

# Qessi Alliance

Queensland Environmentally Sustainable Schools Initiative

Progress Report  
2005 – 2007



All Queensland schools to be environmentally sustainable



# 2005–2007 Queensland Environmentally Sustainable Schools Initiative (QESSI) Progress Report

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## Executive Summary

The Queensland Environmentally Sustainable Schools Initiative (QESSI) is a concept that aims to fulfill one of the challenges issued by the General Assembly of the United Nations in the pursuit of a sustainable global society by *'encouraging Governments to consider the inclusion of measures to implement a Decade of Education for Sustainable Development 2005–2014 in their respective education systems and strategies'* (UNESCO 2005).

The mission of QESSI is to establish a network of environmentally sustainable schools that demonstrate curricular connections and environmental action based on ecologically sustainable development principles. QESSI's vision is for all schools to be environmentally sustainable schools with a concept that aims to integrate existing environmental education for sustainability programs in a holistic process that has measurable social, environmental, economic and educational outcomes.

QESSI is a member of the Australian Sustainable Schools Initiative (AuSSI) partnership. It supports implementation of efficiencies into a school's management of energy, waste, water and biodiversity resources through the improvement of school grounds. This approach integrates the QESSI concept into the existing curriculum and daily operations of the school.

Partnerships among community groups, industry and government agencies are at the heart of QESSI's success. Current key partners in the alliance are: Queensland Department of Education, Training and the Arts (lead agency); Australian Government Department of the Environment, Water, Heritage and the Arts; Great Barrier Reef Marine Park Authority; Environmental Protection Agency; Keep Australia Beautiful – Queensland; Queensland Transport; Department of Natural Resources and Water; Department of Mines and Energy; EnviroCom; Earth Charter Australia; Independent Schools Queensland; Queensland Catholic Education Commission; Science and Geography Teacher and Environmental Education Associations; Queensland University of Technology; Griffith University; Ergon Energy; and Origin Energy.

To add value to the QESSI Alliance concept there are 12 QESSI regional hubs that support clusters of schools as they work to become more environmentally sustainable. Local councils and regional natural resource management groups and Education Queensland's network of 25 outdoor and environmental education centres also support schools on their journey towards a more environmentally sustainable future.

Over 900 schools have participated in one or more QESSI Alliance partner programs over the past four years. This equates to approximately half of all Government schools in Queensland. The alliance members contribute a significant financial investment, both cash and in-kind, to help schools become more environmentally aware and efficient.

Economic benefits are documented with schools saving hundreds of dollars through more efficient use of their resources. One school demonstrated a reduction of more than 40% in energy consumption through participation in an energy efficiency program conducted by the QESSI regional hubs. However there is evidence that there is a good deal of progress yet to be made to reduce energy consumption across schools.

Water conservation programs have created significant savings for schools, particularly in drought affected areas. The impact of Commonwealth water grants cannot be documented yet because the program is just beginning. However Education Queensland's annual reports illustrate significant water efficiencies between the 2003–04 and 2004–05 financial years with water consumption in state schools reduced 8%. Between 2004–05 (7766ML) and 2005–07 (6122ML) consumption reduced again by more than 20%.

Schools have saved considerable money through sustainability initiatives, along with being honored with awards and grants. Reef Guardian Schools receive cash grants as an incentive and reward for good practice. Keep Australia Beautiful – Green and Healthy Schools Awards have recognized excellence in sustainable schools since 2000. Many schools also received community water grants to install conservation devices and water efficient strategies in their schools. Several ‘learnsourcing’ projects have resulted in biodiversity improvements, leading to improvement in catchments and water quality as a bonus benefit of these projects.

The QESSI concept has demonstrated best practice in showing schools how to improve their sustainability and eco-efficiency. Just as importantly, it highlights the education industry’s potential to improve the environmental and economic performance of schools through the alliance approach.

## Introduction

The following report looks at why Educating for a Sustainable Future is important; how QESSI supports the aims of the UN Decade of Education for Sustainable Development (2005–2014); and charts the progress of QESSI over the last three years (2005–2007) with:

- Formation of the QESSI Alliance with key partners and stakeholders
- Development of the three year QESSI Strategic Alliance Plan (2005–2007) and the vision: *“All schools in Queensland are environmentally sustainable”*
- Sustainable Schools Outcomes
- QESSI Alliance Strategic Plan 2005–2007 – Actions and Outcomes of Alliance member programs and QESSI Hubs
- Evaluation of the QESSI Alliance Model: (Research findings from an evaluation of the QESSI Steering Committee)
- Education Queensland’s reports and policies on educating for a sustainable future including the MACER Report
- Conclusion and recommendations

A comparative study of the Victorian and New South Wales Sustainable Schools Initiatives has been undertaken and reference to key points in the study is made in this report.

The main findings and recommendations of this report relate to the following areas:

- Earth Charter Values and Joy of Living Sustainably
- Valuing Indigenous perspectives
- Teacher training courses
- Department of Education commitment to Educating for Sustainability
- State of the School Reports and School Environment Management Plans (SEMPs)
- Educating principals for Sustainability
- Ecological Footprint and Lifecycle Analysis
- Sustainable Business Models
- Biodiversity and Energy Programs

## Why Is Educating for a Sustainable Future Important?

Environmental education for sustainability (EEfS) has been part of Australian schooling for over 30 years and it is now widely accepted that environmental problems need to be addressed through social, political, and economic policies and technological change.

According to the 2001 Australian State of the Environment Report:

“Australians have a high stake in the state of their environment. Our lifestyles and livelihoods depend on its health. People have used the continent’s natural resources over tens of thousands of years and, following European occupation, have employed technologies which accelerated this exploitation... This Report concludes, as did the SoE (1996), that progress towards sustainability requires the integration of environmental with economic and social policies”.<sup>1</sup>

The 2001 State of the Environment Report identifies a range of pressures on the Australian environment, including:

- The degradation of land and waterways
- Population growth and associated problems of urban sprawl, high energy consumption, storm water pollution of estuaries and coastal waterways; and

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1 Australia: State of the Environment 2001.

- Continued decline in biodiversity through land clearing, habitat fragmentation and the introduction of pest species to terrestrial and marine ecosystems.<sup>2</sup>

Of all the environmental indicators, only urban air quality improved. The Report also acknowledges global pressures including critical issues such as global warming... Our present situation is unsustainable in the long term, and we need to find ways in which we can meet our current needs that do not diminish the quality of the environment nor reduce the capacity of future generations to meet their needs. Beyond a utilitarian view of the natural environment as something for humans to use is recognition that the environment has intrinsic natural and cultural values to be fostered.<sup>3</sup>

Creation of a sustainable future is an essential response to the current state of the world's ecosystems. "Sustainability" acknowledges the "economic, social and political pressures" that can inhibit or support the capacity of individuals, communities or the nation to properly care for the environment. Sustainability also seeks to promote stewardship of the environment, encouraging everyone to assume the responsibility of being a caretaker or custodian of the environment.<sup>3</sup>

Indigenous Australians have much to offer in the development of this sense of stewardship. The nature of indigenous Australian's relationship with the environment provides many examples of sustainable use of the limited resources of the Australian landscape. Holistic environmental stewardship is already being achieved by some school communities that have transformed their thinking and their immediate environment. These schools are creating a sustainable future for themselves and the broader community.<sup>3</sup>

The 2006 Australian State of the Environment Report, continues to report these trends.<sup>4</sup>

While lifestyle gains have been enjoyed by many Australians in recent decades, the last three Australian State of the Environment Reports show continued trends in the direction of an unsustainable future. Urgent, widespread and decisive actions are required to help turn this around!

To bring this point closer to home, if air quality was the only positive factor in our home; if we were running short of water; waste was piling up at our backdoor; food production was under threat; storm damage more frequent and intense; the nearby waterway polluted and drying up; if the call of the frogs and other native animals were no longer heard nearby and we were consuming ever increasing amounts of electricity derived from fossil fuels to live and amuse ourselves, then, we would acknowledge we have a problem. Our society has been living the illusion of thinking we can individually shield ourselves from our collective impacts on the environment resulting from unsustainable lifestyles.

While the idea of living sustainably may mean slightly different things to different people one student described this concept quite simply as ...enough for all forever! This is an exciting goal because we do it for ourselves, future generations and all life on this planet. It however needs a fundamental shift in the way we have been doing business and an awareness of how our everyday decisions affect others and the world around us.

The issues facing Australians are mirrored across the world as we come to understand a deeper meaning of "progress and development" which is just and fair for all. These issues are further reflected in the establishment of the UN Decade of Education for Sustainable Development (2005–2014).

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2 2001 Australian State of the Environment Report

3 Educating for a Sustainable Future – A national Environmental Education Statement for Australian Schools 2005, by Australian Government Department of the Environment and Heritage.

4 2006 Australian State of the Environment Report

## UN Decade of Education for Sustainable Development (2005–2014)

Education for Sustainable Development (ESD) is described in Promotion of a Global Partnership for the UN Decade of ESD as education that:

- Enables people to foresee, face up to and solve the problems that threaten life on our planet.
- Disseminates the values that are the basis of sustainable development (intergenerational equity, gender parity, social tolerance, poverty reduction, environmental protection and restoration, natural resource conservation, and just and peaceful societies and
- Highlights the complexity and interdependence of three spheres – the environment, society – broadly defined to include culture – and the economy.

Bringing the UN Decade of ESD into reality requires the commitment from all levels of society. The education system is identified as having a pivotal role to play. State education departments, local councils, schools, local communities and their community organisations are urged to work together to:

- Incorporate ESD into ordinary educational activities and curricula
- To define and implement learning strategies
- Identify local sustainable development problems in cooperation with various stakeholders
- Incorporate local knowledge and skills into ESD
- Exchange ESD experience and use it to improve practices

The steps in Implementing the Decade are spelt out as:<sup>5</sup>

- Formulation of a common vision
- Consultation and ownership
- Development of partnerships and networks
- Capacity building and training
- Research, development and innovation
- Use of information and communication technologies
- Monitoring and evaluation

As the Decade creates synergies with and builds on existing environmental and sustainability education initiatives, it is important for the Decade to be recognized as a catalyst for mainstreaming sustainability education to enable long term change for a sustainable future.

## What is a Sustainable School?

A report prepared by the Australian Research Institute in Education for Sustainability (ARIES) for the Australian Government's Department of the Environment and Heritage on Whole-school approaches to sustainability (10) reveals what a Sustainable School would look like. This school would have:

- **School leadership** which places sustainability at the heart of school planning and practice and engenders democratic and participatory whole-school decision making processes
- **Whole-school participation** in undertaking school action and improvement plans
- Reciprocal community, family and stakeholder **partnerships**
- **Participatory learning approaches** which engender students skills and competencies for critical thinking, intercultural perspectives, participation and citizenship

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5 Promotion of Global Partnership for the UN Decade of Education for Sustainable Development (2005–2014)

- **Integration of Environmental Education and Education for Sustainability** across all key learning areas in the curriculum
- **Hidden curriculum** which reflects key messages and ideas supported by the taught curriculum
- Regular **professional development** for teachers, school management and program partners and facilitators
- **“Greening”** of the school and physical surroundings
- Classrooms within and **outside school boundaries**
- Reductions in the **school’s ecological footprint** (through resource consumption and environmental improvements)
- Regular **monitoring, reflection and evaluation** procedures which inform future actions. The schools in not just the centre of learning but is also a **“learning organisation”** in itself
- **Practitioner research** which encourages reflective practice of teachers and promotes improved performance

The *National Environment Education Statement for Australian schools – Educating for a Sustainable Future*<sup>6</sup> outlines what Sustainable Schools would look like with the central focus on Curriculum that is based on the principles of environmental education for sustainability. This document describes a framework for environmental education for sustainability that includes a Vision; Goals; Learning objectives; a whole-school approach; School governance; Resource management; Physical surrounds and networks and partnerships. There is also a significant focus on learning and teaching with an environmental education for sustainability perspective using the Queensland productive pedagogy dimensions.

