

Wai 1040

In the matter of  
the Treaty of Waitangi Act 1975  
and  
in the matter of a claim by  
Whangaroa Papa Hapu, and  
Hokianga o Nga Hapu Whanau

**CROWN SPONSORSHIP OF MASS DEFORESTATION IN  
WHANGAROA AND HOKIANGA 1840 – 1990**

**SUMMARY**

Summary of a Gap-Filling Brief of Evidence Commissioned by the Crown Forestry Rental Trust for Whangaroa Papa Hapu, and Hokianga o Nga Hapu Whanau, for presentation to the Waitangi Tribunal's Te Paparahi o Te Rahi District Inquiry

The evidence of Dr Garth Cant

July 2015

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| <b>20 July 2015</b>                  |
| Ministry of Justice<br>WELLINGTON    |

## **1. INTRODUCTION**

1. I am a Geographer at the University of Canterbury with special interests in Indigenous land rights, kaitiakitanga, and resource management.

2. This report investigates what the Crown knew about the impacts of deforestation when it sponsored deforestation of Whangaroa and Hokianga, and after the areas had been deforested. There is a focus on: Crown knowledge and policy from 1870 to 1990; and the Crown's knowledge of the environmental impacts of deforestation in the Whangaroa and Hokianga.

4. The Hokianga and Whangaroa harbours are the two largest in the far north (figure 1). The Hokianga harbour has a much shallower entrance, and less clearly defined catchment. The Whangaroa Harbour has a much deeper entrance and a more clearly defined catchment. The map of the Whangaroa map emphasises the complementarity of the inland rohe and the coastal rohe.

