

## EXECUTIVE SUMMARY

This report summarises the findings from the *Environmental Education in New Zealand Schools* research project, undertaken for the Ministry of Education by the New Zealand Council for Educational Research and the University of Waikato between June 2002 and June 2003.

The purposes of the research were to analyse environmental education practice in New Zealand schools to identify strengths and opportunities for future school practice, and to provide direction for the Ministry of Education and Government with respect to future initiatives in the planning, implementation and evaluation of environmental education in New Zealand schools. The research included three components: a literature review, a critical stocktake (survey) of nearly 200 schools involved in environmental education, and case studies of environmental education practices in eight schools and kura kaupapa Māori.

The research findings are reported in four volumes. This report (Volume 1) describes the overall research project, summarises the findings from each of the research components, and responds to the research questions. Volume 1 also highlights implications of the research for future policy, resourcing, practice, and research in environmental education in New Zealand schools. Volume 2 is the full report from the literature review, Volume 3 is the full report from the critical stocktake, and Volume 4 is the full report from the eight case studies.

### LITERATURE REVIEW

The literature review explores the origins and development of environmental education during the last thirty years. The literature review describes how environmental education is related to a series of international summits and declarations about the environment and environmental issues. It also describes some of the challenges that environmental education raises for conventional practices in curriculum and pedagogy, and the problems and barriers that have hindered the integration of environmental into the formal education sector in many countries. Contemporary literature on environmental education emphasises concepts such as: education “in, about, and for” the environment”; student empowerment, responsibility, and decision-making; “action competence”; the recognition of environmental problems as society- and community-based problems; and a growing acceptance of pluralistic viewpoints about the environment.

There was little existing literature on environmental education practice in New Zealand, although some general characteristics of environmental education policy and practice in New Zealand were evident from the existing literature. These include:

- an emphasis on creating and exploiting links between programmes in schools, and extra-school agencies (e.g. regional authorities, conservation and environment societies, and other interest groups);
- the endorsement of “whole-school” approaches to environmental education;
- the advocated inclusion of Māori knowledge and values in environmental education;
- a tradition of education “in” the natural (and local) environment- e.g. through school camps, biology field trips, and learning experiences outside the classroom;
- the frequent selection of certain areas of content “about” the environment in school environmental education programmes (for example, biodiversity, local flora/fauna, nature conservation, water, air, waste and recycling, tree-planting and bush studies, and various aspects of gardening); and

- a central focus on the relationship between environmental education development, and the content of curriculum statements in the seven learning areas of the curriculum framework.

The literature review highlights some examples of international practice(s) in environmental education. Much of this literature stems from two major cross-national networks of activity involving environmental education in schools: the Environment and Schools Initiative (ENSI), and the Asia-Pacific environmental education networks. Both the ENSI and Asia-Pacific networks have generated a large amount of literature about environmental education policy, curriculum, and practice in a range of European and Asia-Pacific countries. The ENSI and Asia-Pacific networks suggested that the development of environmental education in schools is a demanding process that requires complex strategies for change. Strategies that these networks used to support the development of environmental education in schools included: international co-operation and sharing of ideas and strategies; a priority on linking environmental education resource development with teacher professional development; a transition of focus from individual school-based initiatives, towards more centralised support for environmental education; and a culture of action-research. These strategies appear to support environmental education development through an emphasis on supporting practitioners' learning and professionalism, engaging practitioners in dialogue about the goals, aims, and purposes of environmental education, and by embedding continuous research and evaluation as a central facet of environmental education development.

Finally, the literature review gives examples of environmental education policy, practice(s) and research from six countries: Austria, the Netherlands, Norway, Australia, England, and the United States. The role of central agencies in these countries and states typically appears to evolve through a series of phases. First, there is a "mandating" stage, in which a decision is made about the policy and curriculum status of environmental education. Second, there is a "resource development, programmes and initiatives" stage, where central and regional agencies, NGOs, and other stakeholders in environmental education develop a wide array of teaching resources, services, and programmes intended to support the teaching of environmental education in schools. Finally, some countries move into a third stage, where the emphasis is on coordination of existing resources, programmes, and services, and on enhancing the quality of support for schools to make good use of these.

