

# Public Awareness and Environmental Education in New Zealand: A Brief Overview

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## ABSTRACT

New Zealand is known as one of the most advanced countries in environmental policies and activities. Because it is an island country with many threatened endemic species, it became a world leader in tackling invasive alien species and in protecting the country from further invasion. However, like with any conservation work it was essential to gain support from the country's public to advance environmental action. During the last 20 years New Zealand has gone through major restructuring of governmental agencies, has introduced critical environmental legislations and has worked hard to spread the message to its people. In this paper the author tries to give an overview of major environmental movements and changes in governmental policies of the last 20 years, as well as how public awareness and environmental education rose with them.

## 1 INTRODUCTION

New Zealand is a country thriving on its farming and tourism. Both industries rely heavily on natural resources. People are also known to love outdoor activities and there are plenty of opportunities even for city dwellers to tramp in the mountains, sail on the sea, or fish in the rivers. This is one of the countries where people are constantly reminded that nature is an integral part of daily life for business, recreation, culture and also a spiritual ground.

Thus, some of the environmental education has been done in a spontaneous way for a long time, by "having fun" in the environment. Most of the New Zealand adults have fond childhood memories of going to beautiful mountains and beaches on family trips, and they want to keep them that way for their children to enjoy in the future. It is a great advantage of this country.

However, in the background, the "quality" of this environment has been constantly deteriorated without the majority of people realizing it. This deterioration was steepest in the decline of biodiversity and many animal and plant species became threatened mainly from loss of habitat and from the impact caused by introduced alien species. Although the New Zealand government had been protecting wildlife through legislation, such as the National Parks Act in 1952 and the Wildlife Act in 1953, the crisis was not advertised to the public in a big way.

## 2 RECENT DEVELOPMENT IN ENVIRONMENTAL POLICIES AND THE RISE OF PUBLIC AWARENESS

This situation has changed in recent times, especially during the last 20 years. After a major restructuring of central government agencies, New Zealand's Department of Conservation was established in 1987. It became a large agency responsible for protecting threatened species and also for managing more than a third of all land areas of New Zealand, as well as marine and freshwater environments. To achieve more effective management it actively initiated partnerships outside government agencies, including local communities, non-governmental organizations and business communities. Communication became crucial to involve a wider range of people. A good example of this will be discussed in Paul Jansen's paper.

In 1991 the Resource Management Act took effect, amalgamating New Zealand's laws relating to the use and development of land, air and water resources and concentrating on managing the environmental effects of human activities. Its core purpose is to help achieve sustainability in New Zealand (\*1). Anyone trying to take advantage of natural resources in harmful way would be restricted, or the activity prohibited. The Act works as main environmental legislation on human activities and the public has become aware of the effects of each developmental action.

In 1993, New Zealand ratified the Convention of Biological Diversity and "biodiversity" became the key concept for conservation projects. Now it was made clear that protecting biodiversity requires more than one agency or a group of people. It needed everybody's involvement and all geographical areas had to be considered as habitat for a diverse life. Cross-agency organizations (e.g. The Central Government Co-ordinating Group of Biodiversity Chief Executives) was formed and in the year 2000 New Zealand's Biodiversity Strategy was released. The New Zealand Biodiversity Strategy was a goal-setting, action-focused strategy, and in its "Theme 8 – Community Participation and Awareness", some of its priority actions read as follows (\*2).

*Objective 8.1 Community Awareness and Involvement*

*Enhance and broaden individual and community understanding about biodiversity (in particular, New Zealand's indigenous biodiversity), and increase community involvement in the conservation and sustainable use of New Zealand's biodiversity.*

*Actions:*

- a) *Make information about biodiversity available to people and communities, relevant to their local environments (that is, on the extent and management needs of ecosystems, habitats and native species), to enable them to make decisions and take action to support the conservation and sustainable use of biodiversity.*

*Key Players: Doc, MfE, MAF, Mfish, LAs, iwi/hapu, NGOs, community group (\*3)*

"Biodiversity" is a big and complex concept and was an unfamiliar word to many common people, but after numerous public workshops and consultations for the Biodiversity Strategy, it became surprisingly well known. It received funding of NZ\$187 million over the first five years (\*4), and some money was used for specific public awareness programmes (\*5). New partnerships were formed among government agencies, non-governmental organizations, local authorities and communities, to achieve specific goals in the Biodiversity Strategy. These organizations also played an important role in vigorous promotion of biodiversity.

