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**Case studies of sustainability education projects
from around NSW**

Aboriginal Cultural Heritage Audit for use in School Environmental Management Planning

This education program demonstrates the integration of education for sustainability across key learning areas in the school curriculum through culturally appropriate Aboriginal education and biodiversity conservation.

By Joelle Bridger, Environmental Encounters, 2008.

Snapshot

The aim of an Aboriginal Cultural Heritage education audit was to extend education for sustainability programs when developing, implementing or reviewing School Environmental Management Plans.

Aboriginal Cultural Heritage Audits (ACHA) enhance audit tools provided in the NSW Department of Education and Training document *Implementing the Environmental Education Policy in your School* and in the Catholic Education document *On Holy Ground*. Other audit tools in those documents include biodiversity, connectivity and habitat, curriculum, energy, products and resources, stormwater and water.

This education program demonstrates the integration of education for sustainability across key learning areas in the school curriculum through culturally appropriate Aboriginal education and biodiversity conservation.

The program is an initiative of the Mid Rivers Group of Environmental Educators (MRGEE) that consists of government and non-government agencies and is a collaborative effort of a team from within the MRGEE group called the A-Team, (Audit Team).

The setting up of the project was funded by the Northern Rivers Catchment Management Authority (NRCMA) through the Education Officer, Joelle Bridger, between 2006 and 2008. It was financially managed by the Discovery Program of the Dorrigo Rainforest Centre, National Parks and Wildlife Division, and delivered by Mark Flanders, Aboriginal Discovery Ranger.



*Aboriginal Educator with students identifying plants
Photo courtesy of NPWS*

The ACHA has:

- Added a culturally specific spiritual connection to the site on which schools are built;
- Connected student learning to Elders, past, present and future;
- Broadened the environmental auditing tools, and processes available to school communities.

The project identifies the resourcefulness of the first Australians, particularly traditional approaches to local sustainability issues, and has provided valuable planning tools to support student learning.

The project meets characteristics of Education for Sustainability

Introduction

Aboriginal Cultural Heritage Audits (ACHAs) were carried out at schools on Gumbaynggirr lands throughout 2007 and 2008. Local communities from the Coffs Harbour area were impressed and energised by the enhanced student learning of Aboriginal culture. Students, teachers and residents have discovered the pleasure of Gumbaynggirr, one of the oldest living languages on the planet. The combinations of language, lore, tradition, totems and kinship have awoken connections to country afresh for indigenous and non-indigenous students.

The program is an initiative of a team within the Mid Rivers Group of Environmental Educators (MRGEE). The overall purpose of the ACHA program is to assist school communities to develop School Environmental Management Plans (SEMPs).

Aims

The project aims were to create an Aboriginal Cultural Heritage Audit (ACHA) session for schools, as an additional learning tool within the Sustainable Schools NSW model of education for sustainability. Other tools and processes used by the team include biodiversity (connectivity and habitat), curriculum, energy, products and resources, stormwater and water.

A range of learning models are used

The ACHA tool is designed to build upon existing tools and processes to empower students, teachers and their communities to implement education actions. The project vision was to initiate practice change in schools and their communities that would improve their cultural knowledge of the traditional custodians of the landscape, and improve the environmental health of our catchments.

The project promotes and supports:

- Connections to our natural environment;
- Improvement in education for sustainability across all cultures with regard to biodiversity (habitat and connectivity), water stormwater, Aboriginal cultural heritage, energy, transport, products and resources; and
- Participation in changing or developing structures and processes for climate change education.



*Mark Flanders with stone axe artefact
Photo courtesy of NPWS*

The Aboriginal Cultural Heritage Audit enhances current learning for sustainability as NSW schools engage in developing their School Environmental Management Plans. The project does this by creating an overlap of Aboriginal Cultural Education with sustainability education auditing concepts created by NSW Department of Education and Training and NSW Department of Environment and Climate Change through their combined Sustainable Schools (SSNSW) project.

