



Response to the draft New Zealand Curriculum

Department of Conservation
November 2006

Joint submission prepared by Pam Crisp, Environmental Education Coordinator, Department of Conservation with input from Department of Conservation staff including Annette Hamblett, Public Awareness Supervisor, Canterbury; Bernie Napp, senior issues advisor, Head Office; Keith Beutrais, Programme Manager Community Relations, Wanganui; Chris Day, LEOTC contractor, Mt Bruce National Wildlife Centre

Background and Introduction

The Department of Conservation is the manager of public conservation lands, which include over one third of the land mass of New Zealand. It has responsibilities for species management, many aquatic environments and historic places. It is a significant employer in its own right.

The department's overarching purpose is to increase the value of conservation to New Zealanders and, as part of this, to entrench conservation as an essential part of the sustainable social and economic future of New Zealand. (Department of Conservation Strategic Direction, 2006).

Reports such as the United Nations Millennium Ecosystem Assessment- *Living Beyond Our Means: Natural Assets and Human Well-being* (UNEP, March 2005) and our own Parliamentary Commissioner for the Environment's *Creating our Future: Sustainable Development for New Zealand* (PCE, 2002) make clear that nature provides services, including clean air and water that are required to maintain our quality of living. The extent to which those services can continue to be provided will be limited by the quality of management of our ecosystems.

In this sense the department has to sustain much of the environment that sustains us, but this is only possible with the co-operation and active participation of the general public. Conservation, which has long been seen as a public good, is increasingly recognised as a necessity for our future and the task is too large for the department's workforce alone. It is therefore critical that our education system instils the attitudes, skills, behaviours and understanding necessary for active participation in conservation.

The curriculum being finalised today should serve our schools for decades to come and thus provide the basis for citizenship during much of the 21st century. It should therefore take account of realistic predictions of future trends. Those predictions for the state of our environment, in documents already mentioned and many other authoritative sources are clear that future citizens will face critical environmental challenges.

We believe that a future-focussed education system would therefore make active learning and participation in environmental contexts a core function.

As conservation/environmental education is not included as a learning area in the draft curriculum the department position is that there must be a much stronger message in the final gazetted curriculum – that conservation/environmental education is a pillar of citizenship in the 21st century and therefore the everyday business of every school. Any possibility of conservation/environmental education being perceived as a marginal concern is not compatible with the evidence available about the state of our environment and projections for the future.

DOC's role in education

The department's revised strategic direction (2006) recognises the conservation of indigenous species ecosystems and ecological processes as vital to NZ's economic sustainability. Young people are a significant emerging audience for the department.

DOC's focus for education is conservation education, or environmental education with a conservation focus. DOC works with a range of organisations to provide a conservation dimension to support school teaching and learning programmes. DOC works with:

- Tangata whenua (via DOC's Pou Kura Taiao network)
- Ministry of Education (as an LEOTC provider and a member of the education for sustainability reference group, interministerial working group on education for sustainability, and EOTC reference group)
- MFE (joint representation on the above groups, and national programme support – e.g. youth forums)
- Enviroschools (national partnership)
- Royal Society (host organisation for RSNZ teacher fellows; member of EMAP reference group)

- Business partners including the Untouched World Foundation, Bank of New Zealand Save the Kiwi Trust, Comalco (Kakapo Recovery Programme), YHA New Zealand (Young Conservationist Awards), and local businesses
- NZAEE (representation on national exec & branches)
- Community organisations & NGOs
- IT providers – e.g. Heurisko (LEARNZ)
- Regional and city councils
- Outdoor education providers and concessionaires

It is vital that the kinds of opportunities DOC and other organisations and groups with a role in environmental education can provide are supported by a curriculum which has a clear emphasis on environmental and ecological literacy, to complement related competencies such as innovation, creativity, technological literacy and economic sustainability.

Relevance of the curriculum to DOC's work

DOC's education programmes, resources and partnerships reflect the aims of the Guidelines for Environmental Education in New Zealand Schools (Ministry of Education, 1999) and relevant curriculum strand learning objectives. The curriculum helps DOC focus its resources to meet teachers' and students' needs, and facilitates meaningful contact with schools.

The curriculum influences the career choices available to students. Relevant tertiary courses, and vocational programmes such as the Nelson Polytechnic conservation trainee ranger programme, NZ Conservation Corps and Gateway can lead to careers in the conservation and the sustainability sectors. The ability of students to access such opportunities is directly influenced by their prior learning, reinforcing the need for learning pathways based around sustaining and interacting with the environment and conservation at all levels of the curriculum and beyond.

Conservation as a core component of sustainability

Recent research by DOC ("The Value of Conservation, October 2006) has begun to quantify the contribution conservation makes to the economy- both to regional wealth and employment and through ecosystem services or natural processes such as fresh water filtration and allocation, soil maintenance, erosion and flood control and maintaining fish stocks. Destroying the ability of natural ecosystems to provide these services will have major consequences for our environment, economy and people. At the same time, the complex interactions

between natural systems and processes and human activity offer exciting learning opportunities across all strands of the curriculum.