In 1993 the New Zealand government also enforced new legislation called the Biosecurity Act. What is biosecurity? The answer can be found in its promotional website (\*6) as below:

*"Everyone is affected by biosecurity. Biosecurity safeguards New Zealand's economy and environment, our health, our plants and animals, and Maori taonga (\*7) from the risks of introduced pests and diseases. As well as trying to prevent new pests and diseases, and unwanted animal and plant species from arriving, biosecurity involves getting rid of, and controlling those that are already here."*

"Biosecurity" was also a new concept which did not spread so easily among people, until in 2001, epidemic Foot and Mouth Disease prevailed in England. As a farming and tourism country New Zealand was on full alert to prevent invasion by such a disease. NZ government drastically increased its biosecurity budget. Foot and Mouth Disease could be carried by any tourists, so border control became tighter and a big public awareness campaign started in September 2001 called "Protect New Zealand" (\*8). Lead agency for the biosecurity, Ministry of Agriculture and Forestry, implemented NZ \$2.8 million awareness and education programmes (\*9). TV commercials, numerous brochures, newspaper and magazine articles, as well as a website were created for the campaign.

Through this campaign it strongly passed on the message of the importance of the New Zealand environment.

In August 2003, the Biosecurity Strategy for New Zealand was launched (\*10). There are many overlaps in concepts, goals, and actions between the Biodiversity Strategy and the Biosecurity Strategy. The Biosecurity Strategy is seen as part of the Biodiversity Strategy (\*11).

### 3 PROGRESS IN THE PUBLIC AWARENESS

So what are the results of all these legislations and campaigns?

In the Third Annual Report of the New Zealand Biodiversity Strategy published in 2003 (\*12), progress review on Objective 8.1 says:

*Community involvement in conservation and restoration projects has significantly increased in both rural and urban areas. However, there is still widely varied understanding of the concept of biodiversity. Hands-on support and training is being provided for community groups, numerous publications have been produced in a variety of media, and DOC has formed partnerships with local bodies, non-government organizations and iwi (\*13) to promote biodiversity and community involvement in local areas. Many non-government organizations are contributing significantly to this theme, with nation-wide efforts by New Zealand Landcare Trust, the Royal Forest and Bird Protection Society, and WWF.*

All in all difficult concepts such as biodiversity and biosecurity became much more "tolerable", or familiar words to most New Zealanders in the past 10 years. People also became more conscious of their natural heritage and its uniqueness and feel proud of it, especially when they are given a chance to be involved in the projects. It seems to me that there are several reasons for the success in achieving high level of public awareness in New Zealand:

- Strong cross-agency initiative by government.
- Partnerships among governmental agencies, local authorities, non-governmental organizations, business communities and local communities.
- Clear goal setting, practical action plan and constant review of the progress.
- People are not only provided with knowledge, but are also given chances to participate in the projects (action-focus).
- Generous budget allocations by central and local government and from various communities.
- Friendly and easy-to-understand approach to the subject, including TV commercials, TV programmes (\*14), websites, animations and games (\*15).
- People's general interest in nature and their frequent exposure to outdoor activities.
- Population size. New Zealand has a small population of 4 million, which makes it easier to get messages through.
- Commercial concern. Protecting natural heritage is crucial for many businesses of this country.

### 4 ENVIRONMENTAL EDUCATION IN PRIMARY AND SECONDARY SCHOOLS

While all the new legislation was implemented and campaigns were carried out, a framework for environmental education in public schools was also prepared. In the Biodiversity Strategy "Theme 8 – Community Participation and Awareness" (\*16), specific goals and priority action for environmental education was stated as below.

#### *Objective 8.3 Environmental Education*

*Expand and enhance education about biodiversity as a key element in developing environmental education programmes and activities.*

#### *Actions:*

- a) *Integrate biodiversity considerations in the implementation of the National Strategy for Environmental*

*Education, including the development of environmental education curriculum guidelines for schools, the establishment of an in-service training programme for teachers and guidance for local authorities.*

*Key Players: MfE, Doc, MoEd (\*17)*

An exciting aspect of environmental education is the fact that it can connect a wide range of topics and study areas: from science to social studies, from outdoor activities to nature art. However, it can also be difficult to bring it into a school's curriculum. Environmental education in New Zealand is not a compulsory curriculum area on its own, like mathematics or English. It has to be chosen by teachers as a subject and should be incorporated into the curriculum.

In 1999, the Ministry of Education published its "Guidelines for Environmental Education in New Zealand Schools" (\*18). The guideline's focus is on planning and implementing environmental education programmes as part of the "New Zealand Curriculum Framework" in primary and secondary schools (\*19). These guidelines explore the examples of student activities and how those activities can be accounted for in one of the curriculum areas.