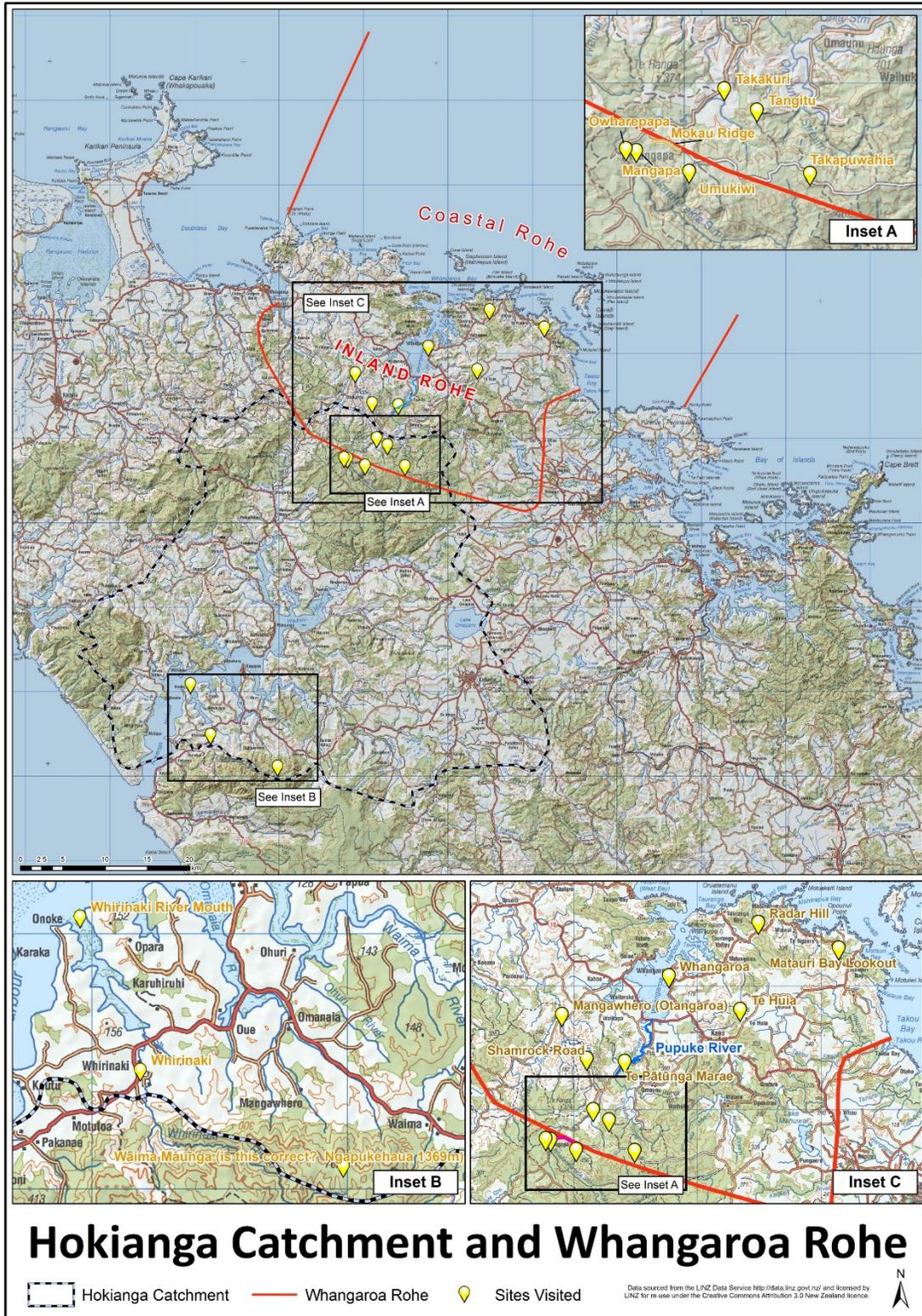


Figure 1 Hokianga Catchment and Whangaroa Rohe

## 2. THE CLAIMANT CONCERNS AND EVIDENCE

5. Ngā Hapū O Whangaroa claimants' concerns are expressions of their world view and their identity. 'We are the land', they say, 'connected to all things and to each other, both spiritually and physically, by whakapapa.' Bringing their claims to the Tribunal is a re-emphasis of their rangatiratanga and their kaitiakitanga within their environment.

6. The claims brought to the Tribunal by Nuki Aldridge and Patricia Tauroa on behalf of Whangaroa Papa Hapū are complementary to other Whangaroa claims and do not supersede them.

7. The Environmental Breach is clearly asserted:

The Crown, in breach of its duties, usurped and undermined the tinorangatiratanga of Ngā hapū whānau o Whangaroa by asserting management and control over the Ngā hapū whānau environment and by delegating powers of management and control over the environment to the detriment of Ngā hapū whānau o Whangaroa claimants.

8. Parallel concerns were brought by Hokianga claimants:

The ability of Hokianga Māori to exercise rangatiratanga over their own affairs pursuant to the principles of Te Tiriti a Waitangi was considerably impacted by the imposition of Crown bodies, frustrating whānau, hapū and iwi arrangements for future generations.

They see this as a Treaty issue and a partnership issue.

9. Whangaroa and Hokianga claimants have already brought substantial evidence on deforestation, and more is in preparation. Among Whangaroa claimants are Patricia Tauroa, Rihari Dargaville, Ani Taniwha, Owen Kingi, Arena Heta, Tarzon Hori, and Karanga Pourewa.

## Research hui and field trips

10. Ngā hapū whānau o Whangaroa organised a research hui at Te Pātūnga Marae. The people draw on the resources of ngahere, awa, and moana and are located on fertile river flats backed by less fertile hills and mountains. The large mural in the whare kai served as a first introduction and a constant reminder of where we were within the larger Whangaroa rohe (figure 2).



Figure 2. The mural at Whakatapuranga, in the whare kai at Te Pātūnga

11. Arena Heta set the context for two excursions. The first, towards the coasts and gumlands, included Te Huia lookout point (Figure 3). The second began on the river flats and the bridge adjacent to the marae, and travelled up-valley through farmland, second growth, reclaimed pastures, pine forest still growing, pine forests recently logged, and pine forests in the process of being replanted (figure 4).



Figure 3. Te Huia looking towards Whangaroa Harbour



Figure 4. Mokau Ridge looking towards Whangaroa Harbour.

Arena Heta and other members of the whānau pointed out sites of kainga, and nohoanga important since the 1870s, and many places where they have worked for New Zealand Forest Service, clearing and burning forest and planting pinus radiata.

12. The concerns of the Claimants are highlighted in the images that follow:



Figure 5. Tangitu. Streams from Tangitu maunga flow into the Hokianga, Bay of Islands, Manganui, and Whangaroa harbours. Debris washed into these valleys and streams destroys habitat and pollutes downstream waters.

