Report by Judith Hill

2010 Churchill Fellow

The Churchill Fellowship to study overseas:

To research the intergenerational transference of knowledge and indigenous participation in child centred environmental projects in New Zealand, USA, Canada, England and Eire.

I understand that the Churchill Trust may publish this report, either in hard copy or on the internet or both, and consent to such publication.

I indemnify the Churchill Trust against any loss, costs or damages it may suffer arising out of any claim or proceedings made against the Trust in respect of or arising out of the publication of any report submitted to the Trust and which the Trust places on the website for access over the internet.

I also warrant that my final report is original and does not infringe any copyright of any person, or contain anything which is, or the incorporation of which into the final Report is, actionable for defamation, a breach of any privacy law or obligation, breach of confidence, contempt of court, passing off or contravention of any private right or of any law.

Signed…………………………………                    Dated…………………………….

(i)
INDEX

Introduction ........................................................................................................... (iii)

Executive Summary ................................................................................................ (iv)

Programme .............................................................................................................. (v)

Main Body.............................................................................................................. page 1

- New Zealand: Great Barrier Island, Okiwi School, Enviroschools........page 1
- Alaska: Tok, Tanacross Village, Tetlin National Wildlife Refuge, Denali & Kenai
  Peninsular National Parks, Chugach Children’s Forest, Homer.................page 6
- West Coast USA: Oregon, World Forest Centre; Alder Creek, One Cool Earth,
  Life Lab classrooms, Green Works......................................................... page 21
- Washington: National Forest Service, American Forest Foundation, National
  Environment Education foundation, Smithsonian Institute....................page 28
- Canada: Emeritus Professor Julia Cruikshank................................. page 40
- Eire: Green Schools Program................................................................. page 41
- England: Eden Project, Escot Forest School, Edcott, Anglo Saxon Village...page 47
- Conclusions................................................................................................. 49
- Recommendations....................................................................................50.

(ii)
Introduction
Before setting out on my overseas research for my Churchill Fellowship, I directed my research questions to succinctly address my research focus; ‘To Study Intergenerational, Cross Cultural Participation in Global Child Centred Environmental Projects.

Having founded the Baldivis Children’s Forest Education Centre twelve years previously, the catalyst for my Churchill Fellowship overseas research was ‘the study of similar child centred environment programs that offered practical learning in sustainable environmental management; their partnerships with local communities, particularly their senior citizens sharing their knowledge and skills with the younger generation, so that past practices in sustainable living can be preserved in today’s society. A second focus was the inclusion of local indigenous groups, sharing their knowledge and traditional land care practices.

What was apparent early in the course of my study was, while many of the complex factors influencing the various programs were localised, there was a commonality between them, particularly, the reliance on financial support and the availability of suitable personnel, factors, which directly impacted on the outcome for every program. But most importantly, what was shared by all groups, was the universal desire to immerse today’s youth in practical learning experiences in environmental sustainability. To bring children and young people out into the natural environment, to learn by experiencing nature, become connected to it and become the natural environment’s future ‘stewards’, was the commonly held goal.

In the course of the study, while seeking solutions and best practice models, the development of a network to link the overseas groups to each other and to those in Australia was to ignite global interest and became an important, underlying goal of my Churchill Fellowship Research.

Acknowledgements:
To have the opportunity to travel overseas on a Churchill Fellowship, was indeed, a wonderful experience which would never have occurred without the support of the Churchill Trust. To be able to study a number of world leading groups, practitioners and institutions providing environmental sustainability education was indeed a privilege and a life time opportunity. For this I am humbly grateful, but very proud to be able to undertake my research under the auspices of the Churchill Fellowship Trust.

Further Acknowledgements must also be given to:
My Referees: for without their generous support and advice, my research would not have been possible.
Mr Arron Wood: Director of Firestarter Pty Ltd, BSC, BFC, Founder of ‘Kids Teaching Kids’ International Youth Environment Movement and a 2007 Churchill Fellow.
Ms Genevieve Gongora-Mesas: PALS Coordinator, Department of Indigenous Affairs.
Mr Howard Flinders: Project Manager, Australian Sustainable Schools Initiative Western Australia.
Mrs Jo-Anne Tregonning: Forest Project Officer, Baldivis Children’s Forest,
My Principal John Worthy: For his much appreciated support and encouragement.
My Husband Geoff: for his patience and fortitude as he bravely drove a variety of vehicles over a multiplicity of terrains in five countries.
My Family: their faith in their parents to complete the task, their help and encouragement was much appreciated.
Executive Summary:

Name: Judith Ellen Hill

Phone: H: 0895252683
M: 0414 622 526

Address: 124 Manning Road
Hopeland
Western Australia: 6125

Position: Senior Teacher, Baldivis Primary School

Project Description:
My Churchill Fellowship Research centred on ‘Child Centred Environmental Sustainability Projects, which had as their primary focus, the empowerment of young people to take future leadership roles in environmental management. Three objectives guided this research; The intergenerational transference of knowledge, looking at the contribution of the volunteers and elders within the groups in transferring knowledge and sustainability practices to the younger generation. The inclusion of indigenous people and the utilisation of their local traditional knowledge and practices in land management was an important second aspect of the study. Finally, the development of global networks linking projects and their young participants underpinned the study, providing a basis for sharing future directions in environmental sustainability education.

Highlights:
A variety of projects and programs were the focus of the study; Children’s Forests, private community groups, schools, large government agencies and environmental organisations. Each provided a unique insight into the wide variety of facets which make up today’s global environmental education movement. The study addressed local environmental education programs across a number of climate zones, and in both urban and remote locations. Access to National Administration bodies gave valuable insight into the role Government Agencies and Corporate Bodies in promoting and supporting environmental education.

New Zealand: Okiwi School: Barrier Island Wetlands Restoration Project;

USA: Host organisation: ‘Hands on the Land’


Washington D.C. National Forestry Service
American Forest Foundation; Project Learning Tree, Smithsonian Institute National Environmental Education Foundation

Canada: University of British Columbia Dept. of Anthropology,

Ireland: ‘An Taisce’; The National Trust for Ireland; Green Schools Education Centre

England: Eden Project; Escot Saxon Village, Camp Wild Project.

Conclusion and Recommendations
What the study revealed was although some of the factors influencing the various programs were localised, there was a commonality between them; the reliance on financial support and the availability and cost of suitably trained personnel. However a positive aspect linked the groups, their shared ideology, a universal desire to immerse today’s youth in practical learning experiences in environmental sustainability. To bring children and young people out into the natural environment, to learn by experiencing nature and become connected to it, was the commonly held goal. It is proposed my findings, curricula materials, and particularly, best practice models will be shared among my Department of Education colleagues and environmental groups. To encourage the establishment of volunteer website, so that retirees, community and indigenous volunteers can access training, and be directed to environmental education groups where their expertise can be utilised. The development of a network to link the overseas child centred environmental education groups to similar groups in Australia has ignited strong interest in the USA. It is proposed, that, through technology, local students will be linked to their counterparts in a series of preposed ‘webinars’ organised by the USDA Forest Service and that the pathways for global travel and overseas study in environmental sustainability, be investigated and included when planning future directions in Australian education programs.
Churchill Fellowship Program

New Zealand:


USA:
Alaska:
24th July 2011 Tok: Jane and Dan Teague Homesteaders: Bio Mass Fuel Generator Tok School, summer holiday program. Subsistence survival.

26th July 2011 Tetlin Wildlife Refuge: Mary Timms Education Officer: Summer School Program. High School Credit course, Writing in Nature.

27th July 11 Moon Lake Activity Day with Tetlin Wildlife Refuge; Indian Crafts.

29th July 2011 Tanacross Indian Village; Elder Dollie Jonathon; interview, tour.

31st July 2011 Denali National Park; Murie Science and Learning Centre, Kristen Frieson, Education specialist, tour of park collected education pack.

2nd Aug. 2011 Chugach National Park; Nicholas Racine, Visitor services Ass. Director, Interview and walk. Volunteer and indigenous programs.


6th Aug 2011 Arctic National Wildlife Refuge, Portage Valley, Ranger Kristen


8th Aug 2011 Homer: WILD Foundation, Director, Kat Haber, Alaska Wildlife Refuge: Oceans and Islands Centre for Marine Studies.

9th Aug 2011 Alaskan Coastal Studies Centre, Patrick Chandler Field Trip and Interviews. Tide pooling resource management, camps, walking trails.

10th Aug 2011 ‘Oceans and Islands’ Centre for Marine Studies. Volunteering positions in sub arctic locations.

Canada:
15th Aug 2011 University of British Columbia Dept. of Anthropology, Professor Julia Cruikshank. Interview, visit to Museum of Anthropology. Inclusion

West Coast United States.:
Oregon: Portland:
21st Aug 2011 Alder Creek Children’s Forest: Professor Jim Proctor, Director. Interview.

22nd Aug 2011 World Forestry Centre: Rick Zenn, Senior Fellow. Interview and tour.

Toured sustainable site and gardens interviewed Greg and Associates.

Power-point presentation to staff, tour of Life Lab facilities.

27th Aug 2011 Yosemite National Park
29th Aug 2011  Liberty High School, Teacher Bob Bourgault, spoke with yr 12 students and toured program garden


Washington D.C.


8th Sept 2011  Dr Sofiya Samman, Director Conservation Education Program National Forestry Service gave a power point presentation of National Forest Service Education Program. Attended NFS Directors meeting: Joe Meade: Director Presentation ‘Out Door Nation, Director Chris Fanning. PM. Participated in 1st Webinar to Forest Service Groups and Children’s Forests across USA.


12th Sept 2011  American Forest Foundation/ Project Learning Tree: Green Schools. Cathy McGlaulfin; Senior Vice President, Education Project Learning Tree, Al Stenstrup, Director Education Programs American Forest Foundation, Vicki Arthur, Conservation Education Specialist National Forest Service, Patti pride Coordinator ‘Partners in Resource Education Foundation. Presentation of Green Schools Program in USA, and PLT Curricula.


Ireland
19th Sept 2011  Dublin ‘An Taisce’; The National Trust for Ireland: Green Schools Education Centre: Cathy Baxter: Green Schools Manager, Niamh Mc Donald; Green Homes Manager; Jane Hackett, National Manager Green Schools Travel, Presentation on ‘Green Schools, Green Homes and Green Communities’

20th Sept 2011  Tralee: Teacher Professional development training

England:
1st Oct 2011  Meeting University of Exeter: Dr Rob Bowker
5th Oct 2011  Eden Project; Andy Jasper, Research Manager tour and discussion of Project.
Main Body:  The Findings

‘The future will belong to the nature smart; those individuals, families, businesses and political leaders who develop a deeper understanding of the transformative power of the natural world and who balance the virtual with the real. The more high tech we become, the more nature we need’... (Richard Louv, ‘The Nature Principal’ 2011)

‘We met on the edge of Telsin Lake, (Yukon), .... hosted by the Teslin First Nation, away from the distractions of town. The meeting included people of all ages, and the expectation was that the elders would do the talking, giving the younger people opportunities to listen’..... (Julie Cruikshank. The Social Life of Stories: Narrative and knowledge in the Yukon Territory’ 1998)

The Churchill Fellowship Research investigated a number of child centred, environmental programs in four countries New Zealand, USA, Eire and England. In Canada, a visit to University of British Columbia, to interview Emeritus Professor of Anthropology, Julie Cruikshank, provided an insight into the connections between the indigenous people and their land, which has survived through generations. In all studies, what emerged was the sanctity of intergenerational transference of knowledge from adult members of society to its children. In today’s communities, the need to teach the next generation the fundamentals of environmental stewardship has never been more urgent, as more and more young people become ‘wired’ into technology’s virtual world. In all case studies, such learning by the young, involved diverse partnerships to disseminate knowledge and provide the necessary skills for children to become the future stewards of sustainable practice. This report provides an insight into a range of programs which strive to maintain a balance between technology and nature in developing future environmental sustainability.

New Zealand: Okiwi School: Great Barrier Island Wetland Restoration Project:
Principal Colin Griffiths.

Environmental Education is an integral component of the curriculum at Okiwi School. It welcomes the opportunity for its pupils to be involved with the community programs in restoration and conservation on Great Barrier Island. Local conservation organisations, individuals and government bodies are encouraged to bring their environmental issues and initiatives to the school and involve the students. By this the children participate in the conservation and restoration of the unique environment of Great Barrier Island.

1.
Its principal, Colin Griffiths, strongly advocates student learning must be real and have life long benefit. Okiwi School is a member of ‘Kids Restore New Zealand’ Organisation.

