

**IN THE HIGH COURT OF NEW ZEALAND
AUCKLAND REGISTRY**

CIV-2010-404-005092

UNDER the Judicature Amendment Act 1972 and Part 30
of the High Court Rules

BETWEEN **NEW ZEALAND CLIMATE SCIENCE EDUCATION
TRUST** a trust registered under the Charitable
Trusts Act 1957, having its registered office at
Auckland

Plaintiff

AND **NATIONAL INSTITUTE OF WATER AND
ATMOSPHERIC RESEARCH LIMITED** a company
that is wholly owned by the Crown and a Crown
Research Institute, having its principal place of
business at Auckland

Defendant

SECOND AMENDED STATEMENT OF CLAIM

APPLICATION FOR JUDICIAL REVIEW

16 July 2012

Next event: Fixture before Venning J 16 July 2012 at 10 am

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SECOND AMENDED STATEMENT OF CLAIM

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THE PLAINTIFF by its solicitor says:

Parties

1. The Plaintiff is a trust duly registered under the Charitable Trusts Act 1957, whose objectives include the promotion of accurate information regarding the science and policy of climate change within New Zealand.
2. The Defendant (**NIWA**) is a company that is wholly owned by the Crown. It is a Crown Research Institute that is subject to the Crown Research Institutes Act 1992, the Crown Entities Act 2004 and the Public Records Act 2005.
3. NIWA was established for the purpose of undertaking research in the environmental sciences for the benefit of New Zealand and is the Crown's principal advisor on scientific issues related to climate change.
4. Pursuant to the Crown Research Institutes Act 1992 NIWA is obliged to:
 - undertake research for the benefit of New Zealand;
 - pursue excellence;
 - comply with applicable ethical standards;
 - act in a manner consistent with a spirit of service to the public; and
5. When carrying out research for the benefit of New Zealand NIWA is required, by necessary implication, to follow relevant established scientific opinions and methods described in internationally recognised research journals (**recognised scientific opinion**).
6. Since 1992 NIWA has maintained the National Climate Database, a scientific database of weather records, dating back to 1853, taken

from several hundred weather stations located around New Zealand (283 of which remain in use today). Before 1992 the National Climate Database was maintained by New Zealand's Meteorological Service.

Seven-station Temperature Series

7. In or about 1999 NIWA published a statistical time series of the nationally-averaged annual mean surface temperature trends experienced in New Zealand since 1853, which it calls the Seven-station Temperature Series (the **7SS**).
8. The 7SS is used by the New Zealand government as the record of the historical temperature trends in New Zealand.
9. The 7SS has important public consequences. It provides the historical base for government policy and judicial decisions relating to climate change within New Zealand, and contributes to the rationale for such policy and decisions.
10. Between 1999 and 2010 the 7SS comprised a spreadsheet showing adjusted temperatures recorded at seven selected weather stations (Auckland, Masterton, Wellington, Nelson, Hokitika, Lincoln and Dunedin, said to be representative of New Zealand), together with a graph showing movements in the average temperature from 1853 onwards.
11. The 7SS temperature data is sourced from the National Climate Database, but is subject to a number of adjustments taken from a student thesis (the **Thesis**) submitted in 1981 by Dr James Salinger, a former NIWA employee.
12. According to the 7SS New Zealand has experienced a warming trend of approximately 1.0°C during the twentieth century.
13. The techniques used by Dr Salinger to make most of the adjustments (the **Adjustments**) are known as neighbour station comparisons.
14. As from 1993 the recognised scientific opinion about neighbour station comparison techniques for New Zealand was and remains

Rhoades & Salinger (1993) (RS93). The RS93 techniques differ materially from the Thesis techniques.

15. NIWA made the decision to publish the 7SS and to adopt the Adjustments (the **1999 decision**) despite the fact that the RS93 techniques had not been used to produce them.

Breach of statutory duty

16. NIWA thereby breached its statutory obligations including its obligation to pursue excellence.

Failing to consider mandatory relevant consideration

17. NIWA did not consider whether the techniques used to produce the Adjustments were consistent with recognised scientific opinion and thereby failed to consider an impliedly mandatory relevant consideration.

Mistakes of fact

18. The 1999 decision was made in the mistaken belief that:
 - the techniques used to make the Adjustments were consistent with recognised scientific opinion; and
 - a systematic migration of weather stations from warmer sites to cooler ones in the early years is the reason why:
 - (a) nine out of 10 of the Adjustments favour an upwards trend in the series; and
 - (b) the 7SS warming trend is inconsistent with the nationally averaged temperature series of 1867 and 1920 which showed that the temperatures recorded then were just as high as current temperatures.

Unreasonableness

19. The 1999 decision was unreasonable because it was based on the mistakes set out in the preceding paragraph and there was no evidence to support the belief.