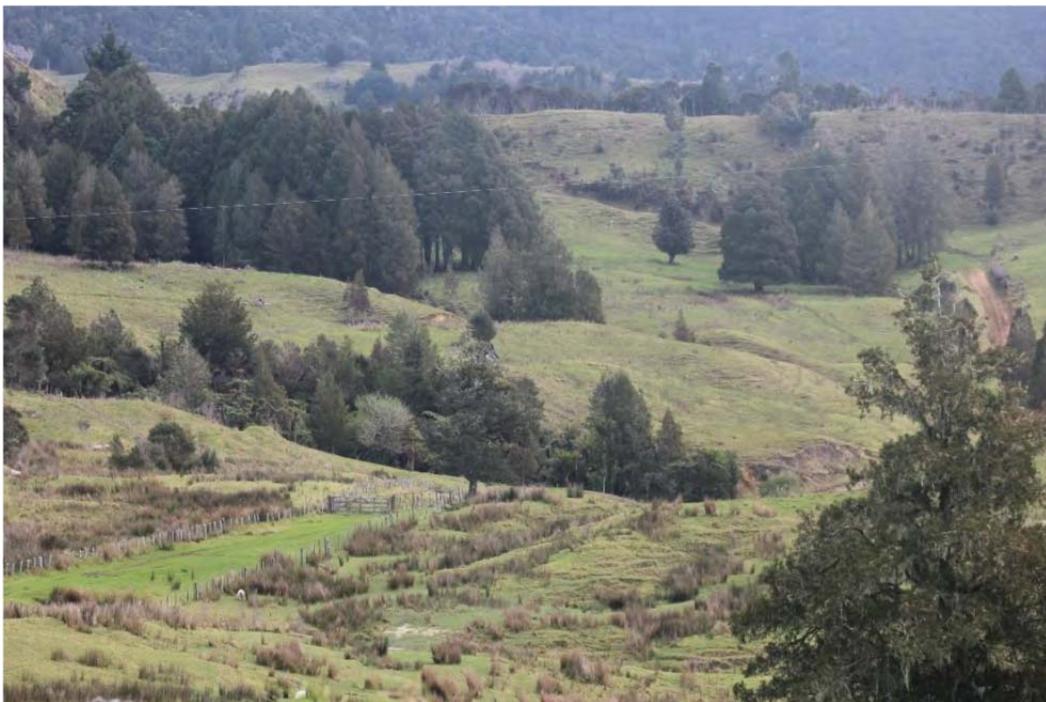


Figure 6. Takakuri Farming Block was farmed and regularly fertilized by Lands and Survey. It has now been placed in the land bank, fertilizer applications have ceased, and pastures are deteriorating.



Figure 7. Umukiwi. Native forest here was cut in the 1970s in preparation for a large scale burn, and then planting. There was massive loss of bird life, including kiwi and kukupa.



Figure 8. Takakuri and Mangapa Blocks planted in the 1980s, were cut in 2014. Wood was left on skid sites and slopes. Requests were made to forest managers for the debris to be made available to tangata whenua to process and remove. Request refused: 'This wood is ours.'



Figure 9. Te Whanaupani protested when Juken NZ cut the pine crop without removing the slash and dockings, and rejected their offer to clean up. Rubbish can be seen on left.



Figure 10. Awaroa, and Mangawhero, streams used to be clear, with tuna and other fish. Now they are contaminated, provide poor quality habitat, and contain little or no kai ika.



Figure 11. Bridge by Te Pātūnga marae. Debris from skid sites and forestry slopes, and from council efforts to clear roads was trapped by the bridge.

### **Whirinaki evidence**

13. Parallel evidence, by Hokianga Claimants, was brought to the Tribunal during week 8 by Whirinaki kaumatua and kaimahi. We begin in the steep forests of the Waima maunga, and follow the Whirinaki river through the lowlands, to the Hokianga harbour. Isabelle Dalton, Anania Wikaira, Lynette Wharerau, Arthur Wynyard, and Ben Morunga have brought evidence.

14. The Wai 700/Whirinaki claimants who have brought these environmental and deforestation issues to the Waitangi Tribunal present them within a tino rangatiratanga, kaitiakitanga, and Treaty partnership framework. In the words of Anania Wikaira:

We are kaitiaki. It has been instilled in us by our whakapapa, living in unison with nature is something that has been passed down since the coming of Kupe.

### **The Claimant Concerns and Issues**

15. Three areas of concern are linked. The first is the loss of forests. The era of greatest forest loss was from the 1870s, when new sawmilling and logging technologies were introduced, when trees of all sorts were cut, and when formerly forested areas of land were

cleared, and burnt, and turned into pasture. But there was a second phase of transformation. During the 1970s and 1980s forests were cut and second growth was cleared to expand grasslands or to plant pine forests.

16. The second is water quality. Deforestation in historic times resulted in erosion, sedimentation, and silting. Best practice in recent times has brought fertilizers and pesticides into the mix. Claimants have sought opportunity to bring these concerns to the attention of farm owners, forest owners and government agencies. A number have described instances where these overtures have been discounted or rebuffed.