Great Barrier Island lies off the north-west coast of New Zealand approximately four and a half hours travel by ferry from Auckland. The pristine, natural forests and wetland environments which make up large traits of the island are carefully monitored and preserved by the local conservation groups and the New Zealand ‘Department of Conservation’ (DOCS). Okiwi School is one of three small primary schools on the island and its students are drawn from the small permanent population with the periodic inclusion of children who come with the seasonal families owning holiday homes on Great Barrier Island. Two privately owned environmental conservation projects, ‘Glenfern Sanctuary’, established by Tony Bouzaid in 1998 and ‘Little Windy Hill Trust’, Judy Gilbert, are important partners to the school’s environmental programs.

The students of Okiwi School are closely linked to the environmental issues on Great Barrier Island and actively participate in the island’s pest eradication programs. Rat poisoning and predator control are woven into their science program; while fishing, surfing and rowing, three of the school’s sporting options, immerses the students in coast care issues and develops an understanding of the pristine, marine environment surrounding the island. The school has its own vegetable garden and keeps poultry as part of their kitchen garden program. Students propagate native species for their wetland conservation program, planting a variety of native sedges and reeds as part of their program to restore the natural habitat of the endangered Brown Teal Duck. Students are heavily involved with the Island’s ongoing Coastal Dune Rehabilitation Project under the auspices of DOCS. This conservation partnership has been imbedded in the school’s education program for over eighteen years. Community conservation partnerships with Okiwi School are largely due to Colin Griffiths’ ideology of an ‘open-door’ policy with the community and government agencies present on the island. All learning programs at Okiwi School are closely linked to the community. Robust partnerships see the school’s boundaries merge with the wider community. The instruction of children in conservation and sustainability has become a practical, shared experience making the educational outcomes relevant and having life long benefit.
Hope Munro is a member of the Okiwi School Board of Trustees, and together with her predecessors, has worked collaboratively to embed the Maori culture in the school curriculum. This was achieved firstly by songs and then by the Maori elders and the community members of the Motairehe Marae, (village) bringing cultural programs to the school. As the school student population includes a large number of Maori children, the Marae Elders are important leaders in teaching the students, past cultural practices in land-care conservation. The Maori language is spoken in the school and is a feature of the school newsletter. Through the Elders, the students learn about the wahi taonga (special places) on Great Barrier Island. They grow and cook traditional vegetables. Elders teach the students how to build hides to discover the taonga (unique) species and help them design and erect interpretive signs to tell others about the endangered animals such as the Pateke (Brown Teal). Maori environmental issues, traditional land usage and the eradication of introduced species to protect the native species are very real learning experiences for the students of Okiwi School.

**Great Barrier Island Summary:**

Okiwi School has its learning programs embedded in the community. It embraces the Maori culture and traditional land-care practices. The school’s partnerships with DOCS and the island’s conservation groups teach the students about conservation and land management. The open-door policy upheld by the Principal and his staff ensures the community conservation policy and practice are an important part of the children’s education. The students’ learning and the school’s policies are not separated from their communities or their immediate environment, rather all have blended together to become an integral part of the education program. Okiwi School, Great Barrier Island, is a positive example of an open approach to the education of its students. The principal’s inclusion policy of the wider community, government agencies, land-care and environmental organisations, individuals and the local Maori community has resulted in a sustainable, enriched learning opportunity for his students. Learning in Okiwi School immerses its students in their own locality they are part of its environmental solutions. At Okiwi School student learning is enhanced by the depth and breadth of the practical educational opportunities offered outside the classroom and school boundaries.

The Enviroschools Foundation with its National Director, Heidi Mardon, has its head office in Hamilton, New Zealand. Its staff comprises of independent Regional Facilitators working in the sixteen Regional Council Boundaries. Each Regional Facilitator ensures the collaboration, networking and support between the schools, their communities and other partnership organisations.

Each school has its own Facilitator to support and guide the school as it develops its own individual Enviroschool Program, tailored to its own particular needs and locality. The role of the partners is to help develop the networking opportunities, provide funding, and skilled personnel and community volunteers for each school program. The Enviroschools Foundation supports three programs, Enviroschools, Aho Tu Roa, (Maori Language based program) and ‘Youth and Community’, all sharing the common objective to empower students and schools in creating healthy, peaceful and sustainable communities.

Enviroschools is an independent organisation working with schools and communities to develop environmental awareness and sustainable practice. At present, it is working with eight hundred and fourteen schools across New Zealand. Its philosophy is to empower the community and provide it with the knowledge and skills to meet the particular environmental challenges faced by the region and beyond. A whole school approach is the key requirement of Enviroschools Foundation Program and must address four key areas:

- **Place – Wahi (Physical surroundings)** School and grounds are designed to work with the natural systems and reflect the culture and heritage of the place. It becomes a site for ‘hands-on student action which integrates the academic, creative and practical aspects of learning.

- **People and Participation – Tangata (Indigenous people)** Decisions and actions are decided with the involvement of students, staff and other members of the community. This creates a sense of belonging and ownership as schools draw upon the combined wisdom of their multi-cultural community.

- **Practices – Tikanga (Correct procedure)** School policies and systems support environmentally friendly and sustainable practices, which are monitored and evaluated as progress is made towards sustainability.
• Programs – Kaupapa Ako (Living curriculum) Students take action on real issues in the school and community. Sustainability is a core part of the formal curriculum. Students design and implement sustainable projects within the school and surrounding community. They draw upon community partners, role models and experts both in the school and from the wider community. Importantly the students share their learning, and become mentors and leaders for younger students, both in their school but also in wider community groups.(1)

In schools, the Foundation undertakes professional development programs to inform and skill teachers before funding specialised, school programs for their students. Enviroschools environmental educators have designed curriculum based environmental kits for the use in schools. Two environmental kits are especially designed to meet the requirements of both English speaking school communities and those in predominantly Maori speaking schools.

To be a Leader, You must Learn to Lead:
The Enviroschools Foundation’s ideology is underpinned by the premise that to empower youth to be future leaders, young people must first be reconnected to the land. They must be involved in the process of connection involving discovery of the problems and importantly to be part of the solution or improvement. Its apparent strength is its holistic approach, linking schools to their wider communities. By the creation of diverse, community partnership groups, the schools are able to offer students a rich, hands-on experience in sustainability education in which the students are able to be the leaders and problem solvers.

For the community, Enviroschools offers the opportunity for indigenous elders and community volunteers to utilise their skills and knowledge and make positive contributions towards a sustainable future. The challenges for the Enviroschools Foundation, is to create ways for schools to share successful projects with others. By sharing successful programs, the Foundation believes, such dialogue will encourage those schools and their communities who are starting out, or those who are struggling to maintain momentum. It realises the Foundation must hold spaces in its planning to weave in new projects as they appear, for it to remain a vibrant and innovative organisation. But its greatest challenge is to keep the continuity of student led projects in New Zealand Schools with all their changes in staffing and direction.

To do so, they believe, student lead environmental sustainability programs must become foundation stones upon which the culture of each school is built. Students must be encouraged to acquire the technical skills to share their work using internet technology and be afforded the opportunity to participate in future global youth environment forums.

**Alaska: The Last American Frontier.**

**Homesteaders: Tanacross Indian Village, Tetlin National Wildlife Refuge, National Parks and Environmental Organisations.**

Alaska provided many clues to past practices in educating young people in family and village groups. Its remote communities are often immersed in the ancient, survival practices of hunting and gathering. Its harsh landscape and winter climates, coupled with its high costs of transportation, mean isolated communities with low employment opportunities, live a pre-commercialism existence. The three Rs of recycling, reusing and reducing are not a cliché, but a way of life. Unfortunately, modern influences of drugs, alcohol and consumerism have pervaded many localities, but for those who still embrace the traditional ways, believe reconnection to the land and its culture, is a way back for its lost members.

**Tok: Jane and Dan Teague: Homesteaders.**

*Tok is a small, remote town on the Alaskan Highway, approximately ninety miles from the Canadian border. It is the trade centre for the Athabascan Native villages of Northway, Tetlin, Mentasta, Eagle, Tanacross and Dot Lake. Tok was originally a camp for the Alaska Commission when the Alcan and Glenn Highways were constructed in the 1940s. Today, Tok has a small population of homesteaders and businesses connected to the highway, forestry and tourism. The Tok town site is bordered by a forest of predominately Black Spruce, poplars and willows with intermittent wetlands, lakes, mountains and river systems.*

Most homesteaders live on small properties within the forest zone and many depend on the natural environment for food throughout the year. Although stores and food supplies are brought in by road, it is expensive. Many households grow their own summer vegetables and harvest edible foods from the forests, lakes and rivers. Summer hunting and fishing is vital to ensure a food supply over the long winter months. Game meat is frozen and fish is generally smoked and stored until needed. Fruits are gathered in the warmer months for jams, chutneys and pickles. Products made from berries, mushrooms and other forest foods provide a source of vitamins in the long winter days, when the more remote homesteaders face the possibility of being snowed in.
Many children assist in these vital activities and learn from a young age, the necessary skills for survival over the cold winter period. Children, as young as two, take part in gathering of berries, and by twelve, are proficient in hunting and fishing. Many of these skills are passed down from generation to generation and are crucial for survival in the harsh sub-arctic environment. (2)

Tok Gateway School, the Tetlin Wildlife Refuge and Tanacross Native Village were the primary sources of environmental education offered to young people, outside the experiences of day to day living.

**Tok Gateway School: A member school of the Alaska Gateway School District**

*Their ethos: ‘Alaskan Gateway Schools and their communities have a responsibility to be accepting, productive and cooperative with one another. Communities, families and their cultural values are the cornerstones of student learning.’* (3)

Tok Gateway School is an impressive building catering for approximately one hundred and ninety students from Tok and the surrounding area. It also is attended by students of the nearby native Alaskan villages. It caters for students from kindergarten to year twelve. Students attend school from August to June with a fortnight’s break over the Christmas/New Year period. Attendance is expected even if the temperature drops to minus thirty degrees. Travel is undertaken by school buses and the roads are kept open by the continual use of snow ploughs. The design of the school reflects the harshness of its surroundings. A wide, enclosed corridor runs around the outside perimeter of the classrooms. This is an important place for exercise when the weather is severe. It is used in a similar fashion, after school hours by the community in the ‘Gateway After School Program’ catering for students, families and community members. Alaskan Native crafts and cultural practices are taught as community members share their skills and knowledge. Parent and community volunteers play an important role within the school and in the education of its students.

**Biomass Energy a Practical Environmental Learning Experience**

Tok Gateway School leads the way in producing biomass energy. The whole of the school’s energy for lighting and heating is derived from a state of the art biomass energy plant. Working with the local Forestry Department, fire ravaged forest trees are brought to the site, chipped and fed into its newly constructed biomass energy furnace. The energy generated, is fed back into the school’s energy grid.

(2). Jane and Dan Teague discussion notes of homestead life 2011.

(3). ‘Alaskan Gateway’, Alaskan Gateway School District, Strategic plan 2010 -2014 p1
Forest Links
There are close links to local government departments and businesses, allowing students the opportunity to enrol in career courses through the school. An example is the Alaska Wildfire Academy, which runs practical learning courses in combating wildfires which can devastate the Alaskan forests in the summer months. Basing part of its course at the school, it trains senior students for local employment during the summer seasons. The students, on completing the training, receive forestry qualifications, allowing them to seek employment in a number of allied industries. The school’s work in establishing and maintaining partnerships with community organisations to utilize available resources has resulted in the recognition of the valuable input by volunteers. The diverse cultural background of the school student body requires all education objectives to be strongly underpinned by the indigenous culture of its immediate local community.

Tanacross Native Village: Dollie Jonathon, Athabaskan Elder
Tanacross Village is situated a short drive from Tok. It is a thriving Athabaskan community which proudly maintains its tribal traditions and culture. Tancross Village is relatively modern, having been moved from its original site, across the Tanana River in the 1970s, due to persistent flooding. It now, has easier access to the Alaskan Highway, which is of some concern for the older community members, as they see their young people being drawn to the larger centres.

Dollie Jonathon, a Tanacross Elder, is adamant the community brought their culture across the river with them. The older Athabaskan community members remain fluent in their language, while, younger residents and children have a passive understanding of simple commands and phrases. Songs are sung in the ‘Tanacross’ language on Wednesday Family nights in order to keep the language and culture at the heart of village life.

Tanacross Village has a Tribal Office, a Community Hall, Community Health Office, St Timothy’s Church, a School and a community garden among its public buildings and facilities. The Tanacross School offers education for local students from kindergarten to year eight, after which the students, continuing their education, are bussed to the school in Tok. The community garden is an important source of food for Tanacross village, growing summer vegetables and berries to be shared by the community. The village men use traditional hunting and fishing to supply meat for the village which the women prepare and store for the winter months.
While the men set traditional fish-traps, net salmon, or hunt moose, caribou, mountain goat, bear, beaver and waterfowl such as Canada Geese and ducks, the woman prepare the game for drying and freezing for the winter. Similarly, to the Homesteaders, the families’ activities are centred on the seasonal activities of hunting and gathering food from the surrounding forest.