The Prime Minister's keynote address to the Labour Party Conference (28 October 2006) emphasises the primacy for New Zealand of sustaining environment, and the need for this to be reflected across Government policy. It is important that there is clear alignment of the curriculum (the national policy on education) with Government policy on sustainability (including climate change, biodiversity, biosecurity, maintaining essential ecological services and processes) and related policy areas.

"The 21st century challenges we face don't only lie in economic and social policy. There is also the great environmental challenge of the unsustainable way of life of developed nations like ours..... I believe that sustainability will be a core value in 21st century social democracy. I want New Zealand to be in the vanguard of making it happen – for our own sakes, and for the sake of our planet. I want sustainability to be central to New Zealand's unique national identity."

The reworking of the national curriculum is a major opportunity for New Zealanders to come to grips with major environmental issues both at home in NZ and globally. The department urges the Ministry to provide a stronger direction for conservation and environmental education, as part of educating young people for a sustainable future.

There must be stronger alignment between the Government's sustainability goals and the context and content of the revised curriculum. Conservation education, as a core component of sustainability, should be part of every student's education.

RECOMMENDATIONS

1. CONTEXT

DOC is concerned at the overall lack of an environmental ethos in the new curriculum, the reduction in the essential learning areas of environmental content, including people's relationship with and impact on the environment, and the optional nature of sustainability (including conservation) as a learning theme. The following changes are recommended to redress these imbalances.

1. Foreword (page 3)

"...there is a developing awareness of what is uniquely Aotearoa..." **Add:**
"Because New Zealand was the last place on earth to be settled by humans,

much ancient flora and fauna has been retained where elsewhere it has disappeared.” Maori are clearly articulating...”

This is an important addition, as it is what essentially defines us as unique and different from the rest of the world. US ecologist and author Jared Diamond has described New Zealand as “the closest to studying life on another planet”.

2. A Vision (page 8)

Vision statement: Suggested addition to text:

Education has a vital role to play in helping our young people to reach their individual and social potentialit is by developing these competencies that they are equipped to participate fully in New Zealand society ***and contribute to the growth of its economy, and to the health and well being of people and the environment...etc.***

Diagram (Page 8):

“Connected”: Is there a need to promote connections between people and the environment as well, *why not?* or is the word “connected” being used here in a different way? How about something like: Able to relate to their to their natural and cultural environment?

3. Principles (page 9)

The "Principles" mention excellence, cultural heritage, equity etc. but ignore the environment.

The Treaty of Waitangi needs to be recognised as a founding document of New Zealand, and central to the relationship between peoples, and between people and the natural world.

Recommendations

Cultural Heritage:

All students experience a curriculum that reflects New Zealand’s bicultural heritage and its multicultural society. All students have the opportunity to experience a curriculum that reflects and values te Ao Maori and the Treaty of Waitangi.

Connections:

All students experience a curriculum that makes connections with their lives and engages the support of their families and communities, and helps them to understand the interdependence of people and the natural world”

Sustainability:

Add a sustainability principle: *All students experience a curriculum that will enable them to contribute to a sustainable future and appreciate the connections between the health of the environment, the economy and people.*

4. Values (page 10)

While DOC is pleased to see that the values include "care for the environment", which can be used to support conservation education, the wording needs to be changed to reflect an eco-centric, as opposed to a human-centred relationship to the environment. We care for the environment because we are connected to it and depend on it. If we fail to respect and care for the environment, society will suffer the consequences. This insight is missing.

Recommended wording:

Sustaining the environment: *"Sustain the environment (the Earth and its interrelated ecosystems) for the benefit of all living things."*

Through their learning experiences students will learn about: *"Different kinds of values, such as moral, social, cultural, aesthetic, economic and environmental"*

Through their learning experiences, students will develop their ability to: *"...make ethical decisions and act on them for the benefit of themselves, their community, and their natural world."*

5. Key competencies (Page 11)

Recommendation:

The Department supports the recommendation of WWF New Zealand (Response to the Draft New Zealand Curriculum, Barry W. (ed.) and Environmental Education and Education for Sustainability Leaders, p.15) that an additional key competency, "Living Sustainably" be added to the competencies, to enable students to creatively find solutions for a sustainable world. This competency must include understanding the contribution that healthy functioning ecosystems make to NZ's economy and society, and how to minimise human impacts on natural systems to sustain the lives of present and future generations.

6. Designing a School Curriculum (Page 26)

There is potential for DOC to partner with local schools in school-based curriculum design. However, the reduced emphasis on the environment and conservation overall in the current draft make it hard for DOC to identify where

the potential opportunities may lie, and where best to focus its limited resources. While DOC notes the inclusion of sustainability as a suggested 'significant theme' in the curriculum design process, it does not believe this will be enough to get schools to pick it up.

