in NRC region). For assessment of “stock exclusion fencing”, design type, distance from [a] waterway, public access rights and to identify the waterways that require “stock exclusion fencing.”

*** The farmer(s) is in serious breach of the “Resource Management Act 1991” Act Section 15 and Act Section 17, i.e., Duty to avoid, remedy, or mitigate any adverse effect on the environment.”**

*145 GPS mapped photos are provided with this report

*Please inform the writer of action or inaction to this correspondence

Naku noa

Millan Ruka

Environment River Patrol - Aotearoa



Image. Millan Ruka. Director, CEO, kaitiaki and kaimahi, Environment River Patrol Aotearoa. 2018. (Source: Leane Makey)

2.0 Story: Section Five [of the RMA]: “This is Bullshit”

Tokatoka te Maunga. Wairoa te Awa. Kaipara te Moana. Rongomai te Ariki. Ngāti Whātua te Iwi. Te Uri o Hau te Hapū. Ma te Kotahitanga. O ngā Marae Katoa. O te Ōtamatea Takiwa. Kia puta mai ai. Te Mana, te Tapu me te Mauri. Hei Whakatakoto o Matou Tikanga. Mo Nāa Taonga. I Tuku iho ai. Na o Matou Tupuna. Hei to Matou Kaitiakitanga.

Mikaera has put his body on the line for Kaipara moana. Police have charged Mikaera with inappropriate use of a firearm. That needed to be done, he says. He has been called crazy, narcissistic, angry, welcoming and caring, as well as, confrontational, kaitiaki and kaimahi. Mikaera feels oppressed, powerless and angry. He takes peace from the guidance of his tupuna Haumoewarangi and Rangiwhapapa both leaders of Ngāti Whātua. Mikaera ponders his priorities. “It’s on my bucket list”, Mikaera says regarding kaitiakitanga at the local scale. “That is my focus. Something that I’ve been doing for decades anyway, but when you’ve had an experience that I’ve just come out of, you think of what your priorities in your life are. What do you want to do before you no longer exist?” He is in the middle of radiotherapy for lymph node cancer. “It’s huge, and you need to think, what is important to me? What is important to me?” he says. Mikaera resides on whenua that has never been sold to Pākēha settlers. This is his place, which he calls home.

He speaks about his first memories of Kaipara and Tinopai, which started around the time he used to holiday as a young boy with his grandmother. “Look...I’ve done this shit for years...I’ve done it for decades”, he says regarding the calling out of the environmental destruction occurring right in front of his eyes in Tinopai (Figure 1) and the Kaipara moana. That “shit” is watching “the environmental policeman” who are “out to lunch” when it comes to upholding the RMA (Resource Management Act) and enabling hapū to participate in the RMA consenting and development decisions. The Act recognises Māori environmental values in the purpose of the Act [8]. However, the RMA juridical framework constraints Māori ability to exercise rangatiratanga primarily because the Act does not define Māori property rights (customary tenure) regarding water, coasts, air, land and soil. Māori are not elected representatives on local governments responsible for Kaipara moana management decisions. Rural land interests established for agricultural exports continue to exercise strong dominance in local government decisions. To promote their values and aspirations for the management of the natural world, mana whenua representatives like Mikaera are constrained to primarily advocacy² work. For Mikaera, his particular challenge is the local government not doing their job of upholding the purpose of the RMA in sections 5, 6, 7 and 8. All these sections encompass mana whenua values such as the regard and provision for the relationship of mana whenua and their culture, traditions and ancestral land-seascapes, water, waahi tapu and taonga; and to have particular regard to kaitiakitanga (s7(a)) and safeguarding the life-supporting capacity of air, water, soil and ecosystems (s5). Mikaera has had particular regard to the RMA and its “shit,” he says, for a long time. The “shit” that Mikaera and the voluntary marae-based resource management unit (RMU) he is involved with, is similar to what Millan does: responding to resource consent applications³; monitoring and reporting of consent conditions⁴; identification, protection and maintenance of areas of natural significance⁵;

² Mikaera held the position of the TUOHST representative for two years on the Northland Regional Council Te Taitokerau Māori Advisory Committee.