17. Behind these environmental concerns are larger issues to do with rangatiratanga, consultation and partnership. The basic concerns of both sets of Claimants are that their rangatiratanga within their rohe, and their kaitiakitanga responsibilities to their forests, their lands, and their waters, have not been recognised.

### **3. PREPARATION FOR THE REPORT**

18. This report builds on the Claimant evidence, and the Alexander environmental report. Alexander identifies the years from 1870 to 1910 as the exploitation years when the greatest damage was done. New logging and sawmilling technologies combined with the economic policies of Julius Vogel to usher in dramatic changes in the North.

19. All of the evidence located supports the contention that the Crown was supportive of the timber industry and showed little concern for the environmental consequences during the nineteenth and early twentieth centuries.

20. Alexander also points to changes since World War II. Agricultural use of land in Northland has intensified with high stocking rates, and Crown support for the conversion of gumlands and swamps, as well as forests and scrubland, to farmland.

### **4. WHAT THE CROWN KNEW IN THE 1870S**

21. Locally, the Crown knew about the lands and waters of Hokianga and Whangaroa. Ferdinand von Hochstetter's 1867 book ensured that the Crown was aware of the knowledge that had cumulated.

22. James Hector ensured detailed local knowledge in the 1870s. The Crown, through Hector and his staff, has access to evidence-based knowledge of these environments.

23. We now come to the most substantial part of this report: what the Crown knew about the impacts of deforestation at the time when large scale forest destruction began in the Hokianga and Whangaroa catchments.

24. Julius Vogel, architect of the economic policies launched in the 1870s, experienced an unexpected conversion to the cause of forest preservation, during field visits in the summer of 1873/4. He came home, collected all of the international scientific information on forests and forestry that he could, absorbed it, and related it to the New Zealand context.

25. Vogel read, day and night, and prepared legislation. On July 14<sup>th</sup> 1874, he stood in the House and presented the New Zealand Forests Bill. With all the passion of the newly converted, he shared with his peers, in a speech that lasted for 168 minutes

26. Vogel not only spoke at length, he also tabled a lengthy printed paper. He encouraged his colleagues to respond at length, and he carefully replied to each of the concerns raised. His Parliamentary colleagues, and his civil servants were given a comprehensive overview of the best scientific information available to the international community.

27. Table 1 is a summary of what the Crown knew in 1874.

28. This was a sound and substantial knowledge base, well understood by the Crown in the 1870s. The Crown's failure to apply it in a thoroughgoing manner is the root cause of the problems spelt out by the Claimants.

**Table 1 What the Crown knew about deforestation and erosion in 1874**

1. The Crown knew that the removal of forests would accelerate soil erosion, and the debris that resulted would find its way into streams and rivers.
2. The Crown knew that the removal of forests would increase run-off, and produce flooding
3. The Crown knew that the flows of streams and rivers would be less constant and that some springs would fail if forests were removed.
4. The Crown knew that the water quality of streams, rivers, and lakes, would deteriorate if forests were removed.
5. The Crown knew that the removal of forests could impact on climate. This part of the knowledge base was configured around the assumption that removal of forests would create large scale climate change. The claims were extravagantly presented, were not well argued, and were strongly challenged by a number of those who participated in the parliamentary debate. Less vigorously presented, but clearly evident, was the knowledge that removal of trees from river banks and lakesides would result in increases in water temperature.
6. The Crown knew that lands were best protected if the headwaters of rivers were retained in forest. 'Guardian forests' included 'the sides, the crowns, as well as the steep declivities of mountains.'
7. The Crown knew that riparian strips were especially important for the protection of streams, rivers, and lakes.

**5. THE CROWN'S KNOWLEDGE BASE EXPANDS 1870 TO 1970S**

29. Section 5 of the main report is detailed. It describes how the Crown's knowledge of the northern environments increased substantially between the 1870s and the 1930s. Norman Taylor in the 1930s and the parliamentary committee on soil erosion in 1939 were the most substantial sources. Kenneth Cumberland highlights our knowledge in a sequence of four photographs. ( → par 38)

30. Geologists, botanists, and foresters, through fieldwork and publications, provided knowledge which was scientifically sound and specific to the far North. Norman Taylor,

a soil scientist based in Whangarei, was able to build on this. By 1938, he had a good knowledge of the problems that were emerging, not just in the north, but across a wider spectrum of farming areas where poor quality pastures were reverting to second growth.

