



Briefing Note: *He Whakaaro | Education Insights* paper, “How environmentally aware are New Zealand students?”

To:	Hon. Chris Hipkins, Minister of Education		
Date:	5 March 2019	Priority:	Medium
Security Level:	In Confidence	METIS No:	1175898
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Messaging seen by Communications team:	Yes	Round Robin:	No

Purpose of Report

The purpose of this paper is for you to:

- Note** that the latest *He Whakaaro/Education Insights* paper examines the awareness of a range of environmental issues among New Zealand English-medium secondary students and how it has changed in the last decade, using data from the Programme for International Student Assessment (PISA).
- Note** that the insights paper finds that New Zealand students have a lower-than-expected awareness of environmental issues, and their awareness has fallen over the past decade.
- Note** that the Ministry plans to publish the attached *He Whakaaro | Education Insights* paper on Education Counts on 8 March 2019, and will liaise with your office on the timing and communications.
- Agree** that this Briefing will be proactively released.

Agree / Disagree

Summary

- The latest *He Whakaaro – Education Insights* paper examines the awareness of a range of environmental issues among New Zealand English-medium secondary students and how it has changed in the last decade, using data from the Programme for International Student Assessment (PISA).

- Key findings are that:
 - New Zealand 15-year-olds report low awareness of key environmental issues compared to most other countries and compared to their average science literacy level.
 - Their environmental awareness fell between 2006 and 2015, a fall which can be explained by a fall in scientific literacy over this period.
 - New Zealand students are pessimistic about these issues improving 'in the next 20 years', which in most other countries is associated with higher student environmental awareness.
- While the results were perhaps unexpected, given the strong theme of sustainability in the New Zealand Curriculum, the report provides useful insights for policy and practice into student awareness of environmental issues, students' sources of information on environmental issues and the strength of association with scientific literacy and science teaching practices.
- Communications messages and questions and answers are attached and they include messages about the initiatives that the Ministry has underway around curriculum support and development on the topic. We will liaise with your office on the communications and any further material required.



Dr Craig Jones
Deputy Secretary
Evidence, Data & Knowledge

4/3/19



Hon Chris Hipkins
Minister of Education

6/3/19

Background

1. The *He Whakaaro/Education Insights* series on the Education Counts website aims to provide relevant and insightful evidence and to provoke further thought and discussion on key education issues. The series is for policy analysts, people working in the programme and intervention area, educators interested in knowing more about education evidence and data, as well as the general public.
2. In the most recent (2015) cycle of the OECD¹'s Programme for International Student Assessment (PISA) research programme, a large representative sample of 15-year-old students in New Zealand were asked how well they would be able to explain certain key environmental issues and whether they felt each issue would get better, get worse or stay about the same in the next 20 years. This was used to gauge students' environmental awareness and optimism. Many of the same questions had also been asked in the 2006 cycle of PISA.
3. To date, PISA in New Zealand is offered in New Zealand English, so schools and students at Levels 1 and 2 Māori immersion (50% or more of instruction in te reo) are not selected.

Key findings

4. The key findings of this insights paper are:
 - a. New Zealand 15-year-old students report low awareness of key environmental issues compared to most other countries and compared to their average science literacy level.
 - b. Their environmental awareness fell between 2006 and 2015, a fall which can be entirely explained by a fall in scientific literacy over this period.
 - c. As well as being related to scientific literacy, environmental awareness is related to students' socioeconomic status and teachers' instructional practices.
 - d. New Zealand students also have low optimism about these issues improving 'in the next 20 years'. Students with higher science literacy tend to have lower optimism about these issues.
 - e. New Zealand is one of only 10 countries (of 72 in PISA 2015) to have below-average environmental awareness and below-average optimism.
 - f. Based on 2006 data, schools are a main source of New Zealand students' awareness of these issues, especially science and geography courses. Media is also a main source of awareness, though significantly less than on average across OECD countries.
5. Based on a review of the literature on improving students' environmental awareness while also raising their optimism that positive change is possible, the paper finishes by recommending a participatory and action-oriented element to environmental education, towards changing habitual behaviours and seeking to empower students.

¹ The Organisation for Economic Cooperation and Development.

Communications Approach

6. Communications messages together with Questions and Answers are attached in Annex 2. We will work with your office on the communications.
7. The messages outline the range of initiatives that the Ministry has underway around curriculum support and development on the topic, viz:
 - a. We are working with schools on a range of curriculum-based initiatives that will boost learning in all areas, including science, environmental awareness and the principles of sustainability. For example, we are currently developing a curriculum resource for schools and teachers to help them integrate the themes of global citizenship and sustainability within their local curriculum. This resource will be ready for Term 2 2019.
 - b. As cited in the paper, there is a strong link between environment awareness and student performance in science. To further support teaching and learning in science, we are developing a resource that clarifies how students progress in their learning between science curriculum levels 2 and 4. This resource is designed to support schools to strengthen their science curriculum at these curriculum levels. This is important as the NMSSA science study shows many students are not making sufficient progress in science between years 4 and 8.
 - c. More broadly, the curriculum, achievement and progress review and review of NCEA changes are looking at how to improve achievement rates across all subjects. This includes working closely with the sector to clarify and better understand how students progress in their learning across curriculum areas, so that schools better support our learners to experience the critical learning they need for success in school, work and life. This is important work for us to achieve an education system where every student and ākonga experiences rich opportunities to learn and make progress across the breadth of the curriculum.
 - d. We have published advice, arranged workshops and are offering extra time for teachers to develop local curriculum, including science topics, available on Te Kete Ipurangi.

Proactive Release

8. We recommend that this Briefing is proactively released following the release of the *He Whakaaro/Education Insights* paper. Any information which may need to be withheld will be done so in line with the provisions of the Official Information Act 1982.

Annexes

- Annex 1: He Whakaaro: *How environmentally aware are New Zealand students?*
- Annex 2: Communications – Top line messages and Questions & Answers

Annex one: He Whakaaro | Education Insights: *How environmentally aware are New Zealand students?*

Annex 1 is available on Education Counts:

<https://www.educationcounts.govt.nz/publications/series/he-whakaaro/he-whakaaro-how-environmentally-aware-are-new-zealand-students>

Proactively Released