However, producing the Guidelines is only half the story. Unless applied to the real classroom, it's good intention will be wasted. Unfortunately, this was the case at least for a while. According to research, only 6% of teachers in the Otago region were using the Guidelines for Environmental Education in February 2002 (\*20), which means that for three years the guidelines gathered dust in the corner of schools' reference shelves.

There are, however, organizations that have been filling the gap. One such example is Enviroschool. If any school is interested in becoming environmentally friendly it can sign up to a three-year course and Enviroschool will send a trained facilitator for up to 80 hours per year, as well as providing an extensive resource kit. In addition Enviroschool also runs an Award Scheme, for which schools can achieve bronze, silver or green/gold levels (\*21).

This project is run by a charitable trust called the Enviroschool Foundation. Its concept was originally developed in 1993 by the Hamilton City Council in New Zealand's North Island. Now the trust operates within a partnership of the Ministry of Environment, Department of Conservation, indigenous groups, various local authorities, universities as well as community groups. The participating school numbers are increasing every year.

In the Third Annual Report of the New Zealand Biodiversity Strategy, published in 2003 (\*22), progress review on Objective 8.3 says:

*Environmental Education curriculum guidelines for schools were completed in 1999 and a nationwide environmental education co-ordination programme has been established by the Ministry of Education. A range of environmental education initiatives have been developed and trailed by biodiversity agencies.*

As the review recognized, it seems New Zealand's environmental initiatives are still at a trial stage. Because of the nature of environmental education, teachers' skills and commitment are essential. Understandably, this will not change overnight. However, it is deserving of praise that not only governmental agencies, but also local authorities and community groups become partners and get involved in primary and secondary environmental education, as students can experience environmental action in real context.

## 5 CONCLUSION

In both public awareness and in school education recent years have been the time for "getting everybody involved", "making effective networks", and "forming partnerships". This needs to continue to achieve sustainable life. There are still many bridges to cross, but people are feeling

more "ownership" of environmental projects, and I think the strong initiative from government, providing a framework and legislation allowing partnerships to thrive, has been the key to achieve it.

### References

- (1) Information about Resource Management Act on Ministry for Environment homepage.  
<http://www.mfe.govt.nz/issues/resource/>
- (2) The New Zealand Biodiversity Strategy - Our Chance to Turn the Tide Feb.2000, P102-103, ISBN 0-478-21919-9
- (3) Doc=Department of Conservation, MfE=Ministry for the Environment, MAF=Ministry of Agriculture and Forestry, Mfish=Ministry of Fishery, LAs=Local Authorities, iwi/hapu=indigenous Maori people and community
- (4) Media release on Third Annual Report on the New Zealand Biodiversity Strategy  
<http://www.biodiversity.govt.nz/news/media/current/04dec03.html>
- (5) The website "Up the Creek" (<http://www.biodiversity.govt.nz/kids/>) was funded by Biodiversity budget.
- (6) Protect New Zealand  
[http://www.protectnz.org.nz/grids/grid\\_e.asp?id=280&area=1](http://www.protectnz.org.nz/grids/grid_e.asp?id=280&area=1)
- (7) taonga=treasure, in indigenous Maori language
- (8) Protect New Zealand <http://www.protectnz.org.nz/>
- (9) Protect New Zealand - The Biosecurity Strategy for New Zealand, August 2003, Prepared by Biosecurity Council, ISBN 0-478-07764-5
- (10) Ministry of Agriculture and Forestry homepage on Biosecurity.  
<http://www.maf.govt.nz/biosecurity/about/roles.htm>
- (11) Media release on Third Annual Report on the New Zealand Biodiversity Strategy  
<http://www.biodiversity.govt.nz/news/media/current/04dec03.html>
- (12) New Zealand Biodiversity Strategy - Third Annual Report 2002/2003, Prepared by the Central Government Co-ordinating Group of Biodiversity Chief Executives, p.31
- (13) iwi=indigenous Maori people
- (14) In 2002, there were TV series featuring DOC rangers ("Park Rangers"  
[http://www.doc.govt.nz/About-DOC/Staff/Park-Rangers-\(The-Programme\)/index.asp](http://www.doc.govt.nz/About-DOC/Staff/Park-Rangers-(The-Programme)/index.asp)) and MAF's border control officers ("Border Control"  
<http://www.maf.govt.nz/mafnet/press/030502border.htm>). Both TV series were popular, and DOC and MAF fully cooperated in the making.
- (15) Internet on-line game was introduced by Protect New Zealand to educate kids about invasive Gypsy Moth (<http://www.gypsymoth.co.nz>)
- (16) The New Zealand Biodiversity Strategy - Our Chance to Turn the Tide Feb.2000, P102-103, ISBN 0-478-21919-9
- (17) MoED=Ministry of Education
- (18) Guidelines for Environmental Education in New Zealand Schools, Ministry of Education, 1999, ISBN 0-478-23692-1. Also available on the internet:  
[http://www.tki.org.nz/r/environ\\_ed/guidelines/index\\_e.php](http://www.tki.org.nz/r/environ_ed/guidelines/index_e.php)
- (19) As above, p.7
- (20) Unpublished research by Tania McLean, Enviro-school Coordinator for Otago region, Environmental Officer for Dunedin City Council, February 2002
- (21) Enviro-schools homepage.  
<http://www.enviroschools.org.nz/howitworks.php>
- (22) New Zealand Biodiversity Strategy - Third Annual Report 2002/2003, Prepared by the Central Government Co-ordinating Group of Biodiversity Chief Executives, p.31