## QESSI is Born

The Queensland Environmentally Sustainable Schools Initiative (QESSI) began on Earth Day, 22<sup>nd</sup> April 2004 with a strategic visioning workshop facilitated by Sustainable Futures Australia involving 30 key stakeholders and a follow up two day capacity building workshop to inform the development of the strategic action plan. The objectives of the Strategic Visioning forum were to develop:

- A shared vision of an environmentally sustainable school by key organisations and agencies
- A three year strategic action plan for the delivery of the sustainable schools program through cooperation and collaboration between key stakeholders

The QESSI vision that – “All Schools in Queensland are Environmentally Sustainable” resulted from this visioning workshop and the Strategic Action Plan is based on the Earth Charter philosophy.

The objectives to be achieved from the Capacity Building and Awareness Raising Workshop were:

- To increase awareness and capacity amongst experienced educators working in the field of education for sustainability to deliver the Queensland Sustainable Schools Program
- To establish a network of Sustainable Schools Program support teachers

Over 70 teachers, environmental educators and sustainable schools service providers participated in this interactive two day workshop with very productive outcomes achieved. A high level of commitment to the QESSI concept was evident and a greater awareness of the volume of existing print, electronic and human resources that are available in the area of environmental education for sustainability, resulted. To quote a participant at the workshop, “There was no competitive atmosphere, just cooperation to achieve the common vision of all schools in Queensland being environmentally sustainable.”

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6 National Environment Education Statement for Australian Schools – Educating for a Sustainable Future (2005) Curriculum Corporation and Commonwealth Department of Environment and Heritage

The Federal Department of Environment and Heritage provided funding to support the Visioning and Capacity Building workshops and to start a Queensland version of the Sustainable Schools model. The Australian Sustainable Schools Initiative (AuSSI) was started in 2002 with AuSSI providing funds for Victoria and New South Wales to trial Sustainable Schools program in these states in 2003. Most states in Australia are now conducting Sustainable Schools Initiatives.

The patron of QESSI is Emeritus Professor Ian Lowe, president of the Australian Conservation Foundation and recently appointed Queensland Smart State Ambassador.

## What is the QESSI Concept?

There have been many quality environmental programs and resources developed over time which have played an important role in raising the awareness and knowledge of students and the community about environmental issues. The market place however, is now saturated with such resources and there is often duplication of resource development, funds and time spent in their development. QESSI is not another program or product but aim's to build the capacity within the existing service providers to assist them reach their goals. By working collectively, the vision of all schools in Queensland demonstrating environmentally sustainable practice will be achieved. The level of cross sectoral support for QESSI is an indication of the high level of commitment in working with industry and other agencies to improve ecological sustainability in schools in Queensland. The QESSI Hubs work in association with and not in competition with other service providers and this is a significant attribute of the QESSI concept. This feature shows a demonstrated success in the value of public-private sector partnerships in promoting environmental education for sustainability with over 900 school programs delivered across Queensland.

QESSI coordination for 2004 to 2007 occurred through a state steering committee, chaired by Terry Kearney, Assistant Director General, Education Queensland. The QESSI Alliance steering committee:

- Develops partnerships and liaises with cooperative stakeholders
- Markets and builds capacities for all service providers
- Provides resources for program implementation
- Promotes environmental awards and incentive schemes
- Liaises with other national groups pursuing similar goals
- Evaluates and monitors the QESSI concept

## QESSI Alliance Members

Partnerships between community groups, industry and government agencies form the heart of the success of QESSI with the current key partners in the QESSI Alliance being:

- Education Queensland as the lead agency in partnership with
- Australian Government Department of the Environment, Water, Heritage and the Arts
- Great Barrier Reef Marine Park Authority
- Environmental Protection Agency
- Keep Australia Beautiful – Queensland
- Queensland Transport
- Department of Natural Resources and Water
- Department of Mines and Energy
- EnviroCom
- Earth Charter Australia
- Independent Schools Queensland
- Queensland Catholic Education Commission

- Science and Geography Teacher and Environmental Education Association
- QUT and Griffith University
- Ergon Energy and Origin Energy
- 12 QESSI Regional Hubs across Queensland supporting a cluster of schools on their journey to becoming more environmentally sustainable
- Each regional QESSI Hub has a range of local QESSI Alliance partners working in a variety of ways to support schools on their sustainability journey

Actions resulting from the QESSI Alliance member meetings have included:

- Quarterly steering committee meetings
- Several professional development train-the-trainer workshops
- Networking between like-minded service providers to achieve common goals for sustainable schools
- Promotion of the process through the Australian Sustainable Schools Initiative (AuSSI) working group
- Presentations of the QESSI concept at several regional, state-wide, national and international forums
- Development of a case study for the 2007 Queensland State of the Environment report
- Draft 2005–07 QESSI Alliance Strategic plan

Some of the QESSI Alliance partners run sustainability programs and/or awards with schools across the State with a number of schools involved with one or more of the QESSI Alliance partner programs. In 2006 there were 914 and in 2007 there was about 700. Table 1 below shows the programs and the number of schools involved per program provider:

**Table 1 – School participation in QESSI Alliance member programs**

Program	No. of schools	
	2006	2007
Green and Healthy Schools (Keep Australia Beautiful)	455	542
Reef Guardian Schools (Great Barrier Reef Marine Park Authority)	142	119
Wipe out Waste and Water Education (EnviroCom)	120	129
QESSI Hub Cluster Schools (Education Queensland)	100	80
Wakakarri (Eco Zone)#	79	105
Sustainable Living Challenge	149	70
Solar Schools – Ergon ^ – Origin*	77 (7)^	2^ 7*
Learnscape projects (Learnscape trust and Reliance Petroleum)#	30	30
Travel Smart Schools (QT)	7	5
Active Travel Schools (BCC)#	18	13
Commonwealth Community Water Grant# (DEW)	149	124
School Recycling (BCC)#	18	30

# Programs not involved in the QESSI Alliance, however participation in this program contributes to sustainability outcomes in schools

Schools involved in 2006 and 2007

NB Since a school could participated in one or more of these programs, the aggregated total does not equate to the total of all individual schools listed above

Another tangible outcome that has resulted from the QESSI Alliance concept has been that the industry partners of QESSI have been inspired to change some of their practices to be more sustainable. There has been a tradition that environmental education for sustainability in schools has meant a transmissive education approach of developing a kit of information and dispatching a copy to every school, hoping this would make a difference. Research has shown this transmissive education is not as effective in environmental education for sustainability as transformative education, which is where the majority of the QESSI Alliance members are now heading in their service to schools.

## QESSI Alliance Member Programs

**Reef Guardian School Program** [www.reefed.edu.au/home/guardians](http://www.reefed.edu.au/home/guardians)

The Reef Guardian Schools Program is an education initiative of the Great Barrier Reef Marine Park Authority that aims to develop partnerships between schools, government, industry, environmental groups and local business in order to work together towards a more sustainable future for our natural resources and in particular the Great Barrier Reef.

When schools register to be Reef Guardians they commit to participate across four key criteria.

### **Curriculum**

- Implementation of teaching and learning opportunities focused on the Reef, sustainability and/or other parts of our natural environment.

### **Resource Management**

- Refuse, reduce, reuse and recycle resources such as waste, water and energy. This can also include improving biodiversity in the school grounds.

### **On-Ground Projects**

- Experimental learning opportunities, size and scale of on-ground projects will be dependent on the school's location, student numbers, ages of students and the partnerships established within the local community.

### **Education of the Community**

- Encourage others to adopt best environmental practices through announcements on school assemblies, in school newsletters, media opportunities and Reef Guardian displays at school and community events.

Teachers that agree to be Reef Guardian Coordinators are well supported by the Great Barrier Reef Marine Park Authority's Education Team. Reef Guardian Coordinators will receive a teacher resource pack that most importantly includes the Reef Guardian Schools Yearly Planner. This breaks the Reef Guardian School year into a manageable and cyclic framework.

Reef Guardian Schools are encouraged to submit an annual report by the end of Term 3 each year. The outcomes demonstrated and illustrated within the annual report allow your school to be considered for \$10 000 worth of Reef Guardian Awards and a further \$10 000 worth of funding support through Ripples of Change grants.

Reef Guardian Schools Program is a dramatic and dynamic program that can unite teachers and their students in a common goal of protecting the Great Barrier Reef. Schools that are participating in the program are consistently reporting that it provides cohesiveness amongst the school and its community and generates a can-do attitude amongst learners of all ages.

## Keep Australia Beautiful – Green and Healthy Schools Program

[www.keepaustraliabeautiful.org.au/qld/01\\_cms/details.asp?ID=7](http://www.keepaustraliabeautiful.org.au/qld/01_cms/details.asp?ID=7)

The future of our environment is in safe hands if the Keep Australia Beautiful Green & Healthy Schools program is anything to go by. Thousands of students and their teachers from more than 550 Queensland schools participate in this cutting-edge, curriculum-based program that promotes health, resource conservation and the environment through Queensland classrooms.

### The program

Green & Healthy Schools encourages schools to develop a green and healthy philosophy and to tackle a range of issues at the school level, including environmental protection, litter prevention, resource management, youth initiatives, health, nutrition and fitness, and community partnerships and action. The program gives students, teachers, parents and friends the chance to take part in a range of initiatives that develop the educational, personal and social benefits that come from caring for self, the community and the environment. Schools that register for the program are provided with a comprehensive resource kit covering everything from school environmental audits to curriculum-based classroom activities.

### The competition

The program also features a competition to recognise and reward schools for their Green & Healthy endeavours. To take out the title of Queensland's Greenest & Healthiest School, a school must be motivated, have a strong sense of community and best exemplify all aspects of the Keep Australia Beautiful Green & Healthy Schools competition.

The assessment panel takes into account every school's geographic, environmental, cultural and economic circumstances, and assesses how efficiently and effectively the school uses the resources available to it against a range of criteria, including: environmental protection, litter prevention, resource management, youth initiatives, health, nutrition and fitness and community partnerships and action.

Keep Australia Beautiful Green & Healthy Schools encourages schools to work at their own pace to achieve outcomes relevant to their school and their school community.

### Theme

This innovative school education program, themed "Ourselves, Our School, Our Community", is free to register and open to all schools – urban or rural, large or small, private or State, secondary, primary and special schools. The competition generally runs from January to October each year, with registrations called in January and closing in February. Assessment takes place between May and June, regional winners are announced at the beginning of August, and the State Awards are held in October.

### Awards

As well as the overall title of Greenest & Healthiest School, 12 Outstanding Accomplishment Awards are presented at the regional and/or State level.

- Greenest & Healthiest School
- MacAir Airlines School Spirit Award
- The Wrigley Company Litter Prevention Award
- Remondis Resource Recovery Award
- Minister for Natural Resources & Water WaterWise Award
- Cartridge World Partnerships Award

- Environmental Protection Award
- Minister for Education's Young Legends Award
- Brisbane Produce Market Health & Nutrition Award
- Queensland Health Fit & Active Award
- Community Action Award
- Allan Phillips World Peace Trust Fund Individual Outstanding Accomplishment Award (regional level only)
- Terry Palmer Award for Outstanding Accomplishment (State level only)

**EnviroCom** [www.envirocom.com.au/](http://www.envirocom.com.au/)

EnviroCom Australia provides environmental education extension services on behalf of Local Government throughout SEQ. The programs delivered through EnviroCom's partnership with Local Government support schools to initiate and sustain environmental sustainability programs relating to water conservation, local environment enhancement, waste minimisation and energy conservation.