³ Land development, industry establishment like underwater marine turbines, wastewater management, land use change.

⁴ For example, wetland protection, mangrove removal, riparian planting, wastewater and water quality parameters.

⁵ For example, wetlands, waterways, estuaries, mahinga kai and wāhi tapu.

creating and maintaining relationships with the Tinopai community; making local government accountable, and the integration and collaboration of local government organisations different plans and rules for resource use. Like Millan, Mikaera's and the RMU's efforts are unable to alter inequitable governing regimes even after governments have recognised the concept of kaitiakitanga in the RMA [9, 10]. Recognition of difference may have been given in the RMA and fisheries legislation; however, scholars find that injustices and inequalities remain for many Indigenous peoples and cultures [11]. Mikaera is in pursuit of a type of transformative justice that reconciles ongoing commitment to dialogue, longterm relationship building and creation of a space for self-sovereignty for the resurgence of Indigenous Māori law, mātauranga and practices.

The first signs of local inequalities surrounding fisheries management in the Kaipara were when Kaipara fishing stalwart, George Pook, left for Australia, Mikaera says. They were a family born on the waters of the Kaipara. After 30 years of commercial fishing on the Kaipara, he believed there was no future for him in the Kaipara. This was in the early 1990s. The Quota Management System (QMS) was introduced in 1986 to address fish and shellfish declines and collapses. The QMS was to put the power into the fisher's hands to control the tonnage of fish they took/take by using quota (ownership right) and annual catch entitlements (access right). Since the first implementation of the Fisheries Act in 1908, Indigenous Māori rights have been negated, and the QMS was no different [12-15]. Before European settlement, most Māori fishers who were predominantly subsistence, trade and barter fishers moving between collecting food from the sea and land continued to be marginalised and legislated out of allowing to fish. In 1992, a Deed of Settlement to recognise Treaty rights in fisheries was provided to the Crown, which determined mandated Māori organisations. What this would mean for those at the local scale was unclear.

For Mikaera, "we were shafted again" and his experience of the QMS is recounted in Barry Barclay's feature-length documentary film, *The Kaipara Affair* [16], which profiled people concerned about a common and shared theme – the 'right' to fish. The spatial conflict between Māori and (local and itinerant) commercial fishers came to breaking point: "They were raping and pillaging right in front of my marae", Mikaera says. He was honest about what happened next: "I put four shots into the air. [Because] about four 450 metre set nets were used in front of the marae. They left after that", he knew who they were. Local fishermen from up the river: "They came back again. I rowed out to them. I took my oar, but he used his assault rifle [on me] this time."

"[I] pull out a gun and fire a **bullet** and now everyone is listening,"

"This is a **bullshit** society."

Things were heating up on and off the water: "Would have been war. You go to war when the law doesn't mean jack shit," he says. Things were frightening, and unsafe, and people were angry: "How can a system allow 6,000 kilometres of set net." Such fishing methods were not indicators of sustainability. Discontented individuals released feelings of marginalisation, injustice and inequality. It was generally felt that the QMS was benefiting a few at the cost of the many [13], including the ancestral fishing grounds farmed by Mikaera's whānau for over 400 years. Indeed, this was considered a typical result for many Māori fishers after the QMS implementation [15]: "[We] were [are] starving right on the shore," says Mikaera.

Māori lore (tikanga Māori) was required, Mikaera says. The rāhui management tool has been a forgotten tool for Māori since 1887 when the first Crown law for fisheries was implemented, says Mikaera. Rāhui is for conservation purposes where a mauri stone was used. If the rāhui were not followed or trespassed, there would be punishment by the Atua and utu on the whānau. In 1997, kaumatua placed a rāhui in the 'Funnel' (Figure 1), the area adjacent to Mikaera's marae, which included the Tinopai village coastline, across the channel (or funnel) to the shoreline on the opposite side. It was a protective rāhui where no commercial fishing was allowed.