Educational outcomes

The outcomes identified during the first two years of the project include:

- Increased awareness and understanding of river catchments in terms of what they are, how they function and how human activities can impact upon their health across the Northern Rivers CMA region;

- Improved community participation in activities that protect and enhance catchment health using sustainability concepts;
- Support for the representation and input of Aboriginal communities into natural resource management (NRM) activities and reforms;
- Capacity building of Aboriginal communities to undertake natural resource management;
- Empowered students, teachers and their communities to initiate practice change that addresses key issues and improves the environmental health of our catchments; and
- Increased the number of schools implementing sustainable land and water management actions within their SEMP.

Improving awareness about greenhouse gases, land and energy use, pollution, sustainable consumption and transport connects directly to educating for sustainable development. These issues are framed in a way that makes sense within the daily lives of students and school communities through our holistic programming.

Project management

The project was funded by the Northern Rivers Catchment Management Authority (NRCMA) through the Education Officer, and financially managed by the Discovery Program of the Dorrigo Rainforest Centre, National Parks and Wildlife Division. Mark Flanders, Discovery Ranger, delivered the ACHA program during the schools, snapshot audit day. Audit Team (A-Team) educators meet twice per term at designated schools, to collaboratively conduct school audits or assessments with students, teachers and their communities.

The MRGEE environmental educators network was created in 2006 to collaborate, increase agency resource efficiency and support agency educators to achieve the natural resource objectives of each agency whilst working with schools and their communities.

The MRGEE network consists of government and non-government agencies such as the National Parks and Wildlife Service, a division of the Department of Environment and Climate Change (DECC), Marine Parks Authority, Northern Rivers Catchment Management Authority (NRCMA), NSW Department of Education and Training (DET), Cascade Environmental Education Centre, Landcare and businesses within the local government areas of Coffs Harbour, Bellingen, Nambucca, Kempsey and Port Macquarie. The network area extends from Grafton to Port Macquarie.



MRGEE members Photo courtesy of Joelle Bridger

The A-Team was created to work with schools to increase schools' capacity in environmental awareness, planning and action. Generally a representative from each agency creates an A-Team, which works in partnership to conduct a snapshot audit day in schools. One A-Team member, Rachel Binskin, Biodiversity Officer of Coffs Harbour City Council, identified 'the need for the inclusion of cultural education within the process of School Environmental Management Planning'. As a result of this need, the ACHA project was implemented through the collaborative effort of A-Team members.

Local and global relevance

Implementation of an Aboriginal Cultural Heritage Audit

When the A-Team engages schools they instruct students and teachers to use the audit tools of the Sustainable Schools NSW initiative. Our addition to the auditing process developed through this initiative is the Aboriginal Cultural Heritage Audit tool.



*Background ACH education
Photo courtesy of NPWS*

The ACHA includes a timeline and visioning process similar to that used in the Sustainable Schools NSW model. It promotes a greater understanding of Aboriginal communities' cultural and heritage landscapes, the connection of people to country, and an improved appreciation of social, spiritual and economic issues within indigenous and non-indigenous communities.

An onsite ACHA of the school includes education on the physical requirements of campsites and travel paths. It discusses the Aboriginal knowledge of flora and fauna resources existent in the school grounds. The contemporary resources found within the school, including human resources, such as Aboriginal Education Assistants are also documented. This is important, for as Rachel Binskin suggests, documentation of these resources in the local area is limited and thus this builds knowledge for the wider community.

Whilst learning simple terms in the local ancient language, students receive cultural heritage background education about:

- Aboriginal protocols;
- The cultural value system of Aboriginal custodians of past and current generations;
- Totemic associations and their relevance to biodiversity;
- The background to the various site types;
- Food management and bush tucker plants; and
- Features of geographical and cultural landscapes.