While programs delivered by EnviroCom are diverse and dependant on the needs/desire of the Local Government partners, the majority of the programs are characterised by the provision of professional curriculum support services, the provision of professional presentation services and the provision of professional support for onground projects to minimise the environmental impacts of the school community within their local area.

EnviroCom's ongoing participation in the QESSI Alliance provides a connection between Local Governments building and supporting community environmental initiatives and the formal education sector.

**Travel Smart** [www.transport.qld.gov.au/Home/General\\_information/Travelsmart/Travelsmart\\_programs/Schools/](http://www.transport.qld.gov.au/Home/General_information/Travelsmart/Travelsmart_programs/Schools/)

The TravelSmart Schools program encourages school communities to consider environmentally-friendly transport options as an alternative to motor vehicle use. In doing so, the program helps school communities to deal with local traffic congestion, road safety and health issues.

#### **What happens in a TravelSmart schools project?**

A working group of school leaders and volunteers is established. Parents are surveyed and site assessments are conducted at each school. This information helps to identify risks and informs the development of a travel plan and site access guide.

#### **Travel plans for TravelSmart schools**

A travel plan is a package of environmentally-friendly travel options schools can use to encourage drivers to consider new ways to transport children to/from school.

The project working group works with the school community, local government and Queensland Transport, to come up with a range of strategies to influence the school community across three spheres:

- The school's policies and environment
- Classroom/curriculum activities
- Involvement of the school and the broader community

The travel plan is tailored to meet the needs of individual schools. Implementing a plan is facilitated by a school's travel coordinator (a member of the school community).

- Sample activities for travel plans:
- conducting classroom activities and bicycle skills education
- promoting bus use and good behaviour on public transport
- rostering volunteer parents, carers and teachers to accompany clusters of children to the bus stop or as they walk or cycle to/from school
- ensuring that the school entry/exit adequately favours the movement of pedestrians, cyclists and buses over cars
- establishing parent car-pooling clubs with social activities
- raising awareness about how easy it is to TravelSmart
- working with stakeholders such as local government, police and transport providers, to play a role and address some of the local barriers to safe walking, cycling and public transport use or enhance the physical environment for traveling smart.

Schools can also support environmentally-friendly travel choices, with:

- new parent/student orientation procedures to assist with travel decisions
- sunsmart practices and perspiration management
- school uniforms that allow physical movement
- appropriate school bag design and weight limits (and/or lockers)
- codes of conduct in relation to travel arrangements
- class finish/start times that align with bus timetables
- a mandated minimum number of hours for physical activity each week
- enforcing the use of bicycle helmets
- locked and covered bicycle storage
- signage or banners to discourage those driving to the school gate.

Queensland Transport helps TravelSmart schools with:

- parent consultation, including forums
- classroom materials
- 'how to' information about public transport, walking, cycling and car pooling through a transport access guide for their site
- newsletter articles, posters, brochures and incentives
- promotional events and competitions
- working with key stakeholders such as local government, school transport operators and road safety advisers
- ideas about ways to shift the dominant car culture and challenge misconceptions about travelling to and from school.

Many TravelSmart schools undertake an event called the 'TravelSmart Family Challenge'. Students are encouraged to try walking, cycling, car pooling and public transport to get to and from school each day and record their travel patterns on a class log. At the end of the two-week challenge, a celebration day is held at the schools to acknowledge achievements. Parents and local councillors are invited to join in the fun. A prize draw is conducted and certificates of appreciation are presented.

### Sustainable Living Challenge [www.sustainableliving.com.au/](http://www.sustainableliving.com.au/)

The Sustainable Living Challenge is designed to provide an incentive to teachers to integrate *education for sustainability* into their classroom teaching program. The Queensland node of the Sustainable Living Challenge is hosted through the Griffith University.

Students, classes and whole schools are encouraged to take on the challenge of sustainable living by creating and working on a project that contributes in some small way towards creating a sustainable future. To do this the Sustainable Living Challenge provides a mechanism for recognising students' involvement in projects that focus on the vast range of issues and topics that comprise sustainability. Projects for the Sustainable Living Challenge are typically on three different scales:

- **Individual and Small Group Projects:** by students individually or in small groups (usually set as a rich task assignment);
- **Large Group Projects:** by teachers managing a large group of students working collectively on a project;
- **School Projects:** by a school wide effort to become a 'sustainable school'.

The Sustainable Living Challenge recognises each and every project with certificates and, for the outstanding ones, awards and prizes in the form of tools and resources that aid sustainable living.

Teachers are encouraged to use their participation in the challenge as a tool for student assessment and/or motivation for involvement in a project.

### Queensland Natural Resources and Water – partnerships in Natural Resource Management (NRM) Education <http://www.nrw.qld.gov.au/education/>

The vision of the Department of Natural Resources and Water (NRW) is 'managing Queensland's natural resources for today and tomorrow'. NRW plays a critical role in the stewardship of Queensland's natural resources and aims to build a greater understanding of natural resource management issues and responses both internally and with our clients. A key aspect of NRW's educational effort focuses on building interest, skills and knowledge in the future generation of land managers and decision-makers to recognise, acknowledge and implement sustainable natural resource management.

Examples of activities that have taken place during 2005–07 include:

#### 1. *Queensland Education Partnerships for Sustainability (QEPS)*

Initiated in 2007 by the Queensland Department of Natural Resources and Water and Terrain (Far North Queensland Natural Resource Management Regional Body), this partnership links organisations involved in education for sustainability across Queensland.

The partnership aims to:

- A. use education as a process to change attitudes and behaviour of current and future generations of land managers and decision makers towards sustainable natural resource management (NRM) outcomes.
- B. build partnerships to support education in natural resource management across regional NRM bodies, community based NRM organisations local/state/federal agencies, and industry groups. Identifying barriers and benefits these partnerships.
- C. maximise our return for investment in education through sharing initiatives, models, resources and knowledge, and
- D. develop a state wide education strategy and project to better integrate NRM practices into decision making and NRM outcomes, as well as raise capacity for NRM educators to deliver on key NRM asset areas.

## 2. *Natural Resource Sciences and Brisbane Central and West schools partnership*

The Partnership in Science – Indooroopilly Schools Cluster was established in 2005 between the Queensland Department of Natural Resources and Water (Natural Resource Sciences (NRSc) at Indooroopilly) and Education Queensland.

The common objective for the Partnership in Schools – Indooroopilly Schools Cluster was to *attract students into the natural resource sciences*.

This has been progressed by organising teacher professional development with scientists; student interactions with scientists; and by supporting student science showcases and conferences.

## 3. *Enterprising Research Education: Supporting Real World Science in Schools (2005–2008)*

This project, funded by the DEEWR (DEST) Enterprise Learning for the twenty-first century program, provided authentic and real world learning opportunities for secondary school students in natural resource management (NRM) science by assisting the development of dynamic and future-orientated research skills. These outcomes were achieved through an innovative partnership between Queensland Department of Natural Resources and Water, Education Queensland, a consortium of local schools (Indooroopilly Cluster of Schools – Partnership in Science Project) and Natural Resource Management regional bodies. The project explored a range of frameworks for research skill development in students wishing to pursue research related positions in industry and research organisations and provided real life science experiences for science teachers engaged in professional development and postgraduate studies in current research practice. A suite of resources for teachers and students were produced based on the project activities and will be disseminated throughout Queensland using networks established during the project.

One outcome from this project was the *Acid Sulfate Soils* professional development package for senior chemistry teachers. Other products for schools explore processes around climate change, use of spatial technologies including Geographical Information Systems (GIS) and ecosystem monitoring and remediation activities.

## 4. *Queensland community waterway monitoring manual*

Launched in 2007, this comprehensive resource provides advice to schools and community-based groups on waterway monitoring from planning through to carrying out a monitoring project. The monitoring methods outlined in the manual cover water quality, waterbug and stream condition and habitat assessment. The manual is accompanied by the *Waterwatch Queensland stream quality slide* a CD-ROM containing the following resources:

- *Monitoring plan tool for community-based waterway monitoring*,
- A full electronic copy of the manual, including field sheets and other record sheet templates, and
- Chapter 7 *Spreadsheet Tool* to assist with stream condition and habitat monitoring.

Supporting educational materials are currently being developed.

## 5. *Waterwise education resources*

*Water: Learn it for life!* was initiated in 2007 as an ongoing education program targeting early and middle years school children in Queensland. It aims to provide teachers with an engaging program of lesson plans, activities, background research materials and multimedia tools. These include information on the key elements of water education for these years: the water cycle; water sources and storage; conservation and efficient use of water; and the new aspects of water recycling and alternative water sources.

The program is designed to build student awareness and understanding of water as a significant environmental issue that affects our lives locally, nationally and globally. It brings into focus the issues faced in Queensland and around the world as countries seek to secure their water future, and gives students opportunities to explore where water comes from, how it is used, and how to use it responsibly.

## QESSI Alliance Strategic Plan (2005–07)

The draft **QESSI Alliance Strategic Plan (2005–2007)** has been one of the most important outputs of the Alliance members and has set the direction for QESSI through the following eight goals:

1. Encouraging schools to be a total organisation for a sustainable future
2. Promoting a dynamic curriculum process and extra-curricula activities
3. Empowering ourselves and others to make the necessary changes
4. Encouraging and supporting skilled, committed and aware staff
5. Creating school facilities that demonstrate and support sustainability
6. Implementing sustainable management systems in schools
7. Improving school resource management, including water, waste, energy, transport and school grounds
8. Encouraging schools and local communities to be strongly linked

The Alliance Plan was presented at a National Environmental Education Network meeting in 2004; at the *Partnerships for Sustainability* conference in Sydney in 2005 and at the *School Development through Environmental Education* conference in Denmark in 2005. It was widely accepted as an important and contemporary approach to delivering environmental sustainability outcomes within the school context.

The QESSI website <http://education.qld.gov.au/schools/environment/outdoor/qessi.html> has been created as a portal for all service providers in the industry of environmental education for sustainability for schools. Websites have also been created by some of the Regional QESSI Hubs with a focus on regional partners programs.

## QESSI Alliance Strategy Outcomes (QESSI Hubs and Alliance Members)

The QESSI Regional Hubs developed annual Regional Action Plans for Sustainability (RAPS) based on the Vision, Goals and Strategies outlined in the 2005–07 QESSI Alliance Strategic Plan. The Regional Hubs also developed Regional Investment Strategies (RIS) that highlighted the financial contribution both cash and in-kind, that each region was able to commit to supporting their cluster of schools.

The qualitative and quantitative data below has been collated from the outcomes and actions from the QESSI Regional Hubs annual reports as well as the QESSI Alliance members' reports.