**Community Education**

In the summer months village children and youth are keep busy engaged in the summer vacation programs around the village. In an effort to help prepare them for future employment, young adolescents are engaged in practical work experience programs run by the tribal office. They undertake projects; tidying the village, recycling useful materials, cleaning verges, caring for the elders, chopping wood and cleaning houses and yards. Traditional crafts such as beadwork, birch bark utensil making, tanning and using hides are popular, summer programs.

Like the homesteaders, the children of Tanacross Native Village are immersed in their immediate environment. They are shaped by their culture and are the recipients of cultural practices handed down from generation to generation. The whole village is part of their educational journey and their understanding and knowledge of the environment surrounding them has become a part of their very existence. Those, like Dollie Jonathon, who embrace the traditional way of life, become proud custodians of their culture and the unique Alaskan environment, ensuring the succession of ancient traditions and environmental stewardship is passed on.

**Tetlin National Wildlife Refuge: Mary Timms; Senior Education Officer.**

*Tetlin National Wildlife Refuge is one of more than 545 refuges in the United States National Wildlife Refuge System of public lands that have been set aside for the conservation of fish and wildlife and their habitats. The Tetlin National Wildlife Village in Tok was established in 1980 and encompasses over 730,000 acres along an important bird migration corridor known as the ’Tetlin Passage’. Over 180 bird species and 44 mammal species raise their young, feed and rest in the Refuge’s wetlands, rivers and forests. (4)*

Besides its important role of protection and conservation of the public forest lands under its control, the Telin Wildlife Refuge staff play an active role in the education of the general public, especially young folk, in environmental management. Young people have the opportunity to take part in the Refuge’s activities and programs.

In the summer holiday season, Tetlin National Wildlife Refuge conducts recognised high school level credited courses for students. The subjects rotate yearly between Ornithology, Fire Science, Boreal Botany and Environmental Literature. Other non credited programs include ‘Nature Buddies’, a day camp for young children up to eight years of age and ‘Water Orientation Day’, a similar camp focussing on wetland ecology, animal observation, water safety and introductory canoe skills. For the older children, the refuge runs ‘Habitat Camps’ which entail a four day canoe trip and ‘Art Camp’ which is a three day ‘observation through art’ camp held at picturesque locations. In addition to the programs, the Tetlin Wildlife Refuge holds special carnivals which mark important seasonal events in the region. The ‘Kite and Crane Festival’, marking the annual migration of these birds as they follow the Tetlin Passage to their summer nesting grounds, is such an example.

**Tetlin Wildlife Refuge educates the community:**

The Refuge is active in educating the general community, individuals and organisations, visitors and local people who plan to spend time in this remote Alaskan region. In the summer, the refuge plays a major role in wildfire management. It runs ‘Fire Wise Program for local residents and teaches home owners how to defend their properties in the face of forest fires.

Tetlin Wildlife Refuge encourages families and visitors to explore the wild spaces in its reserve. It holds family rafting and canoeing days on the region’s lakes and provides the opportunity to engage in summer fire carnivals and habitat camps which focus on fire’s natural role in the forest ecosystems. Throughout the year, it holds Family Craft nights at the Tok Gateway School, where traditional crafts and utensil making are taught by native artisans.

Tetlin Wildlife Refuge works in partnership with the five Upper Tanana Native Communities. In an endeavour to understand the unique relationship between traditional culture and the Alaskan environment, the Refuge includes traditional ecological knowledge as part of their research. It acknowledges the success of traditional land management practices over the generations and respects its long held concepts of ‘only taking what is needed’ and ‘humankind’s interrelatedness with all beings’. For the Tetlin staff these mantras are pivotal in learning how to manage resources in today’s modern world and crucial for the preservation of the natural environment for future generations.
Volunteers: a much valued resource

Tetlin Wildlife Refuge embraces a vibrant volunteer program, which utilises allied volunteer groups, such as ‘Wilderness Volunteers’ to construct and repair vital infrastructure such as paths, board walks and viewing platforms. There are volunteer positions for people with interest and experience in field surveys, bird banding, education and outreach. One very successful volunteer program is the Volunteer RV Hosts Program which takes energetic friendly couples travelling in their RV to be hosts in a variety of locations, at the Tetlin Visitor Centre and the various lake campgrounds. The volunteer hosts are expected to work four days a week and are reimbursed $25 per day while on duty.

Over the years the Tetlin Wildlife Refuge has acknowledged the work of a wide group of people; Wilderness Volunteers, Friends of Alaska Refuges, Boy Scouts and College groups. The work undertaken has been considerable, trail building and improvement, removing invasive plants, cleaning along rivers and boat launches. Individual volunteers have given many hours; bird banding programs, public outreach, education programs and refuge maintenance. Many of the volunteers are local, while other volunteers are from the lower forty eight states of USA, overseas travellers and college groups. Like many of the environmental government agencies and organisations, the reliance on a ready supply of suitably experienced volunteers is an important factor for successful outcomes in environmental conservation and protection.

National Parks Services: Denali, Kenai Peninsular National Parks and Preserves.

National Forest Service: Chugach National Forest, Chugach Children’s Forest

Alaska is fortunate to have eight significant areas of land designated as National Parks and two of the largest National Forests in the USA. Together, they play a significant role in the education of young American citizens in environmental sciences and conservation of natural landscapes.

All have created exciting, natural science programs especially designed for visitors of all ages. Most programs are specifically designed to take people outdoors, to immerse them in the natural world contained in each park precinct. The programs are as varied and diverse as the landscapes within the parks and forests. Visitors are encouraged to explore and discover for themselves the natural wonders of these unique landscapes.
To guide park visitors, are highly visible interpretive signs along trails and easily accessible information pamphlets. Information centres and interpretive centres occur at relevant sites, and their well trained staff members and volunteers are always on hand to answer questions, give talks and lead guided walks for all park visitors. Well signed trails and pathways take visitors to view iconic landmarks and landscapes. Most parks have roadways allowing vehicle access. Many have organised bus tours and supply a variety of camping sites. Forest rangers are employed to manage the park, conserve its environment and protect the fauna which live within the national park boundaries. Interpretation and Education are the fundamental National Park Services Activities

Young visitors to the National Parks and Preserves, such as Denali and Kenai Peninsular National Parks are encouraged to take part in the Junior Ranger Programs. They are given packs containing Junior Ranger tasks, specifically designed for the park they are visiting. Each contains information, games and activities for them to complete during their stay. At the completion of the Junior Ranger Booklet, the child is awarded a Junior Ranger Badge. For students unable to visit National Parks, the National Park movement has created an internet site ‘WebRangers’. By accessing this website, children and young adults can browse the various parks programs and tour the parks using their virtual tour page. National Parks and Preserves offer a wide variety of curriculum based courses and professional development programs.

‘Travelling Trunks’ and ‘Ranger Guest Speakers’ are two innovative programs curriculum based programs available to schools. The parks link closely to schools offering curriculum based programs on a range of environmental science and history themes. They conduct teacher professional development courses aimed to raise the understanding and proficiency of teachers in the natural environment. A most innovative program is the ‘Teacher to Ranger to Teacher Program’, which selects teachers to work as park rangers in the parks before recommencing their teaching roles at the beginning of each school year.

Many National Parks’ education centres and field schools provide in-depth environmental education programs for small groups in natural settings. The courses range from one day field trips to longer periods of time when undertaking wilderness experiences and research. All programs undertaken in the National Parks are designed to introduce young people to the outdoors.
By doing so the Park ‘place based’ programs allow children the freedom to explore what nature is and to discover their relationship to natural environment, thus awakening in their young visitors, a sense of appreciation and understanding.

**Volunteering Opportunities Abound in National Parks and Preserves.**

People volunteering in National Parks provide a huge economic benefit for the National Forest Parks and Preserves each year. Volunteering is seen as an American tradition and its impact upon the sustainability, is most valued by both Government, and private agencies and organisations. The National Parks throughout USA highly prize their volunteer workforce, many of whom return to the particular parks for successive summer seasons. The opportunity to volunteer is made more assessable by the National Parks Services website ‘Volunteers in Parks’ (VIP) Program. The website supplies general information on volunteering, a list of current volunteer opportunities and a volunteer application form. The ‘Support Your Park’ website offers internships and training. In addition to the National forest volunteer websites, the US Government provides a website ‘volunteer.gov’. This website lists volunteer opportunities throughout the United States, enabling volunteers to locate the exact position which best suits their particular skills. International Volunteers are welcome and a special website ‘International Volunteers in Parks’ attracts many overseas volunteers each year.

The roles of the volunteers are diverse, at Denali National Park, suitably skilled volunteers work as interpretive naturalists, preparing and delivering educational programs and providing information in visitor centres. Others with skills in hiking, camping and outdoor survival skills are volunteering at the visitor centres, advising visitors who are contemplating visiting the backcountry regions of the parks.

Volunteers are utilised in resource management assisting researchers and scientists in a variety of field and office work. Such work may include wolf and golden eagle research, bear-human conflict management and seed collection amongst a myriad of other field work opportunities. Similarly to the Tetlin Wildlife Refuge, Denali utilises volunteers as campground hosts informing visitors of camp ground rules, bear safety, food storage and general park information. Volunteer hosts must have their own accommodation usually a RV or caravan. There is no charge for the site and fuel for generators and use of the campground facilities are free. This aspect of volunteering is so popular that most positions are filled by returnees who volunteer year after year. Volunteers are also utilised to build and repair trails, boardwalks and viewing platforms.
Limited housing in the form of cabins is available and trailer pads are set aside at each of the camping grounds for host volunteer use. Volunteers pay for their travel to and from the parks, but the payment of a small stipend is not always given. A two week training course is given to all volunteers undertaking interpretive and backcountry positions, for other positions, on the job training occurs when required. Despite the lack of monetary reward, the volunteer positions in National Parks and Preserves are highly sort after and are usually quickly filled.

**Indigenous Inclusion: The right to belong**

Local Alaskan Tribes have lived in the Denali and Kenai Peninsular Regions for many generations. Their trails crisscross the landscape and its archaeology suggests people have made their homes in their precincts for over 12000 years. With the retreating of the glaciers, and melting of the ice, archaeological evidence of this has been recovered in the form of artefacts and tools. Cultural Resource programs at both Kenai and Denali have documented the stories of the people and the land, providing a valuable resource to share with their visitors. At Exit Glacier, the ‘Alutiiq’ Program for school visitors, explores the way people lived on the land, and students are lead to discover the way weather and the bodies of water influenced where the tribal homes where built and how they were constructed, their hunting and gathering and transportation. The cultural programs of both parks share the stories, music and art of the indigenous people. Their traditional cultural past is preserved in the archaeological sites situated within the parks’ boundaries.

The ties to the land in Kenai Fjord National Park were recognised in 1971 when Alaska Native Claims Settlement Act (ANCSA) allowed descendents to reclaim ancestral land. Today, 42 000 acres within the park is Native Land. In both Denali and Kenai, the same act allowed subsistence hunting and fishing to occur. This has resulted in a co-operative approach by all parties to ensure wildlife numbers are carefully maintained at sustainable levels. Like Tetlin Wildlife Refuge, traditional land management knowledge and practices are respected and have become integral component of modern management practice.

**Chugach Children’s Forest: Chugach National Forest. Nick Racine, ; Sarah Baurio**

Chugach National Forest is the farthest north and west of all the USA National Forests and one of its largest. It has a diverse sub arctic terrain intersected by mountains and rivers. It is home to 10,000 glaciers.
Chugach is divided into three natural regions, Prince William Sound with its spectacular fjords and tide water glaciers, Copper River Delta largely comprising of one of the largest wetlands in the western hemisphere and the Eastern Kenai Peninsula containing spectacular forests and open tundra. Chugach is criss-crossed by five hundred miles of trails and tracks. It has a number of campsites and isolated back-country cabins in designated areas within the Forest precinct. Its spectacular scenery and its diverse wildlife, particularly its migratory birds, make Chugach National Forest a most sought after wilderness destination.

Chugach’s ‘Begich, Boggs Visitor Centre, the park’s centre for administration and interpretive education, overlooks Portage Lake with the Portage Glacier on its eastern shoreline. The centre contains many interactive displays and rangers are on hand to answer questions. Throughout the year, the centre runs informative, education programs and special courses for the more extreme outdoor pursuits of mountaineering and wilderness trekking. Like similar wilderness parks and preserves, Chugach provides a valuable education program for students and young adults. It links these to schools across the country through its education website and in a wide variety of onsite programs and camps for visiting schools and groups, each carefully adapted for a range of age groups and abilities. Chugach National Forest personnel firmly believe in the need to outreach those children and young people who have become disconnected with the natural world. Its goal is to reconnect families and particularly children to the outdoors.