WHEREFORE the plaintiff seeks:

- A. A declaration that the Adjustments used in the seven station series temperature record were not lawfully made (actual wording to reflect the Court's findings).
- B. An order quashing the 1999 decision
- C. Such further order as may be just.
- D. Costs.

NIWA's adoption of the 11SS

- 20. The plaintiff repeats the allegations contained in paragraphs 1-19.
- 21. In December 2009, following criticism of the 7SS by the New Zealand Climate Science Coalition (NZCSC) NIWA published the Eleven-station Temperature Series (the **11SS**). The 11SS comprises a spreadsheet and graph showing unadjusted temperatures recorded at eleven selected weather stations during the period 1955-94, a diverse number of stations during the period 1931-54, and 10 stations after 1994.
- 22. NIWA developed the 11SS for the sole purpose of corroborating the 7SS so as to meet the NZCSC's criticisms.
- 23. The initial selections of the stations and period were made by Dr Jim Salinger, a former employee of NIWA,
- 24. On or about 29 November 2010 Dr Salinger advised Dr James Renwick, NIWA's principal scientist, that the 11 "pristine" stations produced a warming trend of 1.0 C from 1931 to 2008.
- 25. When the data was checked for accuracy NIWA's records revealed that:
 - (a) the series did not extend over the period claimed by Dr Salinger. The 11 stations were in existence for a continuous period only from 1955 to 1994;
 - (b) several of the stations experienced site changes requiring adjustments which had not been made;

- (c) gaps in the record, caused by missing data, exceeded the World Meteorological Organisation standards;
- (d) data from the 1955 to 1994 period showed a warming trend of only 0.28 C;
- (e) whereas data from 1931 (one of the coldest years on record) to 1954 (the early period), during which there were as few as 3 or 4 stations, showed a warming trend of 1.84 C; and
- (f) the combined trend of 1.24 C was 25% higher than the 7SS.

Unreasonableness

- 26. Despite the obvious deficiencies in the data and the unusually large trend produced by incorporating data from the early period into the series NIWA unreasonably decided that the 11SS contained reliable evidence of average temperature trends in New Zealand during the period 1931 to 2008 and decided to publish the 11SS on its website as part of the New Zealand temperature record (the **2009 decision**),
- 27. NIWA has continued to use the 11SS as reliable evidence of the New Zealand temperature trend to this day.

Mistakes of fact

- 28. Alternatively the 2009 decision was made in the mistaken belief that the 11SS contained reliable evidence of average temperature trends in New Zealand during the period 1931 to 2008 when, for the reasons set out in the preceding paragraphs, the evidence on which the 11SS is based was incomplete and unreliable.

WHEREFORE the plaintiff seeks:

- A. A declaration that the Eleven station temperature series was not lawfully compiled (actual wording to reflect the Court's findings).
- B. An order quashing the 2009 decision
- C. Such further order as may be just.
- D. Costs.

NIWA's adoption of the NZT7 following its 2010 review

29. The plaintiff repeats the allegations contained in paragraphs 1-30.
30. On or about 16 December 2010 NIWA published a review of the 7SS covering the period from 1909 to 2008 which it calls the NZT7.

Departures from recognised scientific opinion

31. In performing the review NIWA:
- (a) chose not to use the RS93 methodology;
 - (b) did not follow any other recognised scientific opinion;
 - (c) used isolated stations for comparisons, contrary to recognised scientific opinion that comparison stations should be "neighbours" which experience similar local weather conditions;
 - (d) used data which is, or might be, contaminated by shelter contrary to the methods described in RS93 and Hessel (1980), both being peer reviewed papers published in internationally recognised scientific journals.
32. The contaminated data affected Auckland, Wellington, Lincoln and Nelson. NIWA accepted that contamination had probably occurred at Auckland and Lincoln, but declined to exclude those stations from the 7SS.

Breach of statutory duty

33. By departing from recognised scientific opinion as set out above, without justification or explanation, NIWA breached its statutory obligations including its obligation to pursue excellence.

Failing to consider mandatory relevant considerations

34. In departing from recognised scientific opinion as set out above NIWA failed to consider an impliedly mandatory relevant consideration.

Mistake of fact

35. In departing from recognised scientific opinion in the manner set out above NIWA made a material mistake of fact.
36. Alternatively NIWA's decision to publish the NZT7 was based on the mistaken belief that it had been compiled using internationally recognised scientific methodology.

Unreasonableness

37. In publishing the NZT7 without following recognised scientific opinion and without an independent peer review NIWA acted unreasonably.

WHEREFORE the plaintiff seeks:

- A. A declaration that the NZT7 series was compiled unlawfully (actual wording to reflect the Court's findings);
- B. An order quashing the NZT7 decision
- C. Such further order as may be just.
- D. Costs of and incidental to this proceeding.