31. Taylor identified erosion as the chief cause of hill country deterioration, and the constant use of fire as the greatest single cause of erosion. He reached a conclusion that was important in the context of the scientific debates that followed. ‘Certain lands cannot be farmed permanently as pasture lands’, wrote Taylor, ‘and should be abandoned.’

32. Scientific knowledge is often contested. While Taylor was publishing one set of insights, agricultural scientists Alfred Cockayne and Bruce Levy were promoting a new strategy for grassland farming. Plant breeding and artificial fertilizers would be joined.

33. Cockayne and Levy won the support of farmers, policy makers, and politicians. Their vision was to convert every possible piece of land into pasture. It was a ‘one size fits all’ strategy, simple to promote and apply, that worked well with gentler slopes and better soils but had negative implications for steeper hill country with poorer soils.

34. There was a rude awakening in 1938 with serious floods in the Esk Valley. The Public Works engineers and the politicians recognised that hill country erosion was a national problem, filling rivers with debris and threatening downriver farms, towns, and bridges. Government responded promptly with a committee of enquiry into the effects of soil erosion.

35. The conclusions reached by the committee are set out in Table 5.2 in the main report. In brief: the situation had arisen because farming had been attempted on land unsuited to permanent pasture; farming should be restricted to areas where grass can be permanently maintained; reforestation and grassland management both can play important parts in flood control; and some protection forests can be timber producing.

36. Government took the recommendations seriously and passed the Soil Conservation and Rivers Control Act 1941 which set a national Council, and Catchment Boards for each of the major rivers.

37. Professor Cumberland’s doctoral thesis on soil erosion in New Zealand raised public and scientific awareness. He pointed to the vulnerability of area which combine steep hill country and high and often intense rainfall. Many such areas which were densely forested in the 1840s, had been cleared, eroded, and abandoned by the 1940s.

38. Cumberland's sequence of four photographs highlights this process.



Figure 12 Steeper Hill Country,  
bush covered

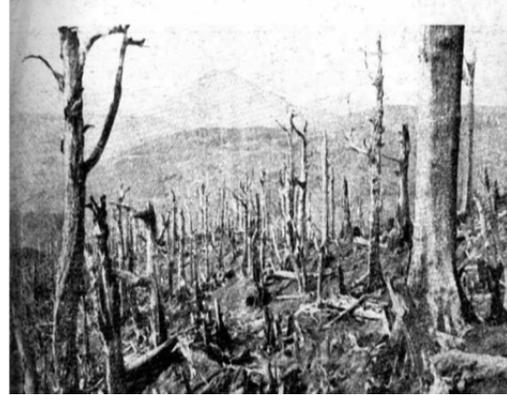


Figure 13 Transformed by Fire



Figure 14 'Newly established pasture  
fails'



Fig 15 'Abandonment allows nature a free hand'

39. There is the dense sub-tropical forest; there is the bush-burn landscape; there are the erosion scarred slopes where newly established pastures have failed to persist; there is an abandoned landscape with animals gone and regeneration evident...

40. Norman Taylor, the Erosion Committee, and Kenneth Cumberland have all reached the same conclusion: there are some areas that can be farmed; but other areas that are best left in forest, or returned to forest [Bruce Levy and the Grassland scientists, however, are in a very different space, as we will see later in the report]

41. The Crown responded to the erosion report by setting up a Soil Conservation and Rivers Control Council and Catchment Boards. These new conservation initiatives depended on good information and the Crown worked hard to provide air photographs, land inventories, and land capability maps from the 1950s onwards. There was, by 1974, a growing volume of information about the potential and the vulnerability of the soils across New Zealand, including the Hokianga and Whangaroa catchments. But the priorities of Government were in the process of change. The grassland revolution, initiated in the 1930s, was about to return to centre stage.

## **6. GRASSLAND FARMING: CROWN POLICIES, 1974 TO 1984**

42. Grassland farming in New Zealand, supported by scientists in the Bruce Levy tradition, expanded to meet the needs of export markets. New Zealand farmers were eager adopters of the innovations recommended by the scientists: millions of tonnes of fertilizers, and 2.4.5 chemicals were purchased by farmers to increase production on relatively poor soils.

43. Agricultural scientists had the upper hand and the warnings of the soil conservators carried little weight at the policy level. Ross Galbraith, in *DSIR: Making Science Work*, probes the strengths and weaknesses of the high fertilizer/high stocking regimes. The nutrients, chemical and biological, are not all retained in the soil. There was enrichment of waterways.