The ACHA raises the awareness of students, teachers and communities of traditional Aboriginal cultural issues and places of significance. It identifies Aboriginal resourcefulness and promotes the use of traditional approaches to local sustainability issues. These sustainability issues are at the forefront of natural resource management today, and as we are faced with the extreme influences and effects of climate change and pollution threats, the long held Aboriginal approaches to biodiversity conservation offer a pathway to change.

The data collected in the ACH audit is used to support students in finding culturally appropriate environmental solutions to any issues raised in the auditing process. Students collect data and convey what they did, what they found out and what they recommend, in a simple PowerPoint format developed by the A-Team. The audit group presents the PowerPoint to the whole school at the end of the audit day. The team can assist students to develop practical actions that empower both students and teachers to create achievable outcomes.

Critical thinking and problem solving is encouraged



This presentation begins a reflective process that can facilitate a whole school community vision that acknowledges the traditional owners of the land. It provides an opportunity for cultural and sustainability learning for students and adults in the community, over several consequent meetings, with a view to develop, implement or review the school's SEMP.

*Whole School Presentation by students
Photo courtesy of Joelle Bridger*

Involvement of Aboriginal personnel and community

Aboriginal education is often taught only briefly in schools, using an historic perspective, and more often from a European perspective. This program is an opportunity to integrate culturally appropriate Aboriginal education into existing student centred sustainability-learning programs across Australia.

One challenge for school curriculum is to integrate education for sustainability across all key-learning areas, within an integrated classroom, as well as to provide teaching and learning tools that meet the needs of students with varied learning styles. The A-team approach to sustainability education is holistic and contributes to the curriculum by the inclusion of the Aboriginal Cultural Heritage within the auditing process.

An Interdisciplinary and holistic characteristic of Education for Sustainability

Mark Flanders, ACHA presenter, and Gumbaynggirr man, is integral to the program as he shares his own culture. Mark advocates that students obtain "a positive cultural education

through the ACH audit program instead of general information out of books". The ACHA includes a number of hands-on positive student learning activities.

A protocol for the delivery of this ACH education program is to ensure that the Aboriginal educator responsible for delivery of this program is endorsed by the local elder groups and can effectively represent Aboriginal community values and views. Again this is cultural education for the non-indigenous as respect for Elders is vital to Aboriginal communities and permission is sought from Elders as a matter of course on any issue related to community life.

New knowledge of Aboriginal culture can occur during audits. It was with great excitement that one local school involved in an audit, collected a lot more information and data about the original inhabitants of the school grounds. Mark informed us that: "A special find was made at the Public School - a rock was found, and not just any rock, but a 'core', a rock from which flakes or blades are removed for use as knives". Previous custodians who walked the land in times long past used this core in everyday life. One of the tasks of ACH auditing of school grounds is to investigate, imagine and discuss where particular (traditional) sites might have been within the grounds.

The ACH audit teacher, Mark Flanders, also works as an Aboriginal Land Council Site Heritage Officer, therefore when artefacts were found in the grounds of this Public School during the audit process, he returned on another day with global positioning system (GPS) equipment to record the location and the site. Such site information is recorded and registered within the Department of Environment and Climate Change (DECC) Aboriginal Heritage Information Management System (AHIMS). The knowledge extension and student learning opportunities provided to these students has long-term ramifications to programming within the school.



One teacher Jo Grodzicki, from another school, was involved in one of the ACH audits and remarked that she was “really impressed by how much learning the students had through the course of one day”.

As a stakeholder Barbara Webster, Senior Ranger (Neighbour and Community Relations) with the National Parks and Wildlife Service, spoke of the DECC commitment to Aboriginal Cultural Heritage Education in identifying the importance of place in country and the responsibilities we have to Aboriginal community.

*ACHA educator, Mark Flanders with core
Photo courtesy of Andrew Turbill*

Benefits and outcomes

Mark recognises that Aboriginal knowledge on the eastern seaboard of Australia is more fragmented than in other parts of Australia. The ACH assessment distinguishes the impact of traditional owners upon the Earth and the impacts since European settlement. This allows the program to teach students about current global climate change by raising awareness and understanding about human impacts on Earth’s life support systems.