The Chugach Children’s Forest.

The adoption of this core principal saw the development of an innovative program running in conjunction and linking to the existing Forest program, the Chugach Children’s Forest. Its vision is, ‘to build connections between kids and everything National Forests and the outdoor world has to offer... Chugach Children’s Forest. has led to a new approach to educating younger visitors and their families. The Children’s Forest is creating new and enhanced programs, events and facilities leading to a new generation of child centred opportunities on public lands. To achieve this, Forest administrators are actively developing strong partnerships and collaborative processes. Four over arching themes emerged from this, the first, to connect kids, families and adults to healthy outdoor activities. Secondly, and its immediate concern, to combat youth unemployment and to ease economically challenged communities, by the establishment of connections to pathways which lead to outdoor education and environmentally orientated career paths is considered critical.
The undertaking to establish young people’s connections to expanded public lands by fostering stewardship and civic participation is seen as vital for the future viability of forests and natural places. The forth theme, reflected Alaska’s vulnerability to global warming and concerns the effect it is having on its unique landscape and its flora and fauna. Chugach Administration believe, for the Forest to survive, strong connection leading to climate change understanding and local solutions is critical.

To implement these, a ‘Stepping Stone Approach’, has been adopted. It sees building connections to the outdoors often requires a series of steps spanning both landscapes and life-spans. This adopts the recommended approach of small steps, beginning with the easiest and most familiar, your own backyard or park, (outdoor play) and progressing to City or State Parks (service learning), then ‘Accessible Forests’, day use and camping areas,(internships, jobs and careers; until ultimately to ‘Youth Managed Forests’(wilderness adventure, lifelong stewardship).(7)

The importance of strong partnerships requires the establishment of enduring and skilful partners. Among the larger partners, the National Forest Service and the Alaskan Geographic, there is a wide range of smaller bodies, organisations and individuals. Volunteer positions are advertised on the Chugach website, and offer a similar opportunity for employment, to those in other public lands websites. Camp site hosts, trail maintenance and interpretive positions are the current positions available for interested volunteers. Due to the present economic climate in the USA, the amount of volunteer positions available is closely tied to the economic viability of the Forest and can vary from season to season.

Children Lead the Way: Volunteering in the Chugach Children’s Forest:
Volunteerism is encouraged at Chugach National Forest and is an important aspect of the Chugach Children’s Forest. It is seen as a way for children to make a productive contribution to the environment, while at the same time, develop positive connections to nature. The positions for volunteers to help children and young adults in the Forest are varied;

- student mentorships, helping youth to explore career and educational opportunities in science, technology and climate change solutions,
- Guest speakers and educators in Chugach Children’s Forest’s youth programs.

- Working with young people and children in a variety of forest programs, lend a hand on trail work projects, research programs and a number of forest outdoor activities. (8)

Children of all ages are encouraged to volunteer in a number of activities. Older students may volunteer as part of schools programs, organisations or groups such as scouts. Younger children may volunteer with their families, the annual ‘Bio Blitz’ held in July, is one such experience. Presentations and ‘hands on’ learning sessions are given in the Portage, Begich Boggs Visitors’ Centre, followed by the opportunity to participate in a variety of outdoor activities with rangers, volunteers and scientists as part of survey teams. Such surveys are; ‘Kids Blitz Tree Identification’, ‘Ice Worm Safari’, ‘Bird Karaoke and other Ways to Learn Bird Songs’, to name but a few activities on offer for young volunteers in the annual Bio Blitz. Data collected from the surveys is added to the parks register of flora and fauna. All activities and survey opportunities are free of charge and camping sites are made available for families and youth groups if required. Annual Youth Expeditions have proven to be an expedient way students and volunteers can ‘partner’ in the Chugach’s operations. Working along side scientists and Forest personnel, students observe and document impacts of climate change on marine and coastal ecosystems of Chugach’s coastline. In the summer, in association with district schools, students record and photograph changes to the Forest and present their findings to the Chugach National Forest Leadership Team. Some student volunteer programs require students to camp in the forest for several days, or may require travel by kayak down rivers, to restore fish habitats. Chugach Rangers working with students from local schools undertake weed eradication programs and monitor feral plant invaders.

The importance of youth volunteers at the Chugach Children’s Forest is widely acclaimed as a way to introduce children and young adults to nature. It builds in children, a growing understanding and appreciation of the natural world and encourages the development of life long commitment to conservation and protection of the environment. The concern Chugach Administration has, is how to make the Chugach experience available for all children to access its outdoor programs and importantly, experience nature in its wild places. The Children’s Forest Board is actively researching ways to children and youth from lower socio/economic communities in response to the US Government’s proposal; ‘No Child Left Inside’.

(8) Alaska Geographic: Children’s Forest -2010 Youth Programs / Alaska Geographic, Chugach Children’s Forest
Sharing Culture, Chugach Forest’s Native Communities:
Chugach National Forest has been home to Alaska Native Tribes for thousands of years and remnants of their traditional houses are still evident within the Forest’s boundaries. Today the descendants of four prominent native groups, the Kenaitze Indian Tribe, the Sugpiaq people, the Yupik and the Eyak tribes live or have areas of traditional land within the Forest boundaries. Their rights to traditional land and subsistence hunting have been settled by government legislation. Under the same act by the US Supreme Court, the Alaskan Native Tribes were given status as sovereign governments.

Recognising the four tribes share the same desire to be stewards of the land, Chugach National Forest is committed to integrating the cultural heritage and traditional indigenous practice of Alaska Natives into the Forest’s programs and management. Traditional stories and art are featured at the Begich Boggs Visitors’ Centre. An interpretive signage marking the early native history has been established at ‘K’beg Interpretive Site’ near the Russian River Camp Ground. On the shores of Nuchek Island within the surrounding Prince William Sound, children and elders reconnect to their heritage at the Nuuchek Spirit Camp. The camp is designed to raise awareness of traditional history and culture. Activities include gathering and preparing subsistence foods, language lessons, woodcarving, beading, traditional singing and dancing. Story telling is important in cultural history, practice and learning values.

Tribal areas are clearly designated on Forest maps and visitors are advised to gain permission from the relevant Tribal Council before entering the prescribed areas. Like other public lands in Alaska, indigenous heritage and culture in an integral component in land management and education programs.

Homer: Alaskan Coastal Studies, Alaska Maritime National Wildlife Refuge, Alaska Islands and Oceans Visitor Centre:

*Homer is a small coastal town on the shores of the spectacular Kachemak Bay is surrounded by wilderness and ocean. It is a popular tourist and holiday destination, where among its variety of outdoor activities, fishing is the highlight.*

Homer is the headquarters for the Alaska Maritime National Wildlife Refuge, situated within the boundaries of the Kachemak Bay Research Reserve. The bay provides a pristine environment for ecological research and education. Early spring each year the Kachemak Bay holds the annual Shorebird Festival celebrating the arrival of the migratory birds which use the bay for feeding and nesting in the summer season.
The Centre for Alaskan Coastal Studies, and the Alaskan National Maritime Wildlife Refuge, which conducts its environmental education programs through the Alaska Oceans and Islands Visitor Centre, are the key agencies for teaching young children and students. The latter has a comprehensive program of educational learning, teacher training and conducts accredited secondary courses in the marine sciences. An online curriculum is available for teachers in marine and terrestrial studies under the auspices of the Alaska Department of Fish and Game. The Alaska Maritime National Wildlife Refuge is the most remote unit of the entire National Wild Life Refuge System. It is responsible for 47,300 miles of Alaska’s Coastline with its 2,500 islands, islets and rocky reefs. The refuge hosts sea bird populations of both national and international significance and provides nesting habitats for 80% of all seabirds in North America. Its primary goal is to eliminate the invasive species such as rats and foxes on the islands, which have had a catastrophic impact on seabird populations and inter-tidal diversity, to restore the natural diversity of its lands.

What was common to both the centres was the education of the public on the unique coastal environment of Kachemak Bay and the surrounding inland area. The volcanic, snow covered islands across the bay, provide a rich environment for research in their relatively untouched, pristine wildernesses. Many learning opportunities are ‘hands-on’ and all take students into the outdoors. Tide pooling, coast care, estuary hikes, migratory sea bird surveys are ways in which young children and their families can be involved in practical learning activities. Camps and field trips are available for school groups, visitors and members of remote island communities. The goal embraced by the centre, is to implement science based education centring on experience based science instruction. There is a broad focus on empowering youth to take a leading role in environmental management. After the disastrous oil spill of the Exxon Valdez and its subsequent clean up by thousands of volunteers, coast care is a major focus for Homers residents. From a young age, children attending the centres are taught about the need for science based information on critical environmental issues. They are encouraged to take an active role in protecting and conserving their fragile, unique, coastal environment. Both environmental education agencies see empowering children for lifelong stewardship the most important outcome for the future of the Kachemak Bay Region.
Volunteerism is the heart of the two environmental learning centres. Each year volunteers are recruited to help in the wide range of programs, particularly in the summer holiday season. Prospective volunteers apply for positions advertised on both government and agency specific websites or through advertisements in local papers and at the centres. Resident volunteers for year round programs are needed particularly for school groups and youth overnight field studies. Volunteer labour for maintenance and building programs are a high priority and manning interpretive centres and office work is also required in the busy holiday season. Community Based Citizen monitoring is a key component of their coast care program. The Kachemak Bay Coast Walk is in its twenty seventh year. Local residents, family, school and visitor volunteers annually monitor the health of the Bay’s coastline and record the impact of human activities. Aligned to this are beach clean up days and wildlife surveys. Homer has an environmentally conscious community that works tirelessly to protect its environment.

Finding their place: Alaskan Marine Camps for Native Alaskan Children

In the Homer community, Native Alaskan artists and craftsmen, story tellers and musicians, keep alive the ancient traditions of the first inhabitant of the region. In support of this process, the Alaskan National Wildlife Refuge conducts Stewardship Camps for children from the Aleutian and Pribilof Islands. These one or two week camps are held each summer and are free to the participants. Stewardship camps are held in specific tribal locations within the Kachemak Bay Region. The camps are held in partnership with the local Native Corporations, community governments, the Aleutian and Pribilof Island Association and the community schools of Sand Point, the Pribilofs and Unalaska. Elders from the area, together with Native craftsmen and artists, the Refuge educators and biologists, and community volunteers are the camp teachers and providers. The camps’ activities integrate Refuge resources and natural processes with local cultural awareness and practice. Students attending each camp, learn about traditional management of land and its subsistence usage. The goal of the camps is to develop a sense of stewardship, coupled with a pride and understanding, of the Alaskan Native culture. By tailoring the needs of each camp, to those of the host community, camp personnel hope to address local issues, as well as awakening in the young people, the understanding of the need for environmental stewardship. By empowering the students to find solutions, it is hoped the camps will provide the acquisition of the necessary skills and offer encouragement to young people, so they will become future leaders in their own communities.
Alaska presented an important overview of large agencies in both the National Forest Service and the National Parks and Preserves working to educate adults and children about the unique Alaskan environment. Its vast wilderness areas, its rugged landscapes, and its extreme climatic conditions, creates the opportunity for young people to explore a natural world of many extremes. Their goal, to develop a stewardship ethos in young people underpins their wilderness programs. While the native village of Tanacross and the homesteaders of Tok, provided an understanding of subsistence living, with its sustainable living practice of conservation management. All contributed to the unique role Alaska plays in sustainability education of young citizens.

**Lower Forty Eight States: The West Coast:**

**Oregon: World Forest Centre and Alder Creek Children’s Forest.**

**The World Forestry Centre: Ric Zenn, (Senior FellowWFC.)**

The World Forestry Centre’s mission is: *‘to educate and inform people about the world’s forests and trees, and their importance to all life, in order to promote a balanced and sustainable future.’* (9)

The World Forestry Centre began as a privately funded US Forest Management Organisation in Portland, Oregon. But after the Mt St Helens eruption affected forestry world wide, it shifted its focus, to become an international research program, offering world wide support in forest research. Its offers a range of forest education programs to a wide variety of professional forestry based organisations and industries. Importantly, it extends this focus to educational institutions, offering programs for students from kindergarten through to tertiary levels of education. The World Forestry Institute is the information services sector of the Centre and offers its services across the world. This is possible through the support of a broad network of global contacts in forestry. The International Fellowship program, the premium professional development program of the Institute, is open for leaders in forest research and environmental education from countries world wide.

A second aspect of the World Forestry Centre is its Discovery Museum, with its interactive exhibits and its offsite Tree Farms, two working forests allow students to participate in a variety of programs provide the latest, best practice learning for both students and adults engaged in Forestry occupations. The Magness Memorial Tree Farm offers a practical outdoor learning approach to school children.