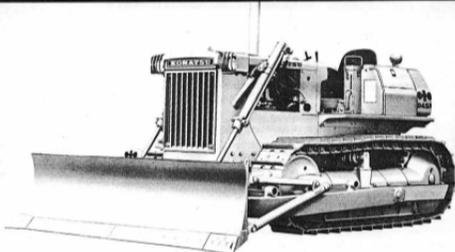
44. We come back to the 1970s. The grasslands revolution was in full flight, and there was shrubland that could be cleared, and swamps that could be drained. The stage was set for one final expansion of the grassland frontier, supported and encouraged by government policies. The evidence is contained in the Annual Appropriation Bills (the 'Budgets') presented by the Ministers of Finance.

45. What the Labour Government put in place in 1974 and 1975, the National Government continued and expanded through to 1984. The aim was to boost livestock numbers to increase export income. Under Labour there were tax incentives for farmers bringing in additional farmland; fertilizer subsidies and application bounties; assistance to aviation contractors; and subsidies for the chemical control of noxious weeds. National continued these, and added a livestock incentive scheme in 1976, and SMPs in 1981.

46. The policies and incentives had particular significance for the Whangaroa and Hokianga. Both catchments contained gumlands and steep and unstable hill country lands, converted to pastures, and then abandoned to second growth. Farmers were subsidised to develop these lands, to apply large quantities of fertilizer, and pesticides and insecticides (figures 16 and 17). Where soils were more fertile, parent material more stable, and slopes were not excessive, these incentives made for good quality farms which contributed to the regional and national economies. But in other Northland situations, farming was not appropriate, erosion was not contained, and nutrients and pollutants found their way into streams and rivers.

Figures 16 and 17: Support for the Grassland Revolution

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8 NZ Journal of Agriculture, August, 1980

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47. The use of agricultural chemicals, encouraged by scientists, extension workers, and stock and station agencies, continued to expand through the 1960s and 1970s

48. There is a parallel story to be told in relation to exotic forestry and forestry chemicals. Expansion of the agricultural aviation industry, along with government subsidies, ensured that the hill country areas and the gumlands of the Hokianga and the Whangaroa were included in this expansion of agriculture and production forestry.

### **Dr Les Molloy**

51. There is one more perspective to add. Dr Les Molloy's conclusions are especially pertinent to the high rainfall hill areas and the gumland districts of Whangaroa and Hokianga. He provides detailed information about soil types, their strengths, and their vulnerabilities.

52. Putting the insights gained from Norman Taylor in 1938 and Les Molloy in 1988 together, there is one more item to be added to the list of things the Crown knew:

8. Hill country and gumland soils, are complex and vulnerable to erosion. Not all land uses are appropriate for all soils. Some are unsuitable for agriculture, some are unsuitable for agriculture or forestry, some are best retained for water and soil conservation, scenery preservation, and outdoor recreation.

## **7. EXOTIC FORESTRY IN THE 1970s AND 1980s**

53. Exotic forestry in New Zealand is largely *pinus radiata* – it grows rapidly and responds well to silviculture. The first large scale plantings, between 1923 and 1936, by-passed Northland. They came to maturity in the 1950s and 1960s, and were the foundation for large scale processing industries at Kinleith and Kawerau.

54. This commercial success prompted Government to support a second phase of planting in the 1960s and 1970s. This time the Hokianga and Whangaroa were involved, and large areas were planted in *pinus radiata*. In some cases, the Forest Service logged and cleared indigenous forest and planted *pinus radiata*; in other cases, poor quality pastoral land was planted with trees.

55. The scientific publications reviewed in the full report give us insights into the practices used when planting took place in the Whangaroa and Hokianga catchments, and more

recently when the blocks visited in January 2015 were cut. The insights into the practices used in the 1970s are organised, around sedimentation, the use of fertilizers, and the use of chemicals.

56. The situation in Northland parallels that in the Pacific Northwest of America. When forest operations moved from gentler slopes to steeper slopes, the loggers persisted with familiar equipment and methods. ‘The logs reached the mills’, wrote Carson, but ‘the damage became obvious as time went on.’

57. Fertilizer use increased dramatically from 1969 onwards. Urea and superphosphate were spread from the air in all conservancies. Research was being carried out and reported; it was precise but circumscribed. The research that is reported was directed to what happened within the forests. We have found no monitoring or research in the 1970s and 1980s that examined what happens to the waters downstream.