A Catchment Officer, Darren Murray, of the Northern Rivers Catchment Management Authority (NRCMA) saw the benefits of this education program and agreed that it would be important “to replicate this project in other areas”. This ACH Audit brings spiritual connections, and local Aboriginal community knowledge into schools, sometimes for the very first time. There is now an opportunity to create ways of incorporating this concept and the ACH Audit tool into other aboriginal nations.

Learners can participate in thinking about how they might like to increase their knowledge of the first Australians

The key to replication is to ensure a consistency of program information and delivery. In developing the audit session format, Joelle Bridger worked particularly to ensure that the program followed education for sustainability principles. The sessions were developed following National training standards and Certificate IV Workplace Assessment and Training principles and allow consistent delivery by various agency educators, through clearly outlined session plans that include content, length, resources and outcomes.

The ACH audit tool has since had a wider application, particularly within the Discovery Programs of the NPWS. As Andrew Turbill explains “This is an effective way to use a non-site based approach to Aboriginal Cultural Heritage (ACH) interpretation and illustrates the practical links between ACH and biodiversity conservation.”

The ACH audit tool has created professional development opportunities for the A-Team presenters through education session development and cultural education. Involvement in the program has led Mark to complete a Certificate IV training program. Mark is widely recognised amongst local school and indigenous communities for his charismatic leadership and mentoring skills.



*Demonstration of knapping of core to produce flints
Photo courtesy of Andrew Turbill*

The strong social and health benefit element shines through. Students receive education from an Aboriginal teacher, a local man who has connections to the local community, is respected and is a role model. As a speaker of an ancient language who has a deep connection to the landscape, Mark is able to convey the cultural connection to country and inspire students to learn and develop a newfound understanding of their sense of place in the world.

When asked, several months later, students who had participated in an ACH Audit process were able to empathise with the Aboriginal viewpoint and what it was like living as an Aboriginal person before European settlement. They understood principles of Aboriginal land use, vegetation management and bush tucker. Students said “the traditional owners didn’t use the flat land during the wet season but camped around a hill to the north west of the school during heavy rain periods in case of flooding’.



ACHA educator, Mark with students
Photo courtesy of NPWS

This education program conveys the strong ecological relationship between Aboriginal people and the local landscape. This ACH Audit meets the NSW Environmental Education curriculum objectives where students are required to develop values and attitudes relating to a respect for life on Earth (V1) and an appreciation of cultural heritage (V2).

Shared values are made explicit and examined, debated, tested and applied

The ACH Audit tool improves cultural understandings of Aboriginal Australians for non-indigenous students, teachers

and their community, as well as enhancing outcomes for indigenous students and communities. Learning is significant and provides many ways of knowing cultural perspectives (p. 25, *Australian Directions in Indigenous Education 2005 -2008*).

Future focus

This audit tool relates to the NSW Department of Education and Training Environmental Education Policy and *On Holy Ground, An Ecological Vision for Catholic Education in NSW*. It could be incorporated into the combined NSW DET and DECC Sustainable Schools NSW processes and thus provide an integrated classroom teaching and learning experience that is able to support Aboriginal cultural traditions with their deep ecological connections, connect students to country through sense of place and deepen understanding of human impact on the environment.

This education program may also increase the number of schools engaged in Aboriginal language learning in our area. The PowerPoint format used for schools in the ACHA includes a recording of Gumgaliya, a story read by Uncle Gary Williams from the Murrumbidgee Aboriginal Language and Culture Cooperative, which is included below, along with the written and translated text in Appendix I.

Expression of concepts in other languages and cultures

The NRCMA could feedback outcomes of the ACH Audit tool to NSW DET, DECC and Sustainable Schools NSW. An additional evaluation tool could be developed to assess participant knowledge, analyse achievements and further document the program, report on project outcomes and use case study examples for other schools to put into practice. Implementing a coordinated approach to the post-audit schools support program would also enhance the process.