The (Pāhēka) Law [Fisheries Act 1996] then assisted the community of Tinopai and Kaipara with a two-year closure.

Mikaera says, "in the end, we were shafted. It was very sad." The Crown made no improvements to the sustainability (biologically and socially) of Kaipara fisheries. The science was lacking and what science they had, did not improve the fish and shellfish (e.g., flounder, mullet, scallop, oysters) or their habitat. Joint and shared efforts by the local Pākehā and Māori of Tinopai and wider Kaipara were a force to be reckoned with because such an alliance had not been publicly seen before. A collective had been forged. However, whānau and community social values and living values were not respected,

"We were starving right [here] on the shore." Mikaera continues,

"This kōrero is so huge and large that you can not talk about it in one session."

There is corruption at play; exclusion and racism he says. He still has a lot to do focusing more so on descendants that remain on the whenua and marae; those that remain, ahi ka. Indeed, passing on tikanga, hapū rangatiratanga; and to uplift the cultural world in all things Māori do for business, health, development and ecosystem management. "Cultural dimensions don't exist and if they do it's tokenistic because mana whenua have moved away from their ancestral place and lands. E hoa whānau. Go back to the marae."

The Waitangi Tribunal (forum to address historical injustices) freshwater reform analysis between 2003 and the present day[17-19] found that the RMA and its allocation regime are not consistent with and breach Treaty of Waitangi/Tiriti o Waitangi principles, including the principle of equity. Māori have been prejudiced by the ongoing failure to recognise their proprietary rights. Institutional and structural barriers have prevented participation in the first-in, first-served allocation system of the RMA, and the (Treaty) partnership in allocation decision-making. Economic opportunities have been foreclosed by the barriers to access water. Three crucial issues were identified in the operation of Part 2 of the RMA, namely the relative weakness of the Treaty clause (section 8); a lack of National direction for regional councils; and how the RMA enables the 'balancing out' of Māori interests. Section 8 is currently applied as part of a hierarchy in which section 8 predominantly comes last. This stems from the phrase "take into account" imposing a lesser requirement than "have particular regard to" (section 7), which in turn is a more secondary requirement than "recognise and provide for" (section 5 – life-supporting capacity).

The RMA makes a proviso for pre-existing rights of farmers but does not do the same for Māori, and does not otherwise recognise or provide for Māori rights of a proprietary nature [18].

“[It's] another manifestation of institutional racism,” says Mikaera.

“We have to put up with this shit...every bloody day. They [Council/Crown] turn their cheek the other way. When they're been found to be wanting, they've created a problem. They just turn the other way. There's no response. Absolutely nothing. Every conversation that I'm having from now on...with people from the government, I'm shoving the law down their throats. Because really, what I'd like to say to them...if you're not prepared to uphold your legal obligations of the RMA well then get out of the bloody office.”

These findings of racism do not just reside in environmental management systems of Aotearoa, but also in health care [20-22], whereby an anti-equity regime is practised thus, Māori health care needs are also not being addressed.



Image. Mikaera Miru. Director, CEO, kaitiaki and kaimahi, Tinopai Resource Management Unit. 2018. (Source: Leane Makey)