58. Good practice with chemicals runs parallel to good practice with fertilizers but the consequences of inappropriate application may be even more severe. Of greatest concern, is the nature and quantity of the herbicides used during the 1974-84 decade. Looking back from a 2015 vantage point, it is clear that the 1970s and 1980s were the high point of confidence in the positive qualities in herbicides.

59. Environmental monitoring to ensure that residues from herbicides did not enter downstream waterways was either ineffectual or non-existent. No evidence has been found, that the Crown or its delegates were in dialogue with Hokianga and Whangaroa Māori, or aware of what was happening to their waters and the biota contained within them.

60. National Water and Soil Conservation Organisation, in 1976, and the Northland Catchment Commission, in 1983, have prepared guidelines for those planning and monitoring forest operations (Table 2). These guidelines address issues which are of high priority in the Hokianga and Whangaroa contexts, and are the sort of issues which prompted the protests described above.

**Table 2. Examples of guidelines for planning and monitoring forest operations**

**Earthworks**

Roads should be located to minimise the risk of debris and spoil entering watercourses . . . Earthworks should be avoided on unstable slopes where climatic or soil moisture conditions would aggravate soil erosion and sediment transport (guidelines 1.1.1 and 1.1.5).

**Protection Areas**

Protection areas are desirable along watercourses where onsite and offsite effects of forest removal would be detrimental . . . The aim should be to manage, plant, or maintain vegetation adjacent to watercourses, and to mitigate soil erosion (guidelines 2.2.1 and 2.2.2)

**Establishment and Tending**

All precautions ... should be taken to ensure that there is no contamination of watercourses with chemicals, debris, or detritus and that soil loss is kept to a minimum (guideline 2.3)

**Management after extraction:**

Slash should not be placed in such a position where it, or its residue can enter a watercourse . . . At no time should rubbish or unwanted material . . . be put in a position where it may enter a watercourse, eg used oil filters, wire ropes, drums, waste oil (guidelines 3.5 and 3.6).

61. The Crown, through the National Water and Soil Conservation Organisation and the Northland Catchment Commission, is to be commended for its role in the preparation of these guidelines. They are soundly based and comprehensive, and were prepared as part of a consultation process. There are two important limitations. Firstly, this consultation process did not include Whangaroa and Hokianga Māori. Secondly, no monitoring processes were put in place by any of the Crown agencies to ensure that good practices were followed, and that the waters downstream from production forests were protected.

62. The Crown has encouraged production forestry in Northland. Government policy makers, from the 1970s onwards, supported private afforestation by fiscal incentives and

technical advice. Large forests have transformed the Northland landscapes, provided jobs where there were all too few jobs, and boosted its local economies. But there are environmental costs parallel to those of grassland farming. Fertilizers and pesticides boost production and reduce labour requirements, but the run-off is a threat to downstream environments. And forest technologies and equipment, developed in areas with gentler topography, are destructive when applied to steep and unstable hill country.

## **8. CONCLUSION**

63. This report, and the larger body of Claimant evidence pointed to in Section 2 are complementary. The focus here is on what the Crown knew about the likely impacts of deforestation, and how it used this knowledge.

64. Three strands of evidence are joined together: the historical evidence of forest destruction between the 1870s and the 1970s; the Claimant and academic evidence of farming and forestry practices in the 1970s and 1980s; and the visual evidence of erosion, debris accumulation, and stream damage. Combining these strands, it is clear that the waters of the Hokianga and the Whangaroa have been exposed to sedimentation from deforestation, run-off from the fertilizers applied to farms from the 1950s and forests from the 1970s, and residues from agricultural and forest chemicals from the 1970s and 1980s.

65. What the Crown knew is repeated in table 3 (items 1 to 7 from 1874, and item 8 from 1938-1939). There is a striking commonality between: the knowledge base laid out by Julius Vogel in Parliament and in parliamentary papers in July 1874; the insights and evidence provided by Norman Taylor in 1938; and the findings of the Parliamentary Committee in 1939.

**Table 3. What the Crown knew about deforestation and erosion**

1. The Crown knew that the removal of forests would accelerate soil erosion, and the debris that resulted would find its way into streams and rivers.
2. The Crown knew that the removal of forests would increase run-off, and produce flooding
3. The Crown knew that the flows of streams and rivers would be less constant and that some springs would fail if forests were removed.
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6. The Crown knew that lands were best protected if the headwaters of rivers were retained in forest. 'Guardian forests' included 'the sides, the crowns, as well as the steep declivities of mountains.'
7. The Crown knew that riparian strips were especially important for the protection of streams, rivers, and lakes.
8. The Crown knew that hill country and gumland soils, are complex and vulnerable to erosion. Not all land uses are appropriate for all soils. Some are unsuitable for agriculture, some are unsuitable for agriculture or forestry, some are best retained for water and soil conservation, scenery preservation, and outdoor recreation.