## Qessi Strategic Plan Outcomes

### Goal 1: Encouraging schools to be learning organisations for sustainability

Strategies	Key Actions	Partnerships	Actions & Outcomes
<b>Strategy 1.1</b> Encourage and support the use of school grounds and local areas as outdoor classrooms for environmental education.	<p>1.1.1 Excursions to local parks and gardens.</p> <p>1.1.2 Design gardens within the Schools grounds using the “Landscape” process.</p> <p>1.1.3 Develop permaculture gardens.</p> <p>1.1.4 Establish Waterwise initiatives in maintaining school grounds.</p>	<ul style="list-style-type: none"> <li>– Parks and Wildlife Service</li> <li>– Environmental Education Centres (EEC)</li> <li>– Learnscapes Trust</li> <li>– Greening Australia</li> <li>– Community Nurseries</li> <li>– Waterwatch groups and programs</li> <li>– NRM Groups</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hubs encouraging school clusters to build on past successful programs of action for sustainability using expertise in the school community</li> <li>• Learnscaping projects undertaken in several school grounds</li> <li>• Learnscaping workshop for student as part of design development for Centre for Sustainability Studies</li> </ul>
<b>Strategy 1.2</b> Work with schools/ systems to support school buildings and infrastructure being designed and utilised to support environmental education for sustainability.	<p>1.2.1 Develop environmentally focused learning areas within the school classroom.</p> <p>1.2.2 Recommend the inclusion of ecologically sustainable development principles in all school building modifications.</p> <p>1.2.3 Encourage the use of passive design features of existing buildings to reduce the necessity to use air conditioning and heating.</p>	<ul style="list-style-type: none"> <li>– Public Works and Q Build</li> </ul>	<ul style="list-style-type: none"> <li>• Development and approval of ESD design guidelines for state school Landscaping</li> <li>• Development and approval of ESD Design Requirements for state schools</li> <li>• Development of Water Efficiency Management Plans for targeted schools in SEQ under level 5 water restrictions</li> </ul>

<p>Strategy 1.3 Work with schools to build positive relationships between staff, students and communities to establish and support partnerships for sustainability.</p>	<p>1.3.1 Encourage schools to develop a School Environmental Management Committee (SEMC) with representation from all the school key stakeholders.</p> <p>1.3.2 Through the (SEMC) develop a School Environmental Management Plan (SEMP) or equivalent.</p> <p>1.3.3 Initiate school environmental education for a sustainable future forums to outline the QESSI Alliance members programs.</p>	<p>– Schools – QESSI Hubs</p>	<ul style="list-style-type: none"> <li>• QESSI regional hubs signed MOUs with their school clusters</li> <li>• Support their schools in various sustainability award nominations</li> <li>• Support their schools to carry out State of the School Environment Baseline audits in areas of governance, curriculum, energy, waste, water and biodiversity and Action Plan development.</li> <li>• Encouraged their schools to establish School Sustainability Committees to help plan and support the school's environmental initiatives. There have been many committees established.</li> <li>• Supporting the development of School Environment Management Plans (SEMPs) with their school cluster (some schools have SEMPs developed and are at various stages of implementation)</li> <li>• Conducted Professional Development sessions in Educating for Sustainability with school communities across the state.</li> <li>• Provide support by face-to-face meetings, emails, phone contact and links to relevant organisations for schools to undertake steps towards ecologically sustainable practices. Developments promoted through individual hub member schools and to community in general.</li> <li>• Regular emails to keep schools informed of upcoming events, funding opportunities, resources and celebrating successes.</li> <li>• Supported schools to undertake student driven environmental audits with the school</li> <li>• Workshop conducted with 26 regional sustainability education providers to present information about QESSI and for their input into the Regional QESSI Action Plan</li> <li>• Developed resource database of sustainability related information and contact details of regional sustainability education providers and programs</li> <li>• Developed QESSI website with links to a range of other sustainability education resources and websites</li> <li>• Providing sustainability related articles for school cluster newsletters</li> <li>• Encouraging Earth Charter principles in schools (in emails, conversations, meetings, websites and PD Workshops).</li> <li>• Providing letters of support for schools applying for funding for sustainability initiatives</li> <li>• Participation in Earth Dialogues workshop at Cooloola Kids Zone Expo</li> <li>• Working with cluster schools and their sustainability committees providing information and direction for their action plans and SEMP development.</li> <li>• Conducted four day camp to provide information about QESSI, enable guest presentations on a range of themes (energy, waste, water, biodiversity) and to produce action plans for the seven primary schools attending.</li> </ul>
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<p>Strategy 1.3 Contd</p>	<ul style="list-style-type: none"> <li>• QESSI school demonstrating student created advertisements being used in school community</li> <li>• “At a Glance” Newsletter Education focused on Sustainability distributed to over 3000 school community members, politicians and EQ Executive Staff.</li> <li>• Indigenous artists contact information provided to QESSI schools and on the QESSI website</li> <li>• QESSI school Earth Charter posters in classrooms.</li> <li>• Developed SEMP PowerPoint presentation for “Teaching for Sustainability” camp.</li> </ul>
<p>Strategy 1.4 Initiate and encourage an action learning process for schools seeking to achieve environmental sustainability.</p>	<p>1.4.1 Support schools through their curriculum framework to develop units of work that are based on the action learning process.</p> <ul style="list-style-type: none"> <li>– Schools</li> <li>– QESSI Hubs</li> <li>– SEQ Catchments</li> </ul> <ul style="list-style-type: none"> <li>• Schools engage students in identifying and assessing environmental issues, observing and recording and engaging in informed debate/decision making</li> <li>• support for Climate Change/Renewable Energy Year 8 Unit of work designed with an action learning focus</li> <li>• staff attending Green &amp; Healthy Schools Expo in Brisbane</li> </ul>

## Goal 2: Promoting dynamic curricula process and extra curricula activities

Strategies	Key Actions	Partnerships	Actions & Outcomes
<p><b>Strategy 2.1</b> Influence school curriculum frameworks to ensure they reflect and promote environmental education for sustainability.</p>	<p>2.1.1 Encourage the concept of “Thinking Globally – Acting Locally for a Sustainable Future” in school curriculum development and implementation.</p> <p>2.1.2 Promote a holistic and integrated approach to environmental education curriculum implementation across all the Key Learning Areas.</p> <p>2.1.3 Develop a future perspective in curriculum development.</p>	<ul style="list-style-type: none"> <li>– Schools</li> <li>– QESSI Hubs</li> <li>– Reef Guardian Program</li> <li>– Earth Charter</li> </ul>	<p>QESSI SCHOOLS:</p> <ul style="list-style-type: none"> <li>• Encouraged to celebrate actions and programs that have been successful and to work through existing frameworks that demonstrated success in the past</li> <li>• Developed units of work which embed the Earth Charter and Sustainability as key organizers</li> <li>• Year 6 Reef Guardians Unit implemented in a number of schools curriculums supporting environmental sustainability principles</li> <li>• All programs at EEC-QESSI Hub have included a focus on sustainability – incorporated in planning, orientations of teachers, programs and planned action post program has integrated permaculture design principles through all primary school year levels</li> <li>• Upper primary year levels undertaking “Blue Gold” and “Our Water, Our Future” Units</li> </ul>
<p><b>Strategy 2.2</b> Support the development of school curriculum frameworks that are student learner centred and reflect real life learning.</p>	<p>2.2.1 Design environmental education curriculum that is student learner centred.</p> <p>2.2.2 Encourage the ethos that environmental education for a sustainable future is a real life learning experience for everyone; students, staff and the school community.</p>	<ul style="list-style-type: none"> <li>– Schools</li> <li>– QESSI Hubs</li> <li>– Fuji-Xerox</li> <li>– Green &amp; Healthy School program</li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion of Environmental challenge in school Superchallenge</li> <li>• Year 4 class participation in revegetation of Cannon Hill Bushland reserve</li> <li>• Earth Dialogue Forums involving students and teachers at and from various QESSI Hub schools</li> <li>• Presentation by Fuji-Xerox Sustainability Manager with students learning about large companies commitment to a sustainable future</li> <li>• Rainforest to Reef programs delivered and action plans developed</li> <li>• QESSI Hub support of school cluster to integrate sustainability into curriculum framework</li> <li>• QESSI Hub establishing a learning place project room</li> <li>• QESSI Hub promoting concept of “Thinking Globally- Acting Locally for sustainability in curriculum</li> </ul>

<p><b>Strategy 2.3</b> Encourage establishment of environmental clubs, activities and projects focused on sustainability.</p>	<p>2.3.1 Establish environmental clubs such as Junior Landcare, Youth Environment Committees.</p> <p>2.3.2 Encourage students to join existing environmental groups such as – Australian Conservation Foundations, Bilby Club, Gould League Membership, etc.</p> <p>– Schools – QESSI Hubs</p>	<ul style="list-style-type: none"> <li>• Establishment of the Queensland Youth Environment Council in May 2007</li> <li>• QESSI Hub providing support and encouragement to student driven Environmental groups</li> <li>• Many School Environmental and Sustainability committees established</li> </ul>
<p><b>Strategy 2.4</b> Identify and address outcomes specific to environmental education In the syllabus.</p>	<p>2.4.1 Support schools in developing environmental education curriculum that is based on the objective of the P-12 Environmental Education Curriculum Guide (Dept. of Education 1993) i.e. Skills, Attitudes, Values, Knowledge, in environmental education for sustainability.</p> <p>2.4.2 Identify the environmental education attributes within the existing Key Learning Areas to be used in syllabus development.</p> <p>– Schools – QESSI Hubs</p>	<ul style="list-style-type: none"> <li>• Sample units of work/assessment items provided to hub schools teaching staff on request. A sustainability related unit of work/assessment bank being developed to enable sharing with other schools.</li> <li>• Development of curriculum material for the Active and Informed Citizens for a Sustainable World – State Schools Values Framework</li> </ul>
<p><b>Strategy 2.5</b> Identify opportunities such as special events and school community actions to enhance student learning Outcomes.</p>	<p>2.5.1 Create an Environmental Events calendar of significant dates to focus environmental outcomes – World Environment Day, Earth Day, and World Wetland Day.</p> <p>2.5.2 Identify significant environmental events that celebrate the outcomes of environmental education for sustainability – River Festival, Eco Fest, Student Congress, and International Student River Health Conference.</p> <p>– QESSI steering committee</p>	<ul style="list-style-type: none"> <li>• QESSI Hub sourced regional calendar of significant dates and shared these with school cluster</li> <li>• Gladstone Eco Fest celebrated each year on World Environment Day involves a strong participation from Gladstone schools</li> <li>• Cabbage Tree Creek Kids Congress is held each year for the Brisbane North schools and is based on the concept of Kids teaching Kids</li> <li>• QESSI Schools encourage to participate in Green &amp; Healthy Schools program, Reef Guardian program, World Environment Day, Arbour Day and Environmental Education Expo</li> <li>• Footsteps towards Sustainability celebration held for all the FANQ QESSI Schools in November 2007</li> </ul>

## Goal 3: Empowering ourselves and others to make the necessary changes

Strategies	Key Actions	Partnerships	Actions & Outcomes
<b>Strategy 3.1</b> Identify and initiate programs for students and staff to support change of attitudes and behaviour related to sustainability.	<p>3.1.1 Encourage students to participate in environmental education programs that focus on personal behaviour change.</p> <p>3.1.2 Encourage teachers to participate in environmental education programs that focus on personal development for sustainable future e.g. Nature Exposed (EPA and PWS), Teaching for a Sustainable World (Fien et al Griffith University).</p>	<ul style="list-style-type: none"> <li>– Schools</li> <li>– QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hub connecting schools within the Hubs electronically via email and website links</li> <li>• QESSI Hub arranged sessions to allow sharing of successful programs across the hub schools</li> <li>• QESSI Hub initiated social outcome data collection at schools</li> <li>• Conference presentation by QESSI Hub at North Qld QESSI Hub, QASSP &amp; EQ Community Development conference and Australian</li> <li>• QESSI Hub presentation to Environment &amp; Outdoor Education Centre's Principal's meeting on Hub activities</li> <li>• QESSI Hub meeting with Learning and Curriculum Support staff at the Northern Sunshine Coast Ed Qld Regional Office to share information about QESSI and explore connections</li> </ul>
<b>Strategy 3.2</b> Integrate sustainability based program outcomes with the aim of supporting behavioural change.	<p>3.2.1 Encourage environmental education programs with outcomes that can be measured in the social, economic and environment areas.</p> <p>3.2.2 Support schools to implement environmental education programs that focus on actions for environmental sustainability.</p>	<ul style="list-style-type: none"> <li>– QESSI Hubs</li> <li>– Earth Dialogues Event</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hub school students representing their region as Earth Dialogue ambassadors</li> <li>• Schools and students encouraged to participate in programs that acknowledge leadership, innovation and improvement</li> <li>• Reef Guardian Future Leaders workshops for students held across the coral coast region throughout each year.</li> <li>• Note the comprehensive set of quantitative and qualitative outcomes listed in the Sustainable Outcomes section of the report.</li> </ul>
<b>Strategy 3.3</b> Identify role models, mentors and champions for the sustainable schools initiative at the state and regional level.	<p>3.3.1 Invite Emeritus Professor Ian Lowe to be the patron for QESSI.</p> <p>3.3.2 Identify role models, mentors or champions for regional QESSI networks.</p>	<ul style="list-style-type: none"> <li>– QESSI steering committee</li> </ul>	<ul style="list-style-type: none"> <li>• Mentor programs established at a number of schools</li> <li>• QESSI Hub mentoring schools and staff through school programs support to increase understanding of Environmental Education for Sustainability</li> <li>• QESSI Hub participated in a local school's Environment Forum, Cooloola Kids Zone and Teacher's Expo where sustainability initiatives from many schools in the Gympie area were shared by students from each school. Also sustainability providers showcased a range of programs available for schools to use.</li> <li>• Teacher from a QESSI school featured in Readers Digest with permaculture/ sustainability initiatives being undertaken at the school</li> </ul>