School programs can be as informal, as hiking through the Forest, or specialised, with learning programs on ecosystems, wildlife habitats or forest ecology. Overnight cabin rental is available for groups who are conducting extended education activities. The World Forestry discovery centre contains a plethora of self guided teaching exhibits and interactive ‘hand on’ learning activities. Students and families visiting the Centre are free to explore at their own pace or through their own interest. All are designed for participants to build their own adventure and chose their learning pathways. The philosophies, that choice is empowering, and students want to discover, drives the educational process of the World Forestry Centre.

Volunteers and Internships Underpin the World Forestry Centre Programs.

Being a non profit organisation, The World Forestry Centre actively promotes volunteerism, and in addition, offers internships for suitable applicants. The volunteers are utilised in the three educational programs of the Centre; the Discovery Museum, Tree Farms or in the World Forestry Institute. Depending on qualification, interests or experience, volunteers fill a wide variety of roles, both indoors or in the field. Internships are similar to volunteering, although unpaid, the intern receives benefits for his participation; professional experience in a national or international environment, learning about the local and global forest industry, natural resources and tree farm management.

There are also administrative positions; involving networking and program organisation. The Education section of the WFC entails; working with Forestry Educators, both in the field, or in developing curricula. The World Forestry Centre accepts volunteering groups as well as individuals. The internship program has proved very popular and receives applications world wide.

World Forest Centre, Indigenous Participation, in a Global Entity

The World Forestry Centre, being a global Entity, embraces indigenous forestry management in its world wide forest community. It provides information and expertise, as well as networks, linking forest operations in developing countries with those of more technically advanced forest management. Importantly, it advocates sustainable forest management practice, particularly in regions where forest habitats are being destroyed through excessive logging.
In its role of the global forest management, the World Forest Centre is inextricably linked to the indigenous cultural aspects of forest management in the USA, where Native Americans are among the largest landowners of commercial forestry resources, making up 4% of USA Forests.

In these communities, commercial forestry is seen as a way of escaping the widespread poverty and unemployment, often a continuing problem on the reservations. Forestry training, and employment in reservation forestry, is seen as a way to help reduce youth unemployment. Traditional forestry practice can require a different approach to modern profitable clear felling practices. Controversy can arise when the social needs, modern economic pressures and traditional environmental management are in conflict. To the traditional forest managers, the forest is more than a commercial entity, as it supplies many necessities and has spiritual value. Within its discovery centre and in its outdoor forest programs for schools, the World Forestry Centre teaches the role the Native American tribes played in maintaining healthy forests. How they lived within them, their subsistence way of life and their spiritual significance in their stories, songs and dance.

**Alder Creek Community Forest: Jim Proctor, Director.**

*Alder Creek Community Forest, an expansion on the original Alder Creek Children’s Forest* is a charitable non-profit environmental education organisation, situated on privately owned eighty acre parcel of land containing a mixed conifer forest and part of the 2,300 acre Alder – Jordan Creek watershed.

It includes, as its partners, the Cow Creek Band of Umpqua Tribe of Indians, owners of a further five hundred acres in the watershed lands.

The Alder Creek Community Forest has developed ongoing partnerships with four local school districts: Days Creek School District, Glendale School District, Riddle School District, and South Umpqua School District. A ‘Hands on the Land Site’, it also has a MOA agreement with the National Forest Service. This memorandum of agreement undertakes to improve water quality in watersheds by maintaining and restoring natural forest systems. (10)

Alder Creek Children’s Forest has educational programs offering a wide range of practical learning experiences in conservation and management of healthy forests, watersheds and communities.

(10) [http://www.handsontheland.org/site-profiles?Itemid=5&sitecode=accf](http://www.handsontheland.org/site-profiles?Itemid=5&sitecode=accf)
Alder Creek provides opportunities for students from kindergarten – year 12 to move their classrooms to the outdoors. It also extends participation in programs and activities to community volunteers and to family groups. Alder Creek Children’s Forest’s conservation and education programs are strongly supported by its extensive links to partnering environmental and science organisations, schools and universities. Jim Proctor, its Director, firmly believes field based activities require strong links to technology to increase their positive impact. The ‘Oregon Explorers’ website, co-ordinated by Alder Creek is a comprehensive website linking Oregon schools to the Alder Creek environmental education facility. Its pilot K-12 program has a wide range of comprehensive teaching tools for teachers, while linking students to expertise not readily available in the classroom. Alder Creek’s interactive website offers viewers five locations to ‘visit’ and locate important environmental treasures.

Volunteer Support
Alder Creek Community Forest actively fosters volunteering and much of its infrastructure development is the work of community volunteers. The work of volunteers is highly prized and volunteers are acknowledged for their efforts by a series of volunteer nights. A Friends of Alder Creek Community Forest Group is active in their support of the Forest, participating in all programs, both educational and in conservation. This brings to the Forest the skills and knowledge of retirees and professionals, along with youth conservation groups and the local Native American Umpqua Indian Tribes who have inhabited the region eight hundred years before white settlement.

Cow Creek Band
Alder Creek Community Forest has created a successful partnership with the local ‘Cow Creek’ American Indian band of the Umpqua Indian people who occupy land within the immediate watershed neighbouring Alder Creek. The two groups often combine to reach their common watershed restoration goals. The Cow Creek Foundation uses profits from its gaming resorts to help fund programs by the Oregon Youth Conservation Corps in environmental restoration, employing disengaged youth in a number of ‘hands on’ programs. One such program is the successful ‘Youth River Steward’s’ program which brings disadvantaged youth to the outdoors to experience the natural world and to participate in positive conservation projects, as restoring river habitats.
California’s ‘One Cool Earth’ Liberty High School, ‘Life Lab Classrooms’
Laureate College, CREEC

‘One Cool Earth’, Greg Ellis Director.

‘One Cool Earth’ is based in San Luis Obispo County California. It runs several small tree nurseries in conjunction with environmental education programs at several local schools. The main program is located at Liberty High School in Paso Robles, CA, just north of San Luis Obispo. The program targets ‘at risk’ students who are at risk of drug abuse, gang involvement or dropping out of school. The main goal is to establish alternative paths for the older high school students in non academic streams in their final years of education. The Innacee Foundation is a key partner in the project and is vital in integrating purpose driven learning in the program. The cofounder, Bob Bourgault, teaches the ‘Greenworks’ class and its headquarters in Paso Roubles. (11)

Liberty High School

Students involved in the ‘Greenworks’ class are non academic students in their last years of secondary education. The program offers these students and alternative practical education with an emphasis on practical skill based learning. A small tree nursery is located within the school boundary. Here the students learn to propagate trees, sell them on or donate them to local revegetation projects. The goal is to develop the program into a sustaining student enterprise. Work is divided between teams who work on the technical operations, production, marketing and leadership. The students receive a portion of the nursery’s income as incentive for staying in school and working. They also achieve high school credits in art, physical education, science and social studies on completion of the program. Work experience in the nursery encourages students and enables them to gain skills giving opportunity for higher education or entry into the workforce.

The nursery practices provenance seed collecting when propagating their annual quota of 10,000 trees. Drought tolerant plants are grown in the nursery to help with the region’s water-hungry landscape. The tree nursery project is one part of the Green Work’s Environmental Program empowering students to create environmental solutions. Green Works students created an award winning soy candle business, receiving their commendation from the local Air Pollution Control District for their work in sustainability.

(11) Greg Ellis, Director ‘One Cool Earth’<greg@onecoolearth.org>
Other Green Works students are developing a worm composting unit utilising the school’s cafeteria waste to provide fertilizer for the nursery and the local market. Mentoring is an important aspect of the Cool Earth Program. This has resulted in the formation of important partnerships with local business, community, government and professional bodies participating in the Green Works program. Students feed their solutions back into the community and make presentations to local and government leaders. Volunteering is the foundation for many of the revegetation programs, particularly when planting on public lands and reserves. One Cool Earth sources its volunteers through its website ‘volunteerslo’, the volunteer resource for San Luis Obispo. They involve people from a multiplicity of backgrounds, ranchers, farmers, students, teachers, retirees and government and corporate bodies. As partners to students in the field, all are committed to the conservation of the regions unique canyon and grassland landscape.

‘Life Lab’ Class of Laureate College; Heather Noyes, (Environmental Science)

Life lab is a living science based program, in which the teacher using the school gardens linking them into classroom learning giving relevance to science through real life application. The program emphasises the integration of grade level curriculum to applied learning in the Life Lab garden. It has a strong emphasis on sustainable and environmentally aware practices. The projects involvement with the local Farmers Market incorporates community based learning and financial literacy. ) (13)

Life Lab gardens incorporate classroom in learning in the practical learning experience of gardening, with all its associated activities such as worm farming, water saving, recycling, reusing etc. The program was founded in Santa Cruz and has been adopted in many Californian Schools. Its primary goal is to teach children to care for themselves and others, and ultimately the world, through gardening and the natural environment.

CREEC (Californian Regional Environment Education Centre) Theresa Lees; Regional Co-ordinator.

These programs are supported by the Californian Regional Environment Education Centre, (CREEC). This agency has developed a network of environmental education resources and training through the Californian Department of Education it has developed a garden based curriculum from kindergarten to year twelve.

The curriculum includes information cards, teacher resources and student workbooks all can be accessed online. The program is further strengthened by its links to history and the social sciences, and has been influenced by the Federal Government’s Education Policy ‘No Child Left Behind’.

**School Gardens Link to Native American History**
The practical learning focus of the program gives wider and more successful outcomes for less academic children. Its links to Native American History, results in the growing of traditional crops in the school Life Lab Gardens. A popular Californian summer garden is the ‘Three Sisters’ garden, where the traditional Indian method of growing corn, squash and beans, is adopted by schools throughout America. CREEC has a local Children’s Discovery Garden in the San Luis Obispo’s Botanic Garden and is active in holding workshops and volunteer training for Life Lab and Community gardens for schools across the State.

**Master Gardener’s Volunteers**
Volunteers are an essential component of Life Lab and Community gardens and participating schools have weekly rosters of skilled volunteers to help in the practical aspects of the gardens. The volunteers are also heavily involved in the gardening education of students, especially in food preparation and marketing of school garden produce in local farmers’ markets. Schools actively seek parent volunteers to assist in the garden programs. To ensure the volunteers have the necessary skills in gardening, a Master Gardeners Training Program is available for participants. The cost of the training is offset by the hours made volunteering in schools and community garden programs.

**California summary:**
California provided the research with a school based approach to environmental education. Californian schools’ partnerships with regional organisations and businesses provided vocational opportunity for academically challenged students. The development of environmental curricula by school and environmental organisations is the foundation for a rich place-based educational experience for Californian students.

Washington DC provided an insight into the National focus on environmental science education. The passage of the ‘No Child Left Inside’ Act reflects the new process that is taking place across the United States of America. From the National Capital, to the various State Government Agencies, businesses and schools, civic organisations and grass roots groups, the move to create a society of environmentally literate citizens is a firmly held goal. The ‘No Child Left Inside’ Coalition strongly supports the current legislation which sees education placed within the context of the family and community and ‘steeped in place’. Place Based Education requires community input, the first time for decades community and parent volunteers are required in these outdoor classrooms. As environment links to the historic ages in America and across the world, more than ever there is a place for Native Americans and their cultural practice. (14)

National Forest Service: Dr Sofiya Samman, Director, Conservation Education Program; Vicki Arthur, Conservation Education Specialist.

The National Forest Service, an agency of the United States Department of Agriculture, through its National Wildlife Refuges, has had a long association with educating families on caring for the wilderness areas of America. The National Forest Service believes the development of strongly held stewardship ideals are crucial for the future preservation of the Nation’s forests and wilderness areas. The agency motto ‘Caring for the land, serving people’ has remained the same for a century. Its directors and educators firmly believe that children are tomorrow’s stewards of the wild places and to achieve that goal, conduct many programs to bring children to nature. The National Forest Service Conservation Education Program is a multi layered program designed to address a multiplicity of needs.

With 155 national forests and 20 grasslands on 193 million acres in forty three states, the Forest Service offers its big backyard as a rich resource for children and adults of all ages. While managing twenty million acres of wilderness areas, 143,000 miles of land and water trails, and more than 6,000 camp grounds, the agency offers these forests, lakes, ponds, reservoirs, experimental forests and visitor centres for learning, studying, fishing, hunting, hiking, ‘geocaching’ and camping. Forest Service workers offer children an endless array of recreational and educational opportunities in a myriad of settings to help reconnect kids with nature. (15)

The Forest Service programs are designed to allow students to practice citizenship in their own localities and communities, to renew within teachers and children, their values of a sense of place. In their program ‘A Forest for Every Classroom’, teachers are given training by natural science professionals to learn ways to utilise forest resources in their class teaching. Its Natural Science Journals, ‘Natural Enquirer’, is distributed to classrooms across the nation. Encased in scientific process, the journal raises important global issues of climate change and urbanisation, allowing students to develop a global citizenship perspective.