66. Vogel, in 1874, told Parliament what would happen. Taylor, sixty-four years later, told his readership what had happened in the heavier rainfall districts of New Zealand. And the Committee on Vegetative Cover reached similar conclusions.

**Insert: a challenge and a response.**

67. This report was submitted in draft in February. When Whangaroa claimants responded, they raised the bar. ‘We need to know, and the Tribunal needs to be told’, they said. ‘what you have found from your research. Where has the Crown fallen short?’

68. The challenge is accepted. There has been loss of ngahere and damage to awa.

69. The Claimants have pointed, very firmly, to the loss of manu and rongoa, not just in historic times, but also during their lifetime experience. The Crown was remiss: it failed to recognise the needs of Hokianga and Whangaroa hapū by preserving sufficient areas of forest to provide habitats, food, and protection for manu.

70. The Crown, informed by Julius Vogel, was aware of the need to preserve forests in the headwaters of streams and rivers, and to retain riparian strips alongside streams, rivers, and lakes. Outside of the forest reserves, it failed to do this.

71. The loss of kai awa from deforestation, pastoral farming, and exotic forestry, has received less attention in other inquiries, and is a main focus in this report. These are the conclusions:

- The waters of the Hokianga and Whangaroa catchments have deteriorated during the Crown’s watch: from the 1870s onwards when the Crown encouraged the conversion of forests to grassland: and in the 1970s and 1980s when Crown policies sponsored pastoral farming and exotic forestry.
- The Crown, from 1874 onwards, had a substantial knowledge bank about the impacts of deforestation, and the ways in which soils and waters could be protected. It chose to sponsor the removal of forest without putting in place the protections.
- The Crown, between the 1930s and the 1970s, gained an increasingly detailed local knowledge. The Crown knew, by the 1970s, that there were gumland and steepland environments in the Whangaroa and Hokianga catchments that were

complex, vulnerable to erosion, and unsuitable for farming and/or production forestry.

- The Crown, through its delegated agents, had the capacity to prepare catchment plans and to monitor the impacts of pastoral farming and exotic forestry on the waters of the Hokianga and Whangaroa catchments but failed to do so. The capacity was there, through the system of catchment commissions, but the Crown neither provided the resources nor required its agents to monitor or protect the waters in these northern catchments.
- The Crown was aware, by the 1980s, of the damage which could be caused by inadequate management of exotic forests. It engaged with the forest industry, and other parties, to prepare guidelines for forest management in Northland, but failed to include Hokianga and Whangaroa hapū in the consultative process. Protests were made, and protesters removed, but the Crown took no action to consult or to address the reasons for the protest.
- The Crown has not ensured that Hokianga and Whangaroa Hapū are able to engage with forest owners, forest managers, and government agencies charged with the protection of the Hokianga and Whangaroa environments. The kaitiaki role of hapū has not been recognised, and the Crown has not acted as a responsible partner.

### **Knowledge and policies**

72. What the Crown knew about forests, and what its agents and policy makers permitted and encouraged, were in two different compartments. Knowledge and policy were largely disconnected. This was evident during the first phase of forest destruction between the 1870s and the 1910s, and especially problematic in the 1970s and 1980s.

73. Production forestry in the Hokianga and Whangaroa catchments is a parallel story. Exotic forestry, as currently practiced, can cause environmental damage. In the Whangaroa and Hokianga context there is damage, and the Crown has failed to monitor the nature and extent of the damage.

### **Towards a better future**

74. This report has been explicit about the losses suffered by five generations of Hokianga and Whangaroa hapū between the 1870s and the 1980s. But the report also provides material which can be used for looking forward. Conceptual insights and empirical knowledge are interwoven. Rangatiratanga is fundamental. Claimant after claimant has underlined the resilience of kaitiakitanga.

75. The evidence reported here shows that the Crown and the Claimants each have substantial bodies of knowledge and working experience about the care and protection of the Hokianga and Whangaroa environments. The promise of this Inquiry and the Treaty Settlement process is that the two bodies of knowledge and experience can be brought together to the advantage of both. All people in the far North, Pakeha and Māori, and Te Tai Tokerau environment will benefit.

Kia ora tatou.