<p><b>Strategy 3.4</b> Identify and promote effective ways to acknowledge leadership, innovation and improvement related to environmental education for sustainability.</p>	<p>3.4.1 Encourage schools to participate in state and regional recognition and awards programs that acknowledge leadership, innovation and improvement related to environmental education for sustainability e.g. National Banksia Awards, Green and Healthy Schools Awards, Reef Guardian Schools Awards, SEQ Healthy Waterways Awards.</p> <ul style="list-style-type: none"> <li>- QESSI Hubs</li> <li>- Green &amp; Healthy Schools Awards</li> <li>- Sunshine Coast Environment Council (SCEC) Froggy Awards</li> <li>- Sustainable Living Challenge</li> <li>- Cassowary Awards</li> <li>- Hands on Habitat Awards</li> <li>- University of NSW</li> <li>- Planet Ark</li> <li>- AMP Foundation</li> <li>- Caloundra City Council</li> <li>- Cleanaway</li> <li>- Ripples of Change Awards</li> </ul> <ul style="list-style-type: none"> <li>• Schools entered various awards</li> <li>• QESSI school won 2006 Brisbane's Greenest and Healthiest School in the Green &amp; Healthy Schools's (GHS) Awards</li> <li>• QESSI school 2006 Highly commended in Sustainability Living Challenge</li> <li>• QESSI school GHS Brisbane Litter &amp; Young Legends Award</li> <li>• QESSI school GHS Brisbane's Young Legends Award</li> <li>• QESSI school Tree Day Planet Ark &amp; AMP Foundation</li> <li>• QESSI school GHS Waste Management and Resource Conservation</li> <li>• 2006 Highly Commended in Lord of Weeds Competition Uni NSW; 2006 Hands on Habitat Awards</li> <li>• Cassowary awards – Continuing excellence certificate</li> <li>• Caloundra City Council/Cleanaway Waste Award</li> <li>• Champion school GHS State Waterwise Award and Reef Guardian Water Warriors Award</li> <li>• Some schools developing internal award systems to recognise environmental achievement in the school community</li> <li>• Garden Gnome Award given to child observed keeping grounds litter free</li> <li>• QESSI Hub developing a recognition system to award good practice</li> <li>• QESSI Hub awarded Clean Beach Award for Resource Conservation and Natural Resource Management</li> </ul>
<p><b>Strategy 3.4</b> Contd</p>	<ul style="list-style-type: none"> <li>• QESSI Hub developed new Sustainable Schools Category in the Sunshine Coast Environment Council's (SCEC) yearly Froggy Awards based on the 8 QESSI goals</li> <li>• Two QESSI schools received first prize and a Highly Commended in the Sustainable Schools Category of the SCEC Froggy Awards</li> <li>• Three QESSI schools won Ripples of Change Awards</li> <li>• QESSI School 2006 Tuckshop of the Year</li> </ul>

## Goal 4: Encouraging and supporting skilled, committed and aware school staff

Strategies	Key Actions	Partnerships	Actions & Outcomes
<p><b>Strategy 4.1</b> Build 'sustainability' into teacher training courses at universities and other institutions.</p>	<p>4.1.1 Establish links with universities that deliver pre-service teacher training courses in Environmental Education for Sustainable Future e.g. Griffith University, Queensland University of Technology, Central Queensland University.</p> <p>4.1.2 Encourage current teachers to participate in professional development opportunities in Environmental Education for Sustainable Future programs, seminars or courses.</p>	<ul style="list-style-type: none"> <li>- QESSI Hubs</li> <li>- Griffith University</li> <li>- University of the Sunshine Coast</li> <li>- James Cook University</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hubs provided professional development for sustainability curriculum units in energy, water and waste</li> <li>• Key teachers in QESSI school cluster meeting after school to share professional dialogue across the hub schools</li> <li>• QESSI Hub developed own regional core module training package for Sustainability Education</li> <li>• Some schools (teachers and students) provided with Sustainability focused weekend residential program at a QESSI Hub/Environment Education &amp; Outdoor Centre</li> <li>• Fifty 1st year student teachers at Central Qld University given experience in sustainability education at the regional QESSI Hub. This link with the teacher training at the University to continue</li> <li>• Sustainability education included as a focus for Centre/Hub orientation programs with three programs conducted for all visiting coordinators</li> <li>• teachers (50 participants) attending programs at the Centre</li> <li>• QESSI Hub support for committee members to view "An Inconvenient Truth"</li> <li>• QESSI Hub principals and relevant Regional Office staff provided with half-day session on "QESSI – What's in it for Me?"</li> <li>• Two day workshop by QESSI Hub with 19 teachers from QESSI school cluster, 5 University trainee teachers and guest speakers with presentation on waste, energy, fishing competition and river care</li> <li>• Partnerships formed with QESSI Hub and James Cook University for fourth year teaching student to assist with PD module implementation</li> <li>• "Productive Pedagogy for a Sustainable School" providing professional development for junior, middle and senior school staff of a regional College to increase knowledge of teaching for sustainability and how to integrate it into the curriculum to large number of middle year students. Program implementation requiring compost bins, tools, recycling bins, worm farms, "Ollie Recycles" CD Rom</li> <li>• QESSI school staff participated in sustainability related PD "Discovery Lecture Series" at Griffith University</li> <li>• QESSI Hub hosted a "Sustainable Futures PD day at the Eco Centre delivered • QESSI Hub hosted international student teachers to gain valuable exposure for successful delivery of environmental education for sustainability programs</li> <li>• QESSI Hubs publicising school achievements/milestones among hub schools and the wider community</li> </ul>

<p><b>Strategy 4.1</b> Contd</p>	<ul style="list-style-type: none"> <li>• QESSI Hub meeting with key staff at University of Sunshine Coast (USC) to discuss mainstreaming sustainability into teacher training course at University</li> <li>• QESSI Hub input into new “Educating for Sustainability” unit for pre and in-service teachers at USC</li> <li>• QESSI Hub hosting USC trainee teacher for work experience in area of sustainability education</li> <li>• QESSI Hub arranged group of USC trainee teacher involvement in a waste monitoring and behaviour change project at nearby College</li> <li>• QESSI Hub attended regional one day PD event – “Muster Cluster” at Gympie, where hundreds of teachers from schools throughout the region meet for a range of Professional Development opportunities including a sustainability education session at a local high school</li> <li>• QESSI Hub attended the Sustainable Schools Expo at Centenary Park High School, Jindalee and joined Values Education, Global Learning Centre, Modeling for Freshwater Food Web Sessions</li> </ul>
<p><b>Strategy 4.2</b> Source ‘Train the Trainer’ modules for QESSI/Alliance members to support the ongoing development of sustainable schools.</p>	<p>4.2.1 Deliver Train the Trainer modules to QESSI/Alliance members, including Hub facilitators and sustainable schools support teachers utilizing existing professional development resources e.g. Victorian Sustainable Schools Train the Trainer modules and NSW Sustainable Schools Support Teachers in-service materials.</p> <p>– QESSI Hubs</p> <ul style="list-style-type: none"> <li>• All QESSI hubs have received five, two day professional development and training workshops on elements of sustainable schools – July 2004, July 2005, November 2005, December 2006, December 2007</li> <li>• PD module “Becoming A Sustainable School provided to all teaching staff, groundsman and some admin staff at several QESSI primary schools</li> </ul>

<p><b>Strategy 4.3</b> Provide professional support to classroom teachers in areas of environmental education for sustainability.</p>	<p>4.3.1 Encourage teachers to participate in professional development opportunities through seminars, conferences and workshops e.g. Environmental Education Expo, Ecofest, etc.</p> <p>4.3.2 Provide professional development opportunities for teachers through the support from the QESSI Alliance member programs.</p> <p>4.3.3 Provide direct professional development opportunities for teachers in a cluster of schools around a QESSI hub staff or a Sustainable Schools Support Teacher.</p>	<p>– Schools – QESSI Hubs – Environmental Education service providers e.g. Council Officers, Water Board education officers, NRM group educators</p>	<ul style="list-style-type: none"> <li>Professional development workshops provided in understanding education for sustainability and developing sustainability curriculum units in energy, water and waste</li> <li>QESSI Hub encourage school cluster staff to access the Centre’s resource library</li> <li>SEQ EE Expo was conducted each year in March attracted approximately 120 teachers each year.</li> <li>Sustainable Schools professional development workshops were conducted by every QESSI hub throughout each year. Teachers participated in the Sustainable Schools, modules that were specific to their schools needs.</li> </ul>
<p><b>Strategy 4.4</b> Provide professional support to administrators and other school staff in sustainability related management practices.</p>	<p>4.4.1 Encourage administrators and other school staff to participate in professional development opportunities through seminars, conferences and workshops e.g. Environmental Education Expo, Ecofest.</p> <p>4.4.2 Provide professional development opportunities for administrators and other school staff through the support from the QESSI Alliance member programs.</p> <p>4.4.3 Provide direct professional development opportunities for administrators and other school staff in a cluster of schools around a QESSI hub staff or a Sustainable Schools Support Teacher.</p>	<p>– QESSI Hubs</p>	<ul style="list-style-type: none"> <li>QESSI Hub coordinators attending school staff meetings to spread the importance of sustainability actions</li> <li>School administrators scheduling space in school’s professional development programs and budgets following QESSI Hub negotiations</li> <li>Many QESSI Hub school teaching staff presenting information from PD in Sustainability to whole staff meetings</li> <li>School tucksops supporting school SEMP’s through commercial enterprises</li> <li>School Environmental Management Plans showcased to whole of school, P&amp;C and other staff</li> <li>SEQ EE Expo conducted annual with over 120 teachers attending in some years.</li> <li>Gladstone Eco Fest attracts thousands of people each year and the Boyne Island EEC is a key contributor to the program</li> </ul>