The department wants to see the recommendation in the *Curriculum Stocktake Report 2003*, that 'sustainability' be a theme against which the entire curriculum is assessed, incorporated into the new curriculum as a mandatory theme, integrated across the key competencies and learning areas. It would be helpful to provide a model for schools to follow and sustainability would be a good theme to use to demonstrate this cross-curricula integration. This would also enable the department to identify the best opportunities to support this learning.

The section titled "Planning for the development of the Key Competencies" (p. 29) indicates that "the key competencies provide a framework for designing learning environments and experiences. The learning areas are considered to provide "unlimited contexts" for developing learning experiences. This reinforces the importance of having adequate reference to environmental sustainability (with conservation as part of that) in the competencies and learning areas.

Recommendations

- Strengthen the environmental and conservation content of the learning areas
- Add a further competency, "Living Sustainably", to the key competencies
- That 'sustainability' be a theme against which the entire curriculum is assessed, incorporated into the new curriculum as a mandatory theme, integrated across the key competencies and learning areas.

DOC also supports the following recommendations made by WWF New Zealand (Response to the Draft New Zealand Curriculum, Barry W. (ed.) and Environmental Education and Education for Sustainability Leaders, pp 16-18):

- Shift the 'Designing a School Curriculum' section to sit before the Learning Areas.
- Develop Education for Sustainability Guidelines, to replace the now out of date Environmental Education Guidelines.

The Education for Sustainability Guidelines would support schools in using sustainability as a teaching and learning context, and help to reinforce the Govt's sustainability goals and DOC's strategic direction for conservation by encouraging recognition and understanding of the interrelationships between all parts of the environment, the economy and people.

2. CONTENT: LEARNING AREAS

The Department is concerned to see an overall reduction in the learning areas to environmental awareness and stewardship/kaitiakitanga.

Science

Five of the six strands of the science curriculum that require students to consider the impact of science on people and the environment have been dropped from the new draft. For example, Achievement Aim 4 of Making Sense of Planet Earth & Beyond, which requires that students should “develop a responsibility for the guardianship of planet Earth and its resources.”

Sustaining the environment is the critical challenge for the scientific community today. Our future scientists need to understand the global and national contexts they will be working in the future. This is too important to be left as a value and a theme in the new curriculum.

It is good to see the concepts of life processes, ecology and evolution included in the Living World Strand, but it is not until level 6: Ecology: “Investigate the impact of natural events and human actions on a New Zealand ecosystem” that students are asked to investigate the interrelationship between humans and natural systems.

This understanding needs to be introduced earlier in the curriculum to lay a foundation for ecological literacy. This would also allow organisations like DOC to support students' learning with targeted resources focused not just on biodiversity and natural ecology, but also on the interactions of people with the natural world.

Recommendation

- Include sustainability/guardianship in the science learning area.
- Reinstate Aim 4 of Making Sense of Planet Earth & Beyond: that students should “develop a responsibility for the guardianship of planet Earth and its resources”

- Ecology: level 6: “Investigate the impact of natural events and human actions on a New Zealand ecosystem” This investigation needs to be introduced earlier in this curriculum strand.

Technology

Strand C of the current technology curriculum also emphasises reflection on the way that technology impacts on people and the environment and this too has disappeared.

Recommendation

- Ensure that the new technology curriculum includes students coming to understand not just how technology impacts on people , but also on the environment

Social sciences

DOC is pleased to see the emphasis on social justice in the social studies curriculum but note the absence of specific mention of the state of the planet and the impact of human behaviour. The “place and environment” and “economic world” strands are noted.

Level 2: “The role of Maori as tangata whenua is significant for communities in New Zealand”

Comment: we are all immigrants to New Zealand - we all arrived on a waka of one kind or another, and we all have a sense of place here. This reality also needs to be reflected in this curriculum strand.

Level 5, The Economic World:

DOC is pleased to note the following student learning outcomes:

Students understand that...

“Economic decisions impact on people, communities and nations and the environment”.

“ The way people manage resources has impacts for environmental & social sustainability”:

Recommendation:

- Move away from simply talking about “resources” (a stock concept) and build in the idea of managing processes, e.g. ecosystem services (a flow concept)

Level 6, The Economic World:

- As a result of scarcity, consumers, producers and government make choices that affect NZ society, *and the environment*.
- The different sectors of the NZ economy are interdependent *and depend on the environment*

Level 8, The Economic World:

... Governments may need to intervene where markets fail to deliver efficient or equitable outcomes *for society and the environment*.

Health and Physical Education

This learning area is a high priority for DOC, in particular the healthy communities and environments strand.

As a general observation, student learning outcomes for this strand involve mainly cognitive skills such as exploring, investigation, describing, specifying, evaluating and analysing. Interestingly, action based competencies are largely woven into Level One (Take individual & collective action...) and Level Two ("Plan and implement a programme)..

Action based competencies and opportunities for experiential learning are important at all levels of the curriculum. Given the current emphasis in schools on student health, declining fitness levels and underachievement of students in outdoor skills, DOC would like to see a far greater emphasis on education outside the classroom- and on more broadly based learning outcomes designed to create a stronger sense amongst students of their connection and responsibilities towards themselves, each other, their communities and the environment.