**More Kids in the Woods: Smokey Bear.**

The national movement to bring children to the outdoors sees the Forest Service striving to make the natural environment available for all students, especially the impoverished city children for whom travel to a wilderness forest is unaffordable without the Forest Service Urban Connections and the National Congress’s program ‘More Kids in the Woods’. These programs offer urban children the opportunity to travel beyond the classroom, beyond the city to explore the woods, wetlands and study the grasslands of the plains. For Teenagers, the Green Collar Mentoring program offers students from New York the opportunity to study the city’s forests, working alongside green collar workers who come from similar backgrounds, to be trained and employed in the cities green spaces and environmental research. A network of partnerships between environmental science based organisations and urban schools, creates the opportunity for mentoring in job training programs between the youth and the scientists and environmental managers. The students work jointly in paid internship programs and are involved in ‘Research in Action’ or the ‘Bronx Youth Urban Forestry Empowerment’ programs to green the city.

**Inner City ‘Green’ Programs.**

In Portland, Oregon, the National Forest Service has a strong involvement with inner city schools through its ‘Windows on Watersheds & Wild-Life Program’. In this program the students work alongside professionals from partnering agencies, such as Alder Creek, to provide a high quality on the job natural resource training. Similar programs run across the States, Urban Connections in Detroit, teaches high school students to carry out Forest inventories in its conservation programs and in the ‘Henry Ford Youth Camp Program’ the emphasis is on learning forest management. Washington Dc’s ‘Urban Kids connecting with Nature’ students looked at the National Capital’s natural environment including river ecology in the ‘The Urban Tree House Program’.
An extensive network of partnerships has resulted in nation wide conservation education programs linked to the National Forest Service. Its role in teacher training, distribution of resources and providing a wide range of practical, ‘placed based’ environmental education, places the National Forest Service at the forefront of conservation educators.

**Students as volunteer teachers**
The effectiveness of peer teaching is recognised by the National Forest Service and its partners in their endeavours to connect kids to nature. Emerging from their nature experience, students are engaging in teaching other students newly engaged in environmental programs. Building on this trend, the National Forest Service has developed ‘Conservation Education Internship’ programs which employ teenagers as part of ‘Intern Teams’. Over the summer months the teams work in a variety of ‘hands on’ activities both in the field and in stewardship training programs. ‘Generation Green Teams’ connects low income, diverse youth in hiking trail adventures culminating in seven weeks employment with the National Forest Service in natural resource management. Students completing the course volunteer their time in similar programs or as community environment volunteers. Local schools award High School credits for those completing the summer programs.

**Volunteering is central to the success of the National Forest Service Education.**
The Service actively advertises the many volunteer positions on its website and through other media outlets. Volunteering positions are quickly filled for the summer vacation months when many of the programs are run. In the spring, successful volunteers receive training for the upcoming summer season. Volunteering in conservation education offers a wide range of opportunities, enabling volunteers to find positions which are best suited for their skills and interests. ‘Friends Groups’ are another popular form of volunteering in the National Forest Service programs. ‘Friends Groups’ are usually drawn from local communities and usually volunteer at particular local sites. These local volunteer groups can be engaged in site management, conservation and preservation, as well as in education, or managing site shops and information centres. Volunteering in the USA is encouraged and most American citizens see it as their civic duty.
The National Forest Service/ Native Americans: Partners in Conservation Education.

The National Forest Service is actively involved developing ongoing partnerships with Native American Tribal Groups in conservation and preservation programs across the United States. Government legislation, in giving Tribal lands ownership to Native American citizens, has seen alliances formed between tribal groups and the National Forest Service in Conservation Education, Forest Management and National Resources Conservation Services. The National Forest Service works with Alaskan and southern Indian tribal groups to co-ordinate the management of national forest lands and resources. It works with tribes to honour the First American Water Rights and Reserve Rights Act which allows them to hunt, fish, gather and graze on public lands.

Partners in Preservation

The Agency also partners local Indian Communities in the preservation of traditional, cultural sites. It provides research, technology and technical assistance for the restoration and preservation of the traditional landmarks and icons. One such program; ‘Partners in Preservation’ which uses Native American volunteers, working with National Forest Service archaeologists, documenting and preserving heritage resources. Working as site stewards, the local tribal groups monitor the sites and inform National Forest Service personnel if intervention is necessary.

Publications Strengthen Partnerships.

To strengthen, co-operative relationships between the Forest Service and Indian Tribes, the Service published ‘The Forest National Resource Book on American Indian and Alaskan Native Relations’. Copies are distributed between the National Forest Service officers and the American Indian Tribal groups to promote sound working partnerships between the two entities. An important action by the National Forest Service is the employment of Native American Indians in their Forestry workforce. Currently approximately 1500 American Indians are employed in a variety of occupations across the National Forest Service making up 5% of the total workforce of 30,000 people.
Financial Partnerships Establish ‘Green’ Career Pathways for Disadvantaged Youth.

These partnership programs are an important way in improving the relationships and foster conservation education. They include financial partnerships between the National Forest Service and the local tribal groups which often contribute the profits from their casinos and forestry to help fund special youth conservation projects as the ‘Inter-Tribal Youth Natural Resource Camps’ and the ‘Yanshuka Culture Camps’ in Alaska. A recruitment partnership between the Haskell Indian Nations University and the Forestry Service, and the introduction of a natural resource curriculum has provided career pathways in forestry for Native American Students. Partnerships with the Indian Polytechnic Institute provided the opportunity for Native American students to find employment in the ‘Student Summer Employment Program’ in the local regions. Numerous Forest Service, its combined programs and camps reconnect tribal youth to traditional ways while enhance in they understanding of natural resource and environmental management in forests and range lands.

The American Forest Foundation: Project Learning Tree Green Schools
Foundation: Kathy McGlaflin, Senior Vice President, Education; Al Stenstrup, Director Education Programs.

‘The total forest area of planet Earth is about 15.2 million square miles. It is roughly 30 percent of the Earth’s land area. It is estimated that about one half of the forests that covered the Earth are now gone.’ (16)

A large amount of American forests is owned by private individuals in smaller holdings than the Government Forest Services and National Parks. However, when added together the total acreage of privately held forests exceeds that with National and State ownership. The health and management of these forests is of National concern, The American Forest Foundation supports private owners by providing resources and technical advice to help maintain the health of present day forests and conserve them for the future. In achieving these goals, the American Forest Foundation recognises the need to bring children and families into the forests to raise environmental awareness and develop the skills and knowledge for effective stewardship in the future.

Throughout the United States, the concern for children’s disconnection with nature is growing in momentum. More and more children are growing up in an urban society with its inward connection to the virtual world of electronics. Like the National Forest Service, the Foundation is actively involved in reversing this trend. The American Forest Foundation works with families and individuals to protect and conserve National Forest and promotes Conservation Education through its Project Learning Tree/ Green Schools Program.

**Project Learning Tree/ Green Schools Program**

The main focus of these programs is to work with schools to equip teachers with confidence and the necessary skills to take their students outdoors. Through Project Learning Tree, the Foundation has developed a comprehensive K to 12 curricula in environmental education that is widely used in schools across the United States. In support of this, Project Learning Tree offers professional development workshops nation wide along with the curricula and associated resources. The project Learning Tree Program supports the theory of ‘outdoors, hands-on’ learning and its facilitators work with teachers to implement the programs out side, but linked to traditional learning within the classroom.

**Green Works: Service Training; Learning for the Future:**

A second successful program has become an important aspect of the Foundation’s ‘hands on’ learning goal, the ‘Green Works Program’. This program creates partnerships between educators and students and community to solve local environmental problems. It merges service participation with classroom learning, allowing students to engage in programs that allow a practical learning experience. For teachers and students, it links the classroom with the real world, linking academic learning with practical application, thus making classroom learning meaningful and less abstract. For the community, the program fosters a growing sense of citizenship and stewardship, ensuring conservation of the natural local environment for the future. Communities are the foundation of the ‘Green Works Program’ and along with local agencies and business volunteers provide a wide range of support for the program. The ‘Green Works’ website, promotes volunteerism in its programs. It recognises the skills local retirees bring to the program, and applauds their efforts in providing practical, learning support for the participating students.
Green Schools: Developing Leadership in Environmental Management.
Over one thousand schools across America have signed up for the Green Schools Program which utilises the training of Project Learning Tree and implements its curriculum into the day to day learning of participating schools. The program is designed to allow students to be leaders in developing and implementing sustainability projects in their schools. Five investigations guides student endeavours; energy use, waste and recycling, water consumption, school site and environment. Students locate the problems and work collaboratively to create solutions which are implemented by the whole school. As citizen scientists, the students share their findings with the school board and make their recommendations for change.

Student participation: An Important Aspect of the Green Schools Program.
Students are included in the Teacher Training workshops for new schools entering the program. Students, from schools with a long involvement in the program, make presentations to teachers as part of professional development workshops. This recognition of students as integral participants, project leaders and peer educators reinforces the underpinning philosophy ‘empowering young people to be future environmental leaders’.

Volunteers, Community: Active Partners in ‘Green Schools Program’.
Like all schools embracing the move to environmental ‘Place-Based’ Education, the Green Schools Program requires active partnerships with community organisations, government agencies and volunteers.
As education shifts from the standard models of curricula lead, classroom based education to active outdoors, community based learning Green Schools Facilitators are engaged in helping traditionally trained teachers develop the new skills to effectively manage the transition. Community partnerships are being established with supporting business or agencies and skilled volunteers are utilised as mentors for students or working partners in the field. The recognition of parents as partners in sustainability projects, school gardens and conservation projects is seen by ‘$ Hours Donations’ and is most valued commodity for the Green Skills Program. Volunteerism is celebrated. When the community becomes involved with the schools and schools make the required shift to an ‘Open Door Policy’, student learning becomes a deeper and more meaningful experience.

‘As the community comes in: The students go out’ (15) Al Stenstrup, Director, Education Programs, Project Learning Tree, Notes from discussion September 13th 2011.
Links to Native American Culture:
From the early development of the Project Learning Tree Curricula, The American Forest Foundation worked collaboratively with the Intertribal Timber Council to include Native American culture in the schools’ education programs. With the success of the PTL curriculum this has become an important part of environmental education for American schools. The Green Schools movement has been embraced in a number of tribal schools, where the ‘Green’ philosophy has been successfully adapted to merge with the American Indian culture. Native American youth are members of the Green Schools Student Advisory Council and many Tribal Councils are important partners in local Green School projects.

National Environment Education Foundation: Patti Pride; Coordinator, Partners in Resource Management.
The National Environment Education Foundation (NEEF) was chartered by Congress in 1990, to advance environmental knowledge and action. Its primary role is to link individuals, schools and organisations engaged in environmental programs to trusted professionals. Partnerships with premier organisations, significantly increases the effectiveness and the credibility of the programs. NEEF partners have successfully worked with schools across the United States. The Foundation has helped fund and provide relevant expertise for projects through the generosity of its sponsor partners.

National Environment Education Foundation: Conservation Programs.
NEEF partnerships work in a variety of conservation areas, protection and conservation of public lands. On their annual ‘National Publics Lands Day’ volunteers work along side public land managers on conservation projects in National and State parks and preserves. During ‘National Environmental Education Week’, NEEF partners engage with schools to undertake local sustainability programs. Throughout the year, NEEF provides on line training to assist teachers incorporating environmental themes from their ‘Classroom Earth’ program into their classrooms and across their schools.

Health Partnership Programs Reconnecting Children to the Natural World.
Other areas NEEF has made a significant impact are; ‘Health and the Environment Program’ providing current information on health related environmental issues. It works with its partners to improve public health, especially in the area of child health and in under-served communities.
In its ‘Children and Nature Initiative’, it has a duel purpose; preventing childhood health concerns and reconnecting children to nature. In this NEEF is partnered by the National Audubon Society and the U.S. Fish and Wildlife Service to take disadvantage children to the outdoors.

**Green Communities: Social Responsibility.**
The Foundation’s ‘Business and Social Responsibility Program’ promotes the integration of environmental sustainability principals in workplaces and the community. Partnership programs such as ‘Earth Gauge’, with the American Meteorological Society to provide up to the minute information for weather reports for media and are readily available on websites for individuals. ‘Earth Gauge’ and ‘Planet Connect Programs’ extends the partnership to schools. Through these programs, NEEF provides funding in the form of grants to establish programs in schools and runs competitions, inviting students to become citizen scientists in their own localities.