## Goal 5: Creating school facilities that demonstrate and support sustainability

Strategies	Key Actions	Partnerships	Actions & Outcomes
<p><b>Strategy 5.1</b> Advocate for all new schools to be designed and constructed on ESD principles and practices.</p>	<p>5.1.1 Encourage Department of Education and the Arts to design and construct all new schools on ecologically sustainable development principles and practices. Refer to the draft Education Queensland “Charter for Sustainability” (Nov 2002).</p> <p>5.1.2 Encourage Department of Education and the Arts to design and construct all non-government new schools on ecologically sustainable development principles and practices. Refer to the draft Education Queensland “Charter for Sustainability” (Nov 2002).</p>	<p>Partnerships</p> <ul style="list-style-type: none"> <li>– Public Works</li> <li>– EQ shared services</li> </ul>	<p>Actions &amp; Outcomes</p> <ul style="list-style-type: none"> <li>• Gateway Learning Community Hub lobbying EQ to consider Sustainable Building Practices in new Prep/Year 1 building</li> <li>• “Science &amp; Technology for a Sustainable School project with students involved in developing plans for a Centre for Sustainability Studies (project funding \$108,000)</li> <li>• Teachers also involved in the development of a Centre for Sustainability Studies involved in workshop working with architects &amp; engineers on Centre designs</li> <li>• QESSI Hub assisting High School in “green mapping” school facilities, grounds and local community environs</li> <li>• QESSI Hub acting as a model to promote sustainable and environmentally responsible facilities and practices with: Alternative energy generation; application of rainwater tanks; natural lighting/airflow; composting toilets; low volume taps, recycling, worm farms, frog pond, biodiversity displays</li> </ul>
<p><b>Strategy 5.2</b> Advocate for all new buildings and existing facilities in schools to be designed and constructed on ESD principles and practices.</p>	<p>5.2.1 Encourage state school principals to request Q Build and Public Works to include ESD principles and practices in all refurbished school buildings, including the establishment of preparatory facilities.</p> <p>5.2.2 Encourage non-state schools to consider ESD principles and practices in all refurbished school buildings.</p>	<p>Partnerships</p> <ul style="list-style-type: none"> <li>– Australian Community Water Grants</li> <li>– QESSI Hubs</li> </ul>	<p>Actions &amp; Outcomes</p> <ul style="list-style-type: none"> <li>• Water tanks installed at many schools through a variety of grant, rebate and donation processes</li> <li>• Upgrading a regional QESSI Hub greenhouse to more effectively demonstrate composting, work-farm operations and propagation</li> <li>• QESSI Hub support for schools to retrofit existing facilities</li> <li>• QESSI Hub planning development of some straw bale construction</li> <li>• A QESSI Hub school promoting the idea of being a QESSI Centre school</li> </ul>
<p><b>Strategy 5.3</b> Promote a statewide program of retrofitting existing schools and facilities to meet ESD principles and practices.</p>	<p>5.3.1 Encourage the retrofitting of water saving and energy efficiency devices in schools as an environmentally sustainable alternative to standard devices.</p>	<p>Partnerships</p> <ul style="list-style-type: none"> <li>– Q Build</li> <li>– Schools</li> </ul>	<p>Actions &amp; Outcomes</p> <ul style="list-style-type: none"> <li>• Schools in SEQ that were high water users, developed Water Efficiency Management Plan (WEMPs) with the aim to reduce their water consumption</li> <li>• Reduced water consumption in ALL state schools from 15 kilolitres per capita (students and staff) in 2002–03 to 12 kilolitres per capita in 2005–06, which is a 20% reduction over three years.</li> </ul>

<p><b>Strategy 5.4</b> Identify and support programs that focus on environmentally sustainable food production.</p>	<p>5.4.1 Establish permaculture gardens in schools.</p> <p>5.4.2 Invite community organic gardeners to assist schools in developing organic gardens.</p> <p>5.4.3 Invite health promoting schools committee members to assist schools.</p> <p>– DPI – City Farms – DNRM</p> <ul style="list-style-type: none"> <li>• Many QESSI schools have edible/permaculture gardens established in their schools through the support of organic gardeners and permaculture consultants</li> </ul>
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## Goal 6: Implementing sustainable management systems in schools

Strategies	Key Actions	Partnerships	Actions & Outcomes
<b>Strategy 6.1</b> Encourage the development and implementation of a SEMP, or similar plan for each participating school in Queensland.	6.1.1 Support schools to develop their own SEMP or similar plan to identify their own specific actions to become a more environmentally sustainable school.	<ul style="list-style-type: none"> <li>- QESSI Hubs</li> <li>- Public Works</li> <li>- EQ shared services</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hubs supporting the development of School Environment Management Plans (SEMPs) with their school cluster (Some schools have SEMPs developed and at various stages of implementation)</li> </ul>
<b>Strategy 6.2</b> Deliver in-service support to key school staff in development and implementation of the SEMP or similar plan.	6.2.1 Identify professional development needs of key staff in participating schools in the area of SEMP design and implementation.	<ul style="list-style-type: none"> <li>- QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• Some schools considering environmental consequences in purchasing policies</li> </ul>
<b>Strategy 6.3</b> Develop a suitable review and feedback process to acknowledge progress in making and implementing plans.	6.3.1 Convene an annual review session for all members of the school SEMC. 6.3.2 Organise an annual review forum for all QESSI Alliance members on the Earth Day, 22 April each year	<ul style="list-style-type: none"> <li>- Q Build</li> <li>- Schools</li> <li>- QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hub encouraging and assisting hub schools to map their current environmental sustainability achievements</li> <li>• QESSI Hub assisting hub schools to identify and plan specific actions which focus on tangible and realistic improvements in sustainability outcomes</li> <li>• QESSI Hub providing a 12 month review forum for progress within Hub schools</li> <li>• QESSI Hub arranged and supported school meetings to review their SEMP</li> </ul>
<b>Strategy 6.4</b> Aggregate sustainability outcomes of all participating schools for SoE Reporting according to national indicators for sustainable schools	6.4.1 Collate all the sustainable outcomes to develop an annual 'State of the Environment' Report for regions and the whole state. 6.4.2 Provide this data to other key agencies e.g. DEH, EPA for inclusion in their SoE Reports.	<ul style="list-style-type: none"> <li>- QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive overview of the QESSI concept and some of the significant outcomes have been published in the 2007 Queensland State of the Environment Report in the Sustainability Section on page 40. This is the first time an education sector program has been profiled in any State of the Environment Report.</li> <li>• Quantitative data that was published in the 2007 SoE includes: <ul style="list-style-type: none"> <li>• A school demonstrated a reduction of more than 40% in energy consumption through support from a QESSI regional hubs.</li> <li>• 20 % reduction in water consumption for all state schools between 2003–04 and 2005–06.</li> </ul> </li> </ul>

## Goal 7: Improving school resource management, including water, waste, energy, transport and school grounds

Strategy	Key Actions	Partnerships	Actions & Outcomes
<p><b>Strategy 7.1</b> Identify and support programs that focus on minimising energy, ater and waste (reducing the 'ecological footprint').</p>	<p>7.1.1 Encourage a Green and Healthy tuckshop/canteen philosophy in all schools.</p> <p>7.1.2 Encourage composting of fruit and vegetable waste from school tuckshop/ canteens.</p>	<ul style="list-style-type: none"> <li>– QESSI Hubs</li> <li>– Water Wise, Waste Wise</li> <li>– Energy Efficiency, Solar Schools</li> <li>– SITA, Cleanaway, EnviroCom</li> <li>– Rio Tinto</li> </ul>	<ul style="list-style-type: none"> <li>• Rio Tinto Aluminium funding provision of energy saving kits to schools for home use for sale by schools</li> <li>• Widespread implementation of sustainable practices</li> <li>• Several QESSI Hub schools implementing successful Australian Government Community Water Grants thus reducing water use</li> <li>• Brisbane City Council's Active School Travel participants</li> <li>• Waste recycling providing income to schools</li> <li>• Easy Being Green promotion to raise funds through a Carbon Credits program</li> <li>• Waste management strategy in conjunction with SITA covering paper, cardboard, recyclable containers, e-waste, fluoro tubes and metals developed for a whole QESSI school cluster</li> <li>• Many schools composting and recycling food waste for worms</li> <li>• School energy audits, solar energy panels, energy reduction action plans implemented</li> <li>• Reduced water usage in many schools with water saving initiatives and water tanks installed</li> <li>• Reduced waste to landfill in many schools by up to 20% and some by 50%</li> <li>• Mulching of school gardens to improve soil and reduced water use becoming a widely accepted practice</li> <li>• New watercraft at QESSI Hub/EE Centre will support operations and reduce greenhouse gas emissions</li> <li>• QESSI Hubs/EE Centres role model sustainable practices in water, waste, energy and biodiversity</li> <li>• Re-use of treated effluent (3000 litres per day) to irrigate ovals at one high school. Estimated saving of 900,000 litres water/year through Federal Community Water Grant</li> <li>• Another Community Water Grant at a regional College enabling dual flush toilets, water efficient shower heads, and water tanks installed for toilets and garden/farm irrigation. Reduction in 1.68 million litres water/year</li> <li>• QESSI Hubs promoting links with and uptake of QESSI Alliance member programs aimed at reducing waste, water and energy (Waterwise, Energy Efficiency, Solar Schools)</li> <li>• QESSI Hub highlighted the Ecological Footprint activity as an important tool in supporting attitudinal and behavioural change in school cluster/PD workshops</li> <li>• QESSI Hub provided access to Energy Trailer (mobile educational resource on greenhouse issues and alternative energy) by the school cluster to assist energy initiatives in schools</li> </ul>

<p><b>Strategy 7.2</b> Identify and support programs that focus on enhancing biodiversity and connecting students to the values of Nature.</p>	<p>7.2.1 Offer in-service Train the Trainer programs such as “Nature Exposed” to teachers and environmental educators.</p>	<ul style="list-style-type: none"> <li>- QPWS</li> <li>- Greening Australia</li> <li>- Brisbane City Council</li> <li>- Griffith University</li> <li>- Conservation Volunteers Australia</li> <li>- QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• Variety of planting projects across many schools using local native plants</li> <li>• Cannon Hill Bushland and Seven Hills Reserve projects in partnership with local schools</li> <li>• Some schools increasing native habitat areas in school grounds and many schools developing edible gardens</li> <li>• QESSI Hub improving grounds with local native plant species</li> <li>• QESSI Hub constructed a frog pond in partnership with Griffith University, Conservation Volunteers Australia with plants from Brisbane City Council</li> <li>• QESSI Hubs promoting links with and uptake of QESSI Alliance member programs aimed at improving biodiversity (Catchment Care groups)</li> </ul>
<p><b>Strategy 7.3</b> Encourage schools and the community to use more environmentally sustainable forms of transport.</p>	<p>7.3.1 Encourage schools to participate in the Travel Smart Schools program.</p> <p>7.3.2 Reduction of air pollution and traffic awareness programs.</p>	<ul style="list-style-type: none"> <li>- Queensland Transport</li> <li>- Travel Smart Program</li> <li>- Brisbane City Council</li> </ul>	<ul style="list-style-type: none"> <li>• Many schools supported in their move to more sustainable forms of transport by involvement in the Travel Smart Program</li> <li>• QESSI Hubs promoting links with and uptake of QESSI Alliance member programs aimed at greater use of sustainable transport (Brisbane City Council’s Walking Bus)</li> </ul>
<p><b>Strategy 7.4</b> Promote appropriate programs that encourage healthier forms of human movement to and from schools and facilities.</p>	<p>7.4.1 Encourage schools to use public transport for school trips and excursions.</p>	<ul style="list-style-type: none"> <li>- Schools</li> <li>- QESSI Hubs</li> </ul>	<ul style="list-style-type: none"> <li>• Wildwords Festival “Be Active Be Smart”</li> </ul>