## THE CRITICAL STOCKTAKE

The critical stocktake reports on the characteristics of 367 teachers at 193 New Zealand schools who are involved in environmental education in some way. The stocktake found that most teachers had been teaching environmental education for five years or less, although some said they had been teaching environmental education for as long as they had been teachers.

The stocktake found a great deal of enthusiasm about environmental education. The focus of teachers' environmental education programmes tended to be education "about" the environment, with attention to encouraging students' care and respect for the environment. Although many respondents described actions their students had taken "for" the environment, there was less evidence that student decision-making was a central facet of these actions. Many teachers indicated that they integrated environmental education into other curriculum areas, most often science, social studies, and technology. There was general support for a whole-school approach to environmental education, although only some respondents appeared to be engaged in whole-school environmental education projects and activities.

Environmental education topics and activities tended to cluster around activities in and around the school environment. Popular topics were waste management and minimisation, water studies, planting and gardening, resource management, and native flora and fauna. Environmental education was said to have a positive impact not only on student knowledge and attitudes but also their motivations for learning. It was also said to contribute to a better school and/or community environment, and to positive relationships between the school and the community.

Overall, only half the survey respondents were familiar with the *Guidelines for environmental education in New Zealand schools*. However, seventy-five percent of environmental education leaders and/or coordinators were familiar with the document.

The main restrictions on teachers' environmental education teaching were time and resources to plan for action and to take action as part of their environmental education programmes. Some teachers also felt that the ambiguous nature of environmental education in the New Zealand Curriculum Framework created tensions for including it in their school or classroom teaching programmes

## THE CASE STUDIES

The case studies found a range of examples of environmental education practice in a diverse group of school contexts. The case studies included two primary schools, two area schools, one intermediate, two secondary schools, and a kura kaupapa Māori. The schools were each at different stages in their journey towards becoming an "environmental education school", and the success and visibility of environmental education differed across the schools. However, some common themes and issues were found across the eight case study schools.

Common factors leading to the schools' involvement in environmental education included: having one or more staff member with a personal passion for environmental education; the school's involvement in formalised environmental education programmes (such as the Ministry of Education environmental education professional development programme); and a desire to use or protect the school's local environment as part of the school's teaching and learning.

Vision, leadership, and recent school changes were evident in a number of the case study schools. The schools' values, culture, and philosophy were often consistent with the goals and aims of environmental education espoused in the international literature and the *Guidelines*. In many schools, "values" were an explicit feature of the school's language and culture. Typically this involved "valuing and respecting yourself, valuing and respecting others, and valuing and respecting the environment". Māori knowledge and values had an intentional and visible role in the kura kaupapa Māori and four of the seven mainstream schools. The schools also tended to have proactive approaches to staff professional development, and encouraged student leadership and responsibility.

Environmental education practice in the case study schools typically began with activities in or near the school environment. Environmental education sometimes began to "snowball" across the school. In several cases, case study schools were committed to large-scale environmental action projects. Most of the case study schools were moving towards formalising their commitment to environmental education through its inclusion in school policy and planning documents.

Challenges and issues arising for the case study schools included:

- dependence on key people to provide energy and expertise in environmental education;
- the amount of time and energy required to sustain environmental education projects;
- getting other staff and/or Board of Trustees “on board” with environmental education;
- having sufficient resources/units/ideas for environmental education teaching and learning;

and

- ensuring the sustainability of environmental education by developing school structures and policies to support it, planning for “sustainable” environmental education teaching or projects that can be sustained for successive cohorts of students; and
- having time to establish and maintain links with the community and environmental agencies.

## CONCLUSIONS AND IMPLICATIONS

In the last section of Volume 1, we highlight implications of the research findings for future policy, resourcing, practice, and research in environmental education in New Zealand schools. Environmental education in New Zealand schools would appear to benefit from further strategies to support communication and dissemination of information about environmental education, including information about the *Guidelines*, and strategies to support networking and sharing of ideas and information about “effective” environmental education practice. Other areas for further consideration are: building on the initial professional development support some schools have received in environmental education; further consideration of the role of curriculum integration with respect to environmental education; identification of specific areas where schools need resourcing for environmental education; coordination in the development and delivery of programmes and resources to support environmental education in schools; and consideration of the visibility and status of environmental education.