Appendix 1: Summary of Environmental Education Developments in New Zealand  
 copyright: Tania McLean, EnviroSchool Coordinator for Otago region

1970	Environmental education raised at a Physical Environment conference.
1977	Environmental education on the agenda of Environment '77 conference held in Christchurch.
1979	<i>Environmental Education Handbook for Secondary Schools</i> (Dowling, 1979) published.
1981	Department of Education coordinated a week-long conference, Environmental Education Across the Curriculum, in Auckland.
1984	<i>New Zealand Conservation Strategy</i> suggested environmental education should be infused across the curriculum and become a subject in its own right.
1984	Formation of New Zealand Association for Environmental Education (NZAEE). <i>Environmental Education: A Source Book for Teachers</i> (Scott, 1984) published. Core Curriculum Review committee recommended that environmental education should be taught through science and social studies.
1987	Inaugural conference of New Zealand Association for Environmental Education (NZAEE).
1988	New Zealand Natural Heritage Foundation formed.
1988	<i>National Curriculum Statement</i> (Department of Education, 1988) included the subject groupings Science, Technology and the Environment.
1991	<i>The National Curriculum of New Zealand: A Discussion Document</i> (Ministry of Education 1991) included Science and Environment grouped together as one subject. <i>Resource Management Act</i> (RMA) adopted.
1993	<i>The New Zealand Curriculum Framework</i> (Ministry of Education 1993) published but 'Environment' not included in the seven learning areas. Hamilton City Council initiated the <i>EnviroSchools</i> project.
1995	<i>Environment 2010 Strategy</i> (Ministry for the Environment, 1995) released. <i>Draft Curriculum Guidelines for Environmental Education</i> (Law and Baker, 1995).
1998	<i>Learning to Care for Our Environment Me Ako ki te Taki Tatao: A National Strategy for Environmental Education</i> (Ministry for the Environment, 1998) published.
1999	<i>Guidelines for Environmental Education in New Zealand Schools</i> (Ministry of Education, 1999a) published and distributed to schools.
2000	Ministry of Education contracted Christchurch College of Education to facilitate nationwide teacher education in environmental education as outlined in the <i>Guidelines</i> . Consortiums of facilitators from 11 regions trained and 1 from each region trained in <i>EnviroSchools</i> in preparation for work with pilot schools.
2001	Training workshops held for teachers nationwide to assist in their implementation of the <i>Guidelines</i> . Pilot schools (2 or 3 from most regions) work with facilitators to develop and implement environmental education into their programmes. Release of the <i>EnviroSchools</i> toolkit.
2002	New Zealand Association for Environmental Education (NZAEE) conference in Hamilton. Further training workshops and pilot schools in most regions as part of the contract. Six more regions have facilitators trained through Christchurch College of Education under the Ministry of Education contract. Nationwide training of <i>EnviroSchools</i> facilitators. Funding allocated to Colleges of Education for the appointment of advisors in environmental education. Ministry of Education contract reviewed.
2003	Regional environmental education coordinator positions commence with training bringing together the environmental education experts from Christchurch College of Education, EnviroSchools, Auckland Regional Council and Masters of Environmental Education degree recipients.
2004	The <i>EnviroSchools</i> Award scheme is launched. New Zealand Association for Environmental Education (NZAEE) conference in Christchurch.