## Goal 8: Encouraging interlinked schools and local community partnerships

Strategy	Key Actions	Partnerships	Actions & Outcomes
<p><b>Strategy 8.1</b> Encourage productive partnerships between schools and their communities on key aspects of sustainability.</p>	<p>8.1.1 Identify and create links with potential partners in the school community who would assist schools in their journey to becoming more environmentally sustainable.</p>	<ul style="list-style-type: none"> <li>- Schools</li> <li>- QESSI Hubs</li> <li>- Great Barrier Reef Marine Park Authority</li> <li>- Gold Coast City Council</li> <li>- CRC for Sustainable Tourism: Earthcheck</li> </ul>	<ul style="list-style-type: none"> <li>• Future Leaders Eco Challenge organized through Great Barrier Reef Marine Park Authority</li> <li>• QESSI Hub working with Rio Tinto who funded home energy saving kits sold for fundraising through the schools</li> <li>• Certain schools actively encouraging the broader school community to shift toward sustainability</li> <li>• Some schools involving local community in development and implementation of SEMP</li> <li>• QESSI Hub arranged meetings with regional Permaculture educators and Living Smart program coordinator to further mutual aims and provided with CD on School Gardens in the Curriculum work to share with school cluster</li> <li>• QESSI information and school photos and outcomes highlights displayed at regional World Environment Day events</li> <li>• Three different QESSI articles in local catchments centre newsletters</li> <li>• QESSI promoted and explained on local radio station</li> <li>• Sustainability Challenge – partnership project between QESSI Hub, Gold Coast City Council and Earthcheck (Cooperative Research Centre for Sustainable Tourism) where students track energy, waste and water use of their homes with the Earthcheck web-tool and database to benchmark and set goals for improving household sustainability</li> </ul>
<p><b>strategy 8.2</b> Identify organisations and agencies that can support schools on their path to a more sustainable future.</p>	<p>8.2.1 Investigate the possibility of schools engaging in community-based sustainability programs and projects.</p>	<ul style="list-style-type: none"> <li>- Schools</li> <li>- QESSI Hubs</li> <li>- Brisbane City Council</li> <li>- Brisbane Exhibition RNA (Ekka)</li> <li>- 4BC Radio</li> <li>- Allan Phillips World Peace Trust</li> </ul>	<ul style="list-style-type: none"> <li>• QESSI Hubs supporting key teachers in grant applications and funding sources for initiatives</li> <li>• Norman Park St School received funding from Allan Phillips World Peace Trust Funding for School Farm</li> <li>• 4BC Radio financial support for father son sleepovers</li> <li>• BCC Councillor working with QESSI Hub and school communities to screen “An Inconvenient Truth” at local cinema</li> <li>• Whole school community awareness raising of Sustainability through actions in schools</li> <li>• Some QESSI Hubs providing support to each other</li> <li>• Fruit &amp; Vegetable display at Brisbane RNA Ekka with theme of “Be waterwise – on the farm, at home and at school” reaching the 100,000 people visiting the Agricultural Hall</li> <li>• QESSI Hub meeting group made up of range of sustainability educators and partners established with regular meetings held</li> </ul>

### Strategy 8.3

Identify and promote learning opportunities for and within local communities related to sustainability.

#### 8.3.1 Seek learning opportunities related to sustainability

issues as they arise, for schools and their staff to engage in their local communities.

<ul style="list-style-type: none"><li>- Schools</li><li>- QESSI Hubs</li><li>- Brisbane City Council</li><li>- Livingstone Shire Council</li><li>- Longreach Shire Council</li><li>- Maroochy Shire Council</li><li>- Cairns City Council</li><li>- Cairns Botanical Garden</li><li>- Caloundra City Council</li><li>- Gold Coast City Council</li><li>- Local councils and shires</li><li>- Green &amp; Healthy Schools</li><li>- Reef Guardian Schools</li><li>- Department of Environment &amp; Heritage</li><li>- Qld Parks &amp; Wildlife Service</li><li>- Qld Sustainable Energy Industry Development Group</li><li>- Metroplex on Gateway</li><li>- B4C Bulimba Creek Catchment Coordinating Committee</li><li>- Maroochy Waterwatch &amp; - Florabunda Bushcare Nursery</li><li>- Aspect Trees</li><li>- North Qld Recycling Agents</li><li>- Cleanaway</li><li>- 96.1 Zinc FM</li></ul>	<ul style="list-style-type: none"><li>• QESSI Hub and school clusters working directly with a broad range of partners through program delivery to schools and other support</li><li>• Local businesses supporting individual school projects</li><li>• Easy Being Green project – selling fluoro light bulbs to school community</li><li>• Media coverage promoting Rainforest to Reef program aimed at water conservation and education for sustainability</li><li>• Anecdotal evidence the sustainability actions are being implemented in students homes</li><li>• QESSI Hubs developing broad range of successful partnerships with QESSI schools and local organisations and agencies relevant to the school cluster</li><li>• QESSI Hub/EE Centre AGM brainstorming session for partnership invitations to the Sustainability Education Summit meeting at the Centre</li><li>• Partnership between QESSI Hub and local council for waste recycling programs, home energy kit, Aqua Clic water saving device &amp; logo design</li><li>• Partnership between QESSI Hub and Cairns Botanical Gardens for Biodiversity design project</li><li>• Energy Trailer Workshop for QESSI schools at QESSI Hub provided by Qld Sustainable Energy Industry Group</li><li>• School mulching and paper recycling project in partnership with local organisations</li><li>• QESSI Hub attending school “Don’t Waste It Presentation” by Cleanaway and Caloundra City Council</li><li>• QESSI school won water tank following a preschool to Year 3 unit focusing on water from radio station 96.1 Zinc FM</li><li>• QESSI Hub attending energetic school edible garden group meetings (parents and teacher) to highlight issues and opportunities in educating for sustainability</li><li>• QESSI Hub exhibited Energy Trailer (mobile educational resource on climate change, greenhouse issues and alternative energy) at community events with sponsorship support by Gold Coast City Council</li></ul>
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## QESSI Regional Hubs

The regional implementation phase of the QESSI Strategic Alliance Plan occurred in 2006 following the establishment of 12 State QESSI Hubs in 2005. Each QESSI Hub works with a cluster of 6 to 8 schools in their region assisting them on their journey toward becoming a Sustainable School by working to achieve the eight QESSI goals. The actions of the QESSI Hubs are detailed in the QESSI Alliance Strategic Plan Outcomes section of this report.

### QESSI Hub professional development:

All professional development and training workshops for the QESSI Alliance members and regional hubs facilitators and coordinators were contracted through an expressions of interest process to the Victorian Gould Group. This organisation was part of the AuSSI pilot and had developed “train-the-trainer” modules for sustainable schools facilitators. There were five modules

**July 2005 – Overview of Sustainable Schools** – To provide the newly selected QESSI Regional Hubs and the existing QESSI Alliance members with a set of strategies (pedagogical, curriculum teaching and learning) to assist schools to become more environmentally sustainable. This will be provided through the researched experience of the Victorian Sustainable Schools Initiative that is coordinated through Gould Group and CERES.

The objectives of the professional development and training program will help participants to learn through the Core Module which focuses on:

- the pedagogy, research and experience behind the Sustainable Schools framework;
- the benefits to schools and students of participating in Sustainable Schools;
- the potential outcomes at the school, family, local government and State levels;
- the structure, approach, skills and twelve key facilitated elements of the Sustainable Schools framework can help them to be more effective in their own sustainability education programs;
- how to develop a School Environmental Management Plan (SEMP); and
- how to use the Sustainable Schools Framework to get started in a school and to maintain the momentum.

**November 2005 – Core Module on Sustainable Schools** – The focus of the first day of professional development was working with the Hub facilitators to develop their work plans for regional action and investment strategies. QESSI Alliance members were invited to this event with hub facilitators to identify resources available through their programs, personnel or agencies to support the work of the hubs. Presentations from both the NSW and Victorian Sustainable Schools Initiatives were delivered.

**December 2006 – Waste and Water Modules** – This workshop, which follows two other workshops, covered the first two of the Resource Modules – Waste and Water. The training program will help participants to learn:

- how to use the Sustainable Schools Framework to engage schools (Principals, teachers and parents in the Queensland Environmentally Sustainable Schools Initiative (QESSI)); and
- how to support schools to complete the required work for accreditation in the Resource Modules Waste and Water.

**December 2007 – Energy Module** – This workshop, which follows three other workshops, will cover the Resource Module of Energy Efficiency. The objectives of the professional development and training workshop were to help participants to learn:

- how to use the Sustainable Schools Framework to engage schools (Principals, teachers and parents) in the Queensland Environmentally Sustainable Schools Initiative (QESSI); and
- how to support schools to complete the required work for accreditation in the Resource Module of Energy Efficiency.

QESSI Hub Regions and Locations:

- Holloways Beach Environmental Education Centre (Cairns Region)
- Boyne Island Environmental Education Centre (Gladstone Region)
- North Keppel Island Environmental Education Centre (Central Queensland Region)
- Sunshine Coast QESSI Hub – Maroochy Catchment Centre, Nambour (Sunshine Coast Region)
- Numinbah Valley Environmental Education Centre (Gold Coast Region)
- North Brisbane Regional Network of Hubs –
- Nudgee Beach, Bunyaville, Brisbane Urban Environmental Education Centres
- Moreton Bay Environmental Education Centre
- Toohey Forest Environmental Education Centre
- Bulimba State School (Gateway Learning Community QESSI Hub)
- Queensland Murray-Darling Committee (Darling Downs and South West Region).

**TABLE of Regional QESSI Hub Cluster Schools for 2005–07**

QESSI Region and Hub name	2005–06 (TOTAL = 80)	2007 (TOTAL = 83)
Gateway Learning Community • Bulimba State School	Balmoral State High School Bulimba State School Cannon Hill State School Murarrie State School Morningside State School Norman Park State School Seven Hills State School	Balmoral State High School Bulimba State School Cannon Hill State School Murarrie State School Morningside State School Norman Park State School Seven Hills State School
Sunshine Coast Region • Maroochy Catchment Centre	Chancellor State College P-12 Eumundi SS Gympie East SS Glenview SS North Arm SS	Chancellor State College P-12 Eumundi SS Gympie East SS Glenview SS North Arm SS
Central Queensland Region • North Keppel Island EEC	Emu Park SS Frenchville SS Lakes Creek SS Longreach SS Rocky Grammar School Yeppoon SS	Emu Park SS Frenchville SS Lakes Creek SS Longreach SS Rocky Grammar School Yeppoon SS
Cairns Region • Holloways Beach EEC	Aloomba SS Freshwater SS Hambledon SS Holy Cross School – Cairns Redlynch SS Whitfield SS Woree SS	Aloomba SS Freshwater SS Hambledon SS Holy Cross School – Cairns Redlynch SS Whitfield SS Woree SS
Gladstone Region • Boyne Island EEC	Boyne Is SS Clinton SS Gladstone South SS Kin Kora SS St. Francis (Tannum Sands) Toolooa SHS	Boyne Is SS Clinton SS Gladstone South SS Kin Kora SS St. Francis (Tannum Sands) Toolooa SHS

<p>Brisbane North Region</p> <ul style="list-style-type: none"> <li>• Nudgee Beach</li> <li>• Bunyaville EECs</li> <li>• Brisbane Urban (2005–06 only)</li> </ul>	<p>Albany Creek SHS  Albany Hills SS  Aspley SHS  Aspley SS  Aspley Special School  Bracken Ridge SHS  Brisbane Central SS  Eatons Hill SS  Everton Park SS  Everton Park SHS  Mt Nebo SS  Newmarket SS  Northgate SS  Sandgate District SHS  St Patricks College  Taigum SS</p>	<p>Albany Hills SS  Albany Creek SHS  Aspley SHS  Aspley SS  Aspley Special School  Bracken Ridge SHS  Eatons Hill SS  Earnshaw State College  Hamilton SS  Lawnton SS  Nashville SHS  Newmarket SS  Northgate SS  Pinkinba SS  Sandgate District SHS</p> <p>Taigum SS  Wooloowin SS</p>
<p>Brisbane South Region</p> <ul style="list-style-type: none"> <li>• Toohey Forest EEC</li> </ul>	<p>Cavendish Road SHS  Holland Park SS  Mount Gravatt SHS  Old Yarranlea SS  Runcorn Heights SS  Stretton State College</p>	<p>Calvary College  Cavendish Road SHS  Corinda SHS  Greenbank SS  Holland Park SS  Mount Gravatt SHS  Old Yarranlea SS  Runcorn Heights SS  Stretton State College</p>
<p>Bayside Region</p> <ul style="list-style-type: none"> <li>• Moreton Bay EEC</li> </ul>	<p>Cannon Hill Anglican College  Dunwich SS  Gumdale SS  Redland Bay SS  St Luke’s Catholic Primary  Tingalpa SS  Wellington Point SHS  Wondall Heights SS  Wynnum Central SS  Victoria Point SHS</p>	<p>Dunwich SS  Gumdale SS  Redland Bay SS  St Luke’s Catholic Primary  Tingalpa SS  Wellington Point SHS  Wondall Heights SS  Wynnum Central SS</p>
<p>Gold Coast Region</p> <ul style="list-style-type: none"> <li>• Numinbah Valley EEC</li> </ul>	<p>Beechmont SS  Bellevue Park SS  Coomera SS  Gilston SS  Nerang SS  Nerang SHS  Pimpama SS  Surfers Paradise SS  St Brigid’s Catholic Primary</p>	<p>Beechmont SS  Bellevue Park SS  Coomera SS  Gilston SS  Nerang SS  Nerang SHS  Pimpama SS  Surfers Paradise SS  St Brigid’s Catholic Primary</p>