References

1. Whatitiri Resource Management Unit, *Whatitiri Resource Management Plan*. 2016. p. 33.
2. Nga Kaitiaki o Ngā Wai Māori, *Ngā Kaitiaki o Ngā Wai Maori Strategic Plan*. 2012 - 2016. 2012. p. 20.
3. Paul, D.H., et al., *Whatitiri: The Lands, the Peoples and their Water*. Report prepared for Te Paparahi o Te Raki Inquiry. Wai 1040. NA.
4. Kāhui Wai Māori, *Te Mana o te Wai. The Health of our Wai, The Health of our Nation*. Kāhui Wai Māori Report to Hon Minister David Parker. April 2019. 2019. p. 52.
5. Hamer, P., *Porotī Springs and the Resource Management Act, 1991-2015. A report commissioned by the Waitangi Tribunal for the Te Paparahi o e Raki inquiry*. Wai 1040. 2016.
6. Mead, H.M., *Tikanga Māori: living by Māori values*. 2003, Wellington: Huia Publishers.
7. Salmond, A., *Ontological quarrels: Indigeneity, exclusion and citizenship in a relational world*. Anthropological Theory, 2012. **12**(2): p. 115-141.
8. Memon, P.A. and N. Kirk, *Role of indigenous Māori people in collaborative water governance in Aotearoa/New Zealand*. Journal of Environmental Planning and Management, 2012. **55**(7): p. 941-959.
9. Bodwitch, H., *Challenges for New Zealand's individual transferable quota system: Processor consolidation, fisher exclusion, & Māori quota rights*. Marine Policy, 2017. **80**: p. 88-95.
10. Bodwitch, H., et al., *Why New Zealand's Indigenous reconciliation process has failed to empower Māori fishers: Distributional, procedural, and recognition-based injustices*. World Development, 2022. **157**: p. 105894.
11. Coulthard, G.S., *Red skin, white masks : rejecting the colonial politics of recognition*, ed. G.R. Alfred. 2014, Minneapolis: Minneapolis, Minnesota : University of Minnesota Press. 2014. ©2014.
12. McCormack, F., *The Reconstitution of Property Relations in New Zealand Fisheries*. Anthropological Quarterly, 2012. **85**(1): p. 171-201.
13. McCormack, F., *Sustainability in New Zealand's quota management system: A convenient story*. Marine Policy, 2017. **80**: p. 35-46.
14. Hersoug, B., *"After all these years" - New Zealand's quota management system at the crossroads*. Marine Policy, 2018. **92**: p. 101-110.
15. Waitangi Tribunal, *Report of the Waitangi Tribunal on the Muriwhenua Fishing Claim*. Wai 22. 1988, Waitangi Tribunal: Wellington, NZ. p. 354.
16. Barclay, B. and D. Selwyn, *The Kaipara Affair*. 2005, He Taonga Films: Auckland. p. 136 minutes.
17. Waitangi Tribunal, *Ko Aotearoa Tēnei. Te Taumata Tuatahi. A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity*. Wai 262. Brooker & Friend, in Waitangi Tribunal Report, W. Tribunal, Editor. 2011, Waitangi Tribunal: Wellington, NZ. p. 298.
18. Waitangi Tribunal, *The Stage Two report on the national freshwater and geothermal resources claims*. Wai 2358. 2019, Waitangi Tribunal: Wellington (NZ). p. 618.

19. Randerson, T., et al., *New Directions for Resource Management in New Zealand. Report of the Resource Management Review Panel. June 2020.*, M.f.t. Environment, Editor. 2020: Wellington, New Zealand. p. 531.
20. Waitangi Tribunal, *Hauora. Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry. Pre-Publication Version. Wai 2575. pp.265.* 2019, Waitangi Tribunal. p. 256.
21. Harris, R.B., J. Stanley, and D.M. Cormack, *Racism and health in New Zealand: Prevalence over time and associations between recent experience of racism and health and wellbeing measures using national survey data.* PLoS ONE, 2018. **13**(5).
22. Kearns, R., H. Moewaka-Barnes, and T. McCreanor, *Placing racism in public health: a perspective from Aotearoa/New Zealand.* GeoJournal, 2009. **74**(2): p. 123-129.

ⁱ Tuna is the Māori name for freshwater eel. The longfin tuna (conservation status: endangered) are diminishing from loss of habitat, and suitable water quality and lack of suitable access for kaitiaki to manaaki tuna. See PCE (2013) *On a pathway to extinction? An investigation into the status and management of the longfin eel.* 2013, Parliamentary Commissioner for the Environment: Wellington, NZ for further information.

ⁱⁱ Millan provided Environment River Patrol Aotearoa reports numbers: 006, 041, 043, 085, 086, 098, 099, 100, 169, 181, 297, 298, 301, 308, 309, 359, 362, 366, 371, 378, 379, 383, 593, 710, 711, 718