The Muurrbay Aboriginal Language and Culture Cooperative is sited in the Nambucca Valley and works to support Aboriginal language revitalisation for six language groups across the Mid North Coast region, including Gumbaynggirr, Dhanggati and Bundjalung. These language groups published Aboriginal dictionaries in 2008. A broader community involvement from all local Aboriginal groups could further enhance the program.



*You are listening to the voice of Uncle Gary Williams reading Gumgaliya (for translation see appendix)
Courtesy of Muurrbay Aboriginal Language and Culture Cooperative*

Conclusion

There can be a lack of recognition of local indigenous groups and the environmental knowledge of the first Australians. This ACHA program begins to meet this knowledge gap amongst non-indigenous and indigenous people in our communities.

At this time of changing climates, and when ecosystem services provided to us by the environment are not taken into account, people everywhere are reaching the same conclusion (Milne, 2008): we need to connect with the Earth in order to maintain or reinvigorate our connection to country. The Aboriginal Cultural Heritage Audit provides a link to the interconnectedness of all life on Earth. The spiritual and cultural traditions, seasonal mobility and kinship structures convey important values about life on Earth, environmental knowledge and a sense of place within our locale.

The program has added a culturally specific spiritual connection to the site on which schools have been built. The ACHA tool has connected student learning to Aboriginal Elders, past, present and future, and broadened the environmental auditing process available to schools. The ACHA tool has developed environmental knowledge and values through appreciation of cultural heritage and biodiversity conservation. It has also provided planning tools to support student learning and assisted schools and their communities to develop holistic School Environmental Management Plans.

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Acknowledgements

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Andrew Turbill	Discovery Coordinator NPWS, DECC
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John McQueen	Principal, Cascade Environmental Education Centre
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Melissa Hinkley	Coffs Harbour City Council
Nicole Larkin	Environment Officer, Coffs Harbour City Council
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Daniella Marks	Marine Parks Authority, Coffs Harbour
Darren Murray	Project Officer, Northern Rivers Catchment Management Authority (NRCMA)
Jo Grodzicki	Teacher Narranga Public School
Barbara Webster	Senior Ranger Neighbour and Community Relations, NPWS, North Coast Region, Department of Environment and Climate Change

Photos courtesy of Andrew Turbill, Barbara Webster and Joelle Bridger

Audio courtesy of Uncle Gary Williams of Muurrbay Aboriginal Language and Culture Cooperative, <http://www.muurrbay.org.au/index.html>

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Appendix I

Translation for Gumgaliya audio

Gumgaliya

Jalumbaw gurraagayju muugang wigiirr.

Long ago Possum put the meat

Waruungga jaliigida guurulawgu

up-in a tree for safe keeping

Gumgaliyu wurrungunymang wijiirr bilandiling

Goanna stole the meat & took off with it

Yaarri gala gurraagayju ngarri ngaramarang

then the possum chased after him

Warii juluumnyarr

down the hill to the sea

Gala Birrmadingandi gumgaligu bunmigurrang

But when goanna was running he dropped the fat

Gurraagayju bawgang gamayju daalbirrwang

Possum threw his spear at the goanna but it only nicked him on the leg

Magay yilaa yaam gumgaligundi muluurr

where goanna's blood spilled become red clay

Gala, gamayju bawgang buyuum gagaarlang muniim.

but Possum's spear kept going and hit the headland, splitting it

Yilaana gumgali bilandarrang bunggiing ngarluungga

Then Goanna escaped by diving in the water

Yidaa yilaa baguurli. Muniimay. Ngiinda ngarri

The Goanna still lies here today (Goanna magically invokes a spell to become a rock)

gulaana nyaagu ngarluungga

you will still see him in the water to this very day

Minyaala garraagayju biyagay biyambay wijiirr

this is why possums don't eat meat

Minyaala gumgaliyu wurrungunymang gulaagumdi wijiirr

because the goanna stole his meat

Biiwayay

The End