**Trusted Professional Partnerships are essential.**
NEEF believes trusted professional partnerships build confidence and inspire individuals to become engaged in environmental issues. By engaging with trusted, professional partners, people achieve positive, life changing and lasting benefits, both in health and in the environment.

**NEEF: Volunteers at the Centre of Change.**
Environmental programs and volunteering are synonymous. For NEEF, volunteering is at the heart of change. In NEEF programs, volunteering takes many forms, the volunteering of specialist skills and knowledge, by the professional partnering bodies and highly qualified individuals; the volunteering of schools and companies to participate in environmental issues and in adopting green practice, and importantly, the volunteering of countless individuals who freely donate their time and effort to help conserve the natural environment. Children, young people and adults are all beneficiaries as they implement lasting changes in environmental management, as a result of the National Environmental Education Foundation’s endeavour. For the natural environment, the empowerment of children and adults to make a difference, inspires hope for its future longevity.
Inclusion is the Key
The National Environmental Education Foundation has created links, not only to partnering professional bodies, but has established important partnerships with Native American communities across the United States. These partnerships have developed beneficial programs in Health, ‘Healthy Green Tribal Schools’ and in education. In Tribal Schools, student participating in the ‘Classroom Earth’ program address local issues and cultural aspects of particular school communities. Many tribal communities and their schools are engaged in the Foundation’s premier environmental annual events, National Public Lands Day and ‘National Environmental Education Week’ when students join with adults to preserve their sovereign lands and importantly their culturally significant heritage sites.

The role of the National Environmental Education Foundation, in creating professional partnerships with indigenous communities has been pivotal, in enabling the more impoverished and dispossessed, to develop positive strategies for improved health and well being of its members. Importantly it continues to partner tribal communities in developing strong stewardship ideals for sustainability.

The Smithsonian Institute Washington; Brigitte Blachere, Program Manager.
The Smithsonian Associates.
‘...for the increase and diffusion of knowledge.’ (Smithsonian legacy)
The Smithsonian Institute, with its nineteen museums and the National Zoo, is more than a repository of artefacts and priceless works of art, it is an ever expanding, interactive, educational facility which holds true to its original premise, that ‘every man is a valuable member of society, who by his observations, researches, and experiments, procures knowledge for men.’ (Smithsonian ethos)

Today, as the institution expands its scientific understanding and shares its findings globally, it upholds its original philosophy by encouraging people of all ages to become global citizen scientists. The Smithsonian Institute’s numerous programs are designed to interest and engage all visitors to its museums, zoo and field research facilities. Its vast online network of informal education is designed to link with more formal education of schools and universities. Available for individuals, it has become a valuable partner for all inquisitive minds. The Smithsonian continues to engage people, collect data and distribute its findings, and as it does so, it encourages the emergence of culturally aware, problem solvers and critical thinkers for the future.
Native American Culture is celebrated at the Smithsonian.
One of the newest museums, the Native American Museum, showcases the largest display of Native art, and historical and cultural objects in the USA. Its design, gardens and exhibitions are the result of a collaborative effort of tribal groups across America. Its purpose is to inform its visitors of the cultural richness and history of Native American people. The Native American Museum acknowledges the historic culture and beliefs of the past in a vast array of colourfull, interactive displays, gardens stories and art as part of their educational and cultural programs. Importantly, it also displays and comments on the contemporary aspects of the present, showcasing food, modern art, music and events. At all times it is sensitive of the diversity of the tribal cultures it displays. The Native American Museum serves to educate the general public and reconnect the American Indian descendants to their traditional cultures.

Smithsonian Volunteers:
The Smithsonian Programs has developed many of its programs to target schools and families, especially those with young children. The programs are designed to awaken interest in young children and to build upon their early curiosity with each successive visit. The vast array of programs encourage interactive and encourage practical learning. They include Sleepovers at the various museums and summer camps. The programs are designed to connect participants to the Smithsonian. Each has a different theme: Rocket Camps: Air and Space Museum, War Camp: (History and Literature), ‘Leggobots’ (technology) a few of the many programs and camps on offer. All programs in the Smithsonian, encourage children to be active explorers in discovering their world.

Recruitment of Volunteers for Smithsonian Programs.
To help run the many programs of the Smithsonian, the Institute actively recruits volunteers. Each museum has a webpage to encourage citizens over eighteen years of age to assist in its programs. The large amount of diversity in its museums attracts volunteers with a keen interest in particular fields. On line volunteer forms are filled in and returned electronically. Once background clearances are received, the volunteers are given training in their particular choice of volunteer employment. Smithsonian Volunteers come from a many fields, but all are dedicated in their chosen area of voluntary work. Many, are retirees from the Smithsonian itself, and return to volunteer.
Volunteer roles at the Smithsonian:
Volunteer opportunities include field work, assisting in restoration and preservation of artefacts and art pieces, cataloguing, reception, docents or tour guides, and education presenters in the various museums. Smithsonian Sleepovers alone require around thirty volunteers for each session, and summer camps many more volunteers are needed. The Smithsonian Institute has over 6000 volunteers in its many fields of volunteer employment. The work of volunteers is acknowledged in annual volunteer receptions and service award certificates and Smithsonian pins are presented for years of service. The Smithsonian Institute’s huge volunteer corps is the face of the Smithsonian Institute; its future is reliant on successive generations of volunteers’ commitment and support.

The United States of America: Final Summary:
The USA provided a diverse, but informative study of sustainability programs reflecting the many approaches of a variety of individuals, groups, organisations and government agencies are making in environmental education. Although it is recognised, the time of the research did not permit a more detailed or inclusive study of a greater number of groups involved in sustainability education, it did provide a base for further exploration of this modern day educational phenomena. Whether it is individual intervention or large organisations and agencies, the commonly held goal is to educate the young to achieve greater sustainability practice. Particularly exemplary is the merging roles between the private organisations and schools in educating young children. Dialogue between the groups and established partnerships maximised choice and effectiveness of programs available. Not just left to the education agencies, environmental education curricula and education programs are also produced by other involved entities.

Technology in Environmental Education.
Further strengthening the move towards sustainable practice was the sophistication of American use of technology, providing an immediate, interactive opportunity for its viewers. By linking groups across America, the internet allows greater transference of knowledge and sharing of experience for all participants. From the ‘Hands on the Land’s’ network of field websites of its many agencies; to the Smithsonian Institute as a global source of information and support, highlighted the modern trend in communication; information and exchange of ideas are only a click away.
As never before, young people in remote communities can readily engage in dialogue on global environmental concerns or receive help for local conservation projects. While some critics see technology as a threat, keeping children locked in their virtual world of computers, others see it as a valuable tool, in exchanging ideas and linking the various environmental programs and the diverse groups who engage in them.

In the course of the research, the opportunity to contribute articles to the National ‘Hands on the Land’ Newsletter and to participate in two National Forest Service ‘webinars’ to schools and environmental organisations across America, highlighted the efficiency of the internet as a communication tool. For young environmental stewards, technology allows the sharing ideas and the engagement of others in their quest to achieve global sustainability. The research highlighted the exchange of ideas and linking environmental groups by technology and travel, was seen a desired outcome for all organisations and groups.

**Canada: Inclusion of Indigenous Culture: Professor Emerita of Anthropology: Julia Cruikshank.**

A brief stopover in Vancouver gave the opportunity to discuss an important focus of the research; the inclusion of indigenous culture in sustainability programs. Professor Cruikshank, having lived and worked in the Yukon for many years recording the stories of the Athapaskan and Tlingit Elders and their connections to place, is currently investigating the links between environmental earth sciences and indigenous oral traditions. Much acclaimed anthropologist and author, Professor Cruikshank gave a valuable insight into today's move to recognise and include indigenous culture knowledge and practice into environmental education. Historically, indigenous cultures recognised the fundamental importance of the land to their survival. They lived by the seasons, hunting and gathering foods as each season dictated. The land and all it contained was crucial for survival and thus was respected.

**Colonisation Resulted in Dispossession and Loss of Culture.**

Colonisation saw the imposition of new values and judgements under British Victorian ideology. The same events are differently portrayed in the stories and teachings handed down through successive generations. With colonisation, dispossession occurred and ancient survival practices ignored as the newcomers imposed regulations and exclusion from the old ways.
In the modern times National legislation has allowed Native Americans to make claims over tribal lands. This has resulted in a return of ownership and in respect to traditional dependence on subsistence living allows hunting, fishing and gathering on public lands. Climate change, with the melting of the Glaciers has revealed artefacts from the past; subsequent field work has involved young Inuit people in the anthropological research, however this is curtailed by costs. Other programs are initiated in education facilities and local schools in effort to reconnect Native American children to past cultural practices. For the Native American people of the north, the recognition of their traditional ownership of tribal lands has helped to rebuild their communities, reconnecting the young people to the ancient traditions and beliefs. However for many communities, poverty, poor health and education standards remain a serious problem.

Native American Participation in the Environmental Debate.
It is only in the last decades, Native American tribal groups are emerging to participate in the environmental debate and to share their knowledge of their natural world after a long exclusion.

‘Anthropologists are aware, that throughout the world boundaries of culture, race, gender and religion are drawn ever more firmly as positions to speak from- whether to assert different truth claims or to deny humanity to those who seem unfamiliar.’

Julie Cruikshank, ‘The Social life of Stories, Narrative and Knowledge in the Yukon Territory’; University of Nebraska, 1998. P1


Eire: Green Schools Program: Cathy Baxter: Manager.
Eire’s Green Schools program is part of the Foundation for Environmental Education’s programs which run from the An Taisce’s Environmental Education Organisation in Dublin. The Green Schools Program is part of the Eco Schools International Education Program, an award scheme, promoting and acknowledging long term, whole school action for the environment. It is run in schools in conjunction with several key Irish ‘Green’ sustainability programs.
The Green Schools Program chooses as its focus the four themes of water, transport, waste and energy and includes three additional themes of ‘Nature and Biodiversity’, ‘Life style and Healthy Living’, and ‘Climate Change’. This allows participating schools to be awarded Green school flags as they achieve each goal. Eire has achieved an impressive 85% of Irish Schools participating in the Green Schools Program. Similarly to Green Schools in the USA, the program encourages students to take lead roles in each school program, assessing the target area for improvement, devising the intervention program and implementing the solutions. Students conduct surveys, implement solutions and monitor progress, informing the school body on movement towards goals.

**Green Schools Programs: Jane Hackett, National Manager, Green Schools Travel.**

In areas such as Transport, the schools partner with the Irish Department of Transport, Tourism and Sport which funds them to find more sustainable ways to travel. Schools conduct ‘COW’, Cycle on Wednesday, and ‘WOW’ days, Walk on Wednesday’, in an effort to reduce the need for public transport. ‘SEED’ programs encourage the development of school vegetable and herb gardens, while ‘LEAF’ programs teaches children about Irish Forests and woodlands. All Green School Programs are linked to the traditional educational curriculum.

**Green Community Based Programs: Niamh McDonald, Green Homes Program.**

The Green Schools program runs in conjunction with Green Homes, a program which takes energy saving and waste management into Irish homes. Students are involved in helping to monitor energy and water usage in the homes, as well as, undertaking projects waste management and finding ways to make transport a greener system. Action plans are devised, and certificates are awarded, when goals are reached. The biggest incentive is the reduction of household costs when lifestyle changes are achieved. The Green home program is taught in schools as well as being part of the Green Communities’ project. In a country facing a critical national debt, cost savings in the home and in school expenditure is a critical factor in its economy. The Green Communities Program brings communities together to protect and enhance their environment.
Communities come together to develop communal allotment gardens, as a way of reducing food costs, other aspects of green communities are conservation of public lands and heritage sites, waste management and cleanup of local sites and towns, repairing common facilities foot paths, drainage channels and wetlands. In Dublin, An Taisce is developing food walks, mapping fruit trees, herbs and edible plants on public grounds and parks in the city.

**Green Programs for the Unemployed:**
Most Green Community have programs which target unemployed youth. By including ‘on the job’ training and partnerships with government bodies and businesses young people gain skills to access future employment. Other key community programs and events are the National Spring Clean, Clean Coasts Day and IBAL (Irish Business Against Litter) have been successful in moving the country towards sustainable practice. While anti litter and clean-up campaigns are successful in the small towns and villages, evidence demonstrates there is some reluctance, in the larger cities, to change anti-litter thinking and practice.

**Volunteering Reduces Costs in Sustainable Practice:**
Ireland follows the current trends in dependency upon volunteerism for success in world environmental education. Irish volunteers provide the greatest cost saving aspect of sustainability programs. In all its programs, the volunteer component is critical for success. In the Green Schools Programs, parent volunteers conduct the ‘Walking School Bus’ as they supervise children as they safely walk together to school. Volunteers act as road wardens, assisting students across the roads, as well as volunteering in school gardens and on woodland and forest excursions. By linking to Green Communities Program and National Environmental Events, school programs influence a positive response in Green Homes Programs which in turn engage their local communities into action. The ‘knock-on’ effect achieved in this way increases the number of volunteers contributing their time and effort to improve environmental awareness in Ireland. Community volunteers are active in a number of environmental projects, coast care, clean up days, community gardens and bio diversity surveys and field work. Green Schools and its allied Green groups are pivotal in encouraging Irish citizens to be involved in the growing Irish environmental management and sustainability movement across Eire.
England:

**Eden Project Cornwall: A project of sustainability education for all. (Andy Jasper: Research Manager).**

The Eden Project in Cornwall provided an example of education in sustainability being embraced by the whole nation, not just the local communities surrounding the project, not only the county, or England, but the whole British Isles and beyond. What has caused this phenomenon? It certainly is not traditional education of the masses! It is the immersion of the message in spectacle and fun. With its beginnings in a clay pit, shaped by community vision, the Eden Project has been transformed to be a showcase of splendid engineering and gardening expertise.

Within its isometric domes, huge Mediterranean and Rain Forest ecosystems invite the public to wander the pathways or explore the canopies on elevated walkways. Interspersed are interactive information activities or exhibits inviting visitors to touch, feel smell or taste and learn. Outside the domes, large vegetable gardens and orchards sculpt the landscape with every kind of fruit, vegetable and herb. A restaurant, (pay what you think it is worth) community kitchens and craft spaces are contained in a large hall adjoining the smaller Mediterranean dome. Other buildings and infrastructure focus on waste management and other exhibits emphasise the development of future green fuels and renewable energy sources. The Eden Project is a waste neutral site, all products in its shop are made from recycled materials; even the chairs in the tea rooms are made from the plastic cups used in its restaurants. All food wastes are recycled into compost for the gardens; all waste is recycled within its boundaries. All recycling areas are public exhibits and are utilised in their education programs for participants of all ages.

**Programs to develop a green future:**

*The Narrow confines of sustainability are not just energy use, waste management and environment; the heartbeat comes from the way we treat each other’....(17)*

The Eden Project engages people from all walks of life. It brings visitors in droves to experience its exhibits, take part in the many activities and walk its dome worlds. Education is fundamental to the Eden project and begins at the earliest of ages. The Children’s Program’ Changing the State of Play’ with its ‘Mud Between your Toes’ for young children and ‘Muddy Shorts’ program for disabled children allows children to explore nature and experience its teaching.

‘Mud between your Toes’ connects children of varying needs social housing, schools, playgroups, traveller children and gypsies. The program invites adults to participate in family activities such as den building and water transport.

The Eden philosophy believes *play does not only belong to childhood, but to adulthood too and certainly for communities. A playful community is a sustainable community’*... (18)

If communities are unable to come to nature then nature comes to them. The Eden Project employees and volunteers bring nature into communities building gardens and playgrounds for socially disadvantaged groups. Their ‘Gardens for Life’ Programs have built gardens in poorer community schools both in Britain and in third world nations.

**‘Real Cool Futures’ Program: Green jobs for the Future.**

The ‘Real Cool Futures’ Program is designed to inspire school leavers into Green Occupations for the future. Its motto of ‘Your planet, Your Talent, Your Future’, underpins the project encouraging young people to take up the challenges of climate change in their Green Talent Summer Schools. The Green Talent Program partners with local education authorities, targeting innovative students. It gives career advice and teaches new ways of working in green vocations. It workshops the students in sustainable practice, then provides a week in local businesses and local government agencies where they carry out waste management and energy saving assessments for each enterprise, then devise ways to reduce, recycle and reuse waste. This program has received excellent feedback from all participants and for many teenagers, has introduced them to future green employment.

**Volunteering for Self esteem and Employment:**

The Eden Project runs with a workforce of seven hundred employees and around three hundred volunteers at any one time. Volunteers participate in a multiplicity of work situations and are a vital component of Eden’s success. Volunteers are of all ages and their skills are matched to the roles they undertake in the Eden Project.

Training is available for volunteers entering the project.

An exemplary aspect of the Eden Project philosophy is its philosophy of reaching out to all people, especially those who have been reduced to living on society’s fringes. Several programs to reconnect the homeless, prisoners, addicts and the unemployed to mainstream society run out of the Eden Project.


45.
‘A Taste of Eden’ Program targets the long term unemployed. Its two day immersion workshop and thirteen weeks unpaid works in the Eden Project or off site in local industry is designed to give participants the confidence, skills and experience to be able to get back into the workforce. Its volunteer program runs in conjunction with workshops to help participants cope in employment. Its program covers, stress management, time keeping, team working, communication and skills. It also builds key skills of literacy and numeracy, CV writing, interview techniques and job searching. Personal Action plans are drawn up and monthly meetings to assess progress are part of an ongoing education when the participants have completed their thirteen weeks volunteering in their area of interest.

‘The Great Day Out’ invites homeless people, offenders and excluded homeless people to experience Eden in a personalised tour which includes a close up look behind the scenes of the organisation and work required to keep the Eden machine running. ‘Hands-on’ workshops introduces crafts, painting, potting, planting, harvesting, cooking and eating together is a key part of the day. Participants are then given the opportunity to begin partnership training in the community or as partner volunteers in the Eden Project operations.

‘Growing for Life’ is an Eden program which moves offsite into the prisons, establishing vegetable and herb gardens; offering the learning of new skills and possible future employment on release. This program has been successful in socially disadvantages communities especially in Gypsy or Travellers camp sites.

The Eden Project Demonstrates Community Strength.
The Eden Project has developed an outstanding model for volunteer training, not only for retirees who wish to give time and skills, but for the young and socially disadvantaged, it offers real hope and training for the future. For those citizens who have become socially isolated, the Eden Project accepts and reconnects people through its volunteer programs. For the research it provided a most valuable insight into the strength and commitment of community based programs which are life-changing for its members.
Escot Forest School and Edcott Anglo Saxon Village: Ottery, St Mary: Alan Bruford, Project Manager, Dr Rob Bowker, University of Exeter.

The final phase of the research examined Escot Forest School with its Edcott, Anglo Saxon Village. Escot Forest School is part of the Forest Schools movement in Britain. Based on the Scandinavian approach to education, the Escot Forest School associates believe being immersed in the natural world from an early age, enhances formal learning and develops positive social skills for citizenship. For students, it compliments their formal learning and allows the freedom to discover and create. For participating adults it reconnects them to the natural world and provides the expertise and confidence to take children out of the confines of classrooms and into the natural world.

**Escot Forest School** is part of a large estate in rural Devon, and presents nature based, environmental programs linked to classroom curricula. Its wildwoods and wetland places invite children to explore, discover and create. Escot programs target children and programs are designed to meet a range of age groups. Programs run from one day, to their Camp Wild, residential nature camps, which run for up to a week. For teachers and adults, Escott provides training courses to develop the skills to take classes outdoors and to utilise the natural woodland setting in their teaching. Professional development training and adult team building are two features of the Escot program. All student programs involve a large number of volunteers, either from school parent bodies or from the volunteer network associated with the Escot program.

**Edcott Anglo Saxon Village: Looking back at Britain’s past.**

Edcott Anglo Saxon Village is a recreation of a typical Anglo Saxon Village which would have existed in southern England in the Saxon period. Built under the direction of the Museum of London and the Time Team specialists, Edcott is a living history site enabling individuals and groups to investigate and experience day to day life of their early English ancestors. All buildings, tools and site structures have been constructed using the information and tools of the period. Edcott is part of the Escot Forest School and is a large part of its programs linking history to environmental science. It allows students to learn the skills of survival from the past and compliments the learning experiences of the ‘Wild Woods’ program.
Volunteers construct Edcott and help develop an early British lifestyle.
The building of Edcott and its subsequent ongoing development is largely the work of volunteer groups who give a weekend of their time each month. An eclectic group of tradespeople, artisans, historians and families; the volunteers each contribute their particular skills and knowledge to reproduce early village life. Volunteer weekends focus on teaching specific skills of the era, like thatching or constructing earth ovens. Others build forges, kilns, looms and wood lathes following authentic ancient methods. Other weekends are spent weaving, spinning, pottery and woodcarving. Costumes are sewn and eating utensils and bowls are carved from wood. The development of the Anglo Saxon subsistent way of life provides a practical learning experience for both adults and children as they become part of Edcott’s living history program.

Escot Forest School with its Edcott Anglo Saxon Village is a key professional development venue for teacher training and learning experience for their students. Edcott’s rudimentary structure transports visitors into a past era, in which nature was central to living. It introduces them to a world, where survival depended upon ingenuity and creativity. By necessity, nature had to be embraced and included and life styles looked to preservation and conservation to achieve sustainability.

England: Sharing Education.
Time constraints only allowed the narrowest of studies of child-centred, environmental programs within the British Isles, but it did demonstrate the importance of community in outdoor, place-based learning. The three projects exemplified modern education trends, of freeing students from the constraints of classrooms to discover the natural world. For the students engaged in place-based education, their learning is enhanced by exploring the natural environment; for teachers, teaching is a partnership between professional agencies and the community. Partnerships in environmental education can create exciting learning opportunities that have far reaching effects across every facet of society. For all people environmental sustainability it is the hope for the future.
Conclusion
My Churchill Fellowship gave me the opportunity to gain first hand knowledge of world trend towards sustainability and its recognition of the need to develop environmentally literate citizens. It allowed me to gain a clearer understanding of the need for conservation and preservation of Earth’s Wild Places, accepted as a primary concern in the face of global warming. Conservation programs visited, highlighted the need to engage young children in the natural environment to develop the skills for future stewardship roles. The Fellowship allowed me to discuss current trends with those at the forefront of sustainability, and examine new environmental curricula being developed across countries, not just by education authorities, but with their environmental partners, and community networks. I have a clearer understanding of partnerships between indigenous and non indigenous entities and how traditional ways and cultural practices can be incorporated conservation education of children. Although in Australia the value of volunteers is recognised by the large institutions and government agencies; in America, I was able to explore the expedient processes undertaken to recruit, train and utilise volunteers to maximise their effectiveness in a wide range of programs and settings. The agencies’ recognition of volunteer contribution gave a clearer understanding of American success in retaining volunteers over substantial periods. Volunteering is an excellent way for society’s senior citizens to re-use their skills and knowledge and find satisfying purpose in retirement.

The opportunity to travel overseas and study innovative programs in sustainability has come at a time in Australia when many Australian citizens are becoming disconnected to the natural world. The cry to ‘unplug’ the children is now heard as communities struggle to cope with the growing social isolation and declining health of their members. Retiree numbers are growing as the ‘Baby Boomers’ leave the workforce, bringing valuable skills, much needed for many volunteering projects. Today, indigenous community members are beginning to take important roles in conservation and education. Sustainability Education is gathering momentum a time when technology makes rapid global communication possible.

I sincerely hope my report will provide a thought provoking perspective of sustainability that will generate inclusive partnerships and positive action in place-based education programs for young Australians.
Recommendations

My recommendations are based on enhancing current practices in Australia

- Increased implementation of place based environmental education programs in Australian schools.

- In place based environmental education curriculum development, the importance of partnerships with environmental organisations and government agencies to be recognised and implemented.

- Green Futures: provide workplace experience for senior students in ‘Green workplaces where ‘cutting edge’ sustainable practice models are being developed.

- Young children are consulted in development of nature base play activities and allowed to develop a free play approach to exploring natural environments. Children, particularly those in inner city urban environments, from Kindergarten onwards to be given opportunity to explore natural places.

- Children’s Forests, modelled on successful programs where children are empowered to take leadership roles in environmental management be developed in partnerships with Federal and State Governments, environment groups, education agencies and Local Government bodies.

- Children’s Forests and environmental centres, involved in sustainability, to be partnered with education bodies, and community partners in shared funding arrangements; including salaries and consumables.

- Local government partnerships to assume greater building and ongoing maintenance costs for infrastructure and environmental management by child-centred environmental projects on public lands.

- Continue to foster and include indigenous members of society to share their culture and practices in sustainability education programs and conservation projects. Sustainability programs to be sensitive to indigenous cultural beliefs and practice.

- Further develop opportunities and training for volunteers to take roles in a wide range of place-based environmental learning opportunities.

- Link young Australians involved in conservation to global projects, by technology and travel. It is in the interest of the Nation’s future that young people are encouraged to take a lead role in global trends in sustainability.

- Continue to develop partnerships between education groups in sustainability and their partners to share findings and resources.

- To encourage and community groups and volunteer organisations to engage in child centred environmental education programs and projects.

- To encourage educational authorities and schools to develop partnerships with government agencies, organisations, businesses and professional bodies to enrich learning experiences in sustainability education.