<p>Darling Downs Region</p> <ul style="list-style-type: none"> <li>Scots PGC College (2005)</li> <li>Queensland Murray Darling Committee in association with the Amaroo EEC (2006–07)</li> </ul>	<p>Scots PGC College The School of Total Education Warwick Central SS Amiens SS Freestone SS Killarney SS Yangan SS Clifton SHS</p>	<p>Amiens SS Crow’s Nest SS Yelarbon SS Scots PGC College</p>
<p>Wide Bay Burnett Region</p> <ul style="list-style-type: none"> <li>Barambah EEC (2007 only)</li> </ul>		<p>Wondai P-10 SS Gympie West SS Jones Hill SS Kilkivan SS Moore Park SHS Gympie East SS (as an affiliate to this Hub)</p>

## Comments from QESSI Hub Reports

The following ideas and comments were provided in a number of QESSI Hub reports:

- schools appreciated what they saw as a long term commitment and ongoing relationship with the QESSI Hub
- consideration should be given to extending partnership agreements up to four years
- Importance of offering flexible presentation modes while ensuring quality outcomes
- need to recognize differences between urban and regional Hub issues in terms of travel costs for longer distances between schools and investment strategy development differences
- time restrictions and demands on teachers seen as a barrier to teachers introducing sustainability education into the classroom
- increased frequency of contact with key teachers essential to improving sustainability outcomes
- mandating the inclusion of water, waste, energy and biodiversity data/targets as part of schools’ curriculum and reporting (ie AOP and SAR) to ensure significant attention and energy is given to bring about quantitative and qualitative improvements within schools
- success of a four day camp attended by seven schools to develop action plans and instigate changes for participating schools
- sustainability Challenge involving local council, schools and students’ households seen as highly effective in keeping sustainability “on the agenda” amongst the myriad of other school priorities and tracking changes in resource use in the students’ homes
- importance of developing a Sustainable Schools Category in the existing Sunshine Coast Froggy Awards to reinforce this approach to educating for sustainability for the region
- importance of partnerships between QESSI Hubs, schools and Universities with the inclusion of education for sustainability being fostered in teacher training courses
- need for greater funding to support the QESSI Hub operations in order for this to be sustainable into the future
- importance of schools developing long term connections with protected local natural areas possibly in partnership with local councils and community groups for biodiversity education. This connection should involve a range of potential education activities – monitoring and identification of local native species; weed identification and eradication, bushland/streambank restoration planning and action; arts activities inspired by students’ visits to the areas; other curriculum connections and developing ideas to carry out biodiversity improvements in school grounds

- greater support for schools to reduce energy use along with renewable energy education and uptake
- the effectiveness of the Ecological Footprint and Lifecycles analysis tools to help schools and students develop an understanding of the impacts of everyday lifestyle decisions.

## Sustainable Schools Outcomes

The majority of the sustainable schools provided annual ‘State of the School’ reports that tracked the measurable qualitative and quantitative sustainability outcomes. The schools used the indicators to measure these outcomes from the list in Appendix 1 of the National Environmental Education Statement for Australian Schools – Educating for a Sustainable Future i.e. Environmental, Educational, Economic, Social and Governance. These outcomes have been aggregated across all the contributing schools and have been only referenced once for each specific outcome. Some outcomes were common to several schools but have only been mentioned once in this aggregated set of data below.

### Environmental Outcomes

Schools demonstrated significant environmental outcomes through the formation of **sustainability committees**. Many committees have been established with representation from the broader whole school community. Regular meetings were held to conduct and review environmental audits and develop and review action plans.

Environmental sustainability goals have been prioritized in a number of school Annual Operational Plans and many schools developed their **School Environment Management Plans (SEMPs)**. Such plans involve setting short and long term sustainability goals and action plans in the areas of water, waste, energy and biodiversity, curriculum connections, links with the community, school grounds improvements, operational plans and school policies.

The following actions have been featured in various Sustainable Schools Outcome Reports:

- whole school community had exposure to a wide range of issues on regular basis through class/ whole school activities, at assembly or through the newsletter with QESSI quotes and information
- each class adopted one area of sustainability as their focus and responsibility, sharing back to whole school
- showed photostory from QESSI enrichment camp
- parent’s enthusiasm and support in waste minimisation project and new enrolments from parents viewing school website and environmental focus
- school held Student Enviro Forums in 2005 and 2006 hosting student representatives from 14 schools in the Cooloola region to workshop environmental issues (waste, wildlife preservation and gardening) and plan solutions for each school
- one school’s motto of “Lifelong Learning for Heart, Mind and Earth” enacted in all aspects of school operations and curriculum
- Reef Guardians Dress in Blue Day – celebrated with litter free lunch and students dressing in blue. Also special assembly with Great Adventures character Wally the Maori Wrasse and marine biologist
- display of students engaged in Reef Guardians activities set up at Cairns show
- talk by Sustainable Living Challenge at district science forum dinner
- raffle tickets for students picking up paper bag full of rubbish and draw to win something from the tuckshop

- students involved in becoming a more sustainable school for the future and joined in cluster of like minded schools
- James Cook University students involved as interns to help school achieve its goals
- establishment of student driven Environment Portfolio and Clubs in the school.

Schools have demonstrated significant environmental outcomes as well as financial savings through sustainability initiatives such as those listed above. They have also been honored with awards and grants for their environmentally sustainable initiatives. Reef Guardian Schools receive cash grants as an incentive and reward for good practice. Many schools also received community water grants to install water conservation devices and water efficient strategies in their schools. Learnscaping projects in several schools have resulted in biodiversity improvements both through the removal of weeds and the planting of endemic native species. The resultant improvement in catchments and water quality is another benefit of these projects.

### School Grounds

Schools across the state have been establishing and maintaining edible food gardens in the school grounds growing vegetables, herbs and fruits. The use of mulch on the gardens to improve soil and conserve water has been widely reported along with worm farms, chickens and composting practices. Often the produce from the garden is used by the school tuckshop to support the school's healthy eating strategies. Student involvement is a key feature of the food garden activities with some schools incorporating permaculture design principles in all year levels of the school curriculum. One such school's program was recently featured in the Readers Digest.

A number of other actions to improve school grounds reported on by Queensland schools include:

- green mapping of school grounds by students identifying weeds for removal, need for ground cover, shade and areas to improve
- weeds being removed from school grounds in stages. This includes the removal of 60 mature sized pine trees. All replantings with local native species
- 200 local native trees planted including koala food trees
- rainforest restoration project to improve biodiversity in school grounds
- National Tree planting day – tree planting by Years 3,4, and 5
- new native shrubs planted to attract birds and insects
- planting native plants, bush tucker in gardens and Richmond Birdwing Butterfly Vine in school rainforest area
- 50 trees planted along slope in grounds for Tree Planting Day
- one of the first schools in Australia to plant a Wollemi Pine – Twilight evening planting with 300 people. School won the tree through a competition entered by a school parent
- school participates in Clean Up Australian day by cleaning up local area
- stormwater drains cleaned of litter and soil.

### Biodiversity

A number of schools have been undertaking biodiversity improvement projects in the school grounds and through partnerships with other organisations in local areas near schools. These projects usually involve weed clearing and planting with endemic native plants. Some of the projects were along creeks and river banks. Regular follow up working bees feature as an important aspect of the projects. The plantings were often arranged to coincide with events such as National Tree Planting Day.

Other biodiversity protection and improvement activities completed on an individual and school level include:

- students rejuvenating the Tingalpa wetlands region via the removal of over 450kg of water weed, cleaning up litter and planting over 300 trees in the local catchment area
- 18 classes planting as part of National Tree Planting Day
- Environment Club working with Greening Australia and Main Roads on riparian vegetation project bordering the school with the assistance of the Nerang Catchment Association
- planting native bush tucker in gardens and Richmond Birdwing Butterfly Vine in school rainforest area
- local native plants established in grounds for food and shelter for native fauna
- rainforest/Indigenous Trail with help from the Environmental Education Centre
- raising awareness of the importance of improving biodiversity in the school grounds with the whole school community by writing articles for the school newsletter and regular discussions with students
- nesting boxes for cockatoos placed and monitored by nature club
- in conjunction with James Cook University involvement of students to identify and record local bird species
- students learning about weed identification and their threat to biodiversity
- participation in Wildlife Awareness Week, including production of banners displayed on Karawatha State Forest fence.

## Waste

Schools are showing a strong focus in the area of waste reduction and associated activities including avoiding litter; purchasing materials only when needed; reusing items where possible; recycling paper, cardboard, glass, metal and plastics and sending rubbish to landfill as a last resort. Food scraps are frequently being composted, fed to worms and chickens with soil improvement for the gardens. One school is graphing the waste audit results and this is displayed on classroom walls to inspire action.

There are a number of schools regularly conducting waste audits and reduction strategies. Reporting indicates waste to landfill is being reduced from 30% to well over 50% as a result.

Local council waste education programs feature strongly as an effective partnership model between schools and external program providers. For example, the design of the “Don’t Waste It Schools program” for Caloundra City Council was assisted by a local primary school with significant waste and litter reductions resulting.

Waste reduction activities on an individual and school level include:

- beach Challenge clean up
- litter campaign by student council
- Clean Up Australia Day participation
- 600 students removed litter in school clean up day
- litter parades at end of each term
- “Clean Seas for Me” signs painted next to drains by Action Science group to encourage students not to litter
- litter education and promotion of picking up litter in the playground at lunch times.

## Reducing

- many students involved in Litter Free Lunchbox programs
- celebrating Sea Week with a litter free lunch
- tuckshop working on reducing amount of packaging and litter
- plastic bag challenge
- no waste Wednesday in prep
- economic toilet paper dispensers installed
- eating in classrooms – less rubbish, reduction in number of lbin around school
- Gold Coast City Council “Wipe Out Waste management program”
- Caloundra City Council “Don’t Waste It Schools program”
- rubbish raffle
- printing of calico bags by student council with bags sold to community through newsletter, local shops and for library bags by student school council
- environmentally friendly library and carry bags for booklist.

## Reusing

- uniforms resold
- P&C sells reusable lunch bags
- composting of food scraps and scraps for chickens
- worm farm and compost buckets in every room, including staffroom
- SKRAP busters ensure food scraps fed to chooks and worms
- increased size of worm farms – increased from two to four baths
- food scraps composted from tuckshops and classrooms
- worm farm for food scraps and using worm castings for fertilizer
- composting waste through home economic department and tuckshop
- compost bins and worm tubes acquired for use in the school
- shredding paper to reduce amount of paper going to landfill
- using both sides of paper sheets and sorting paper has raised awareness of not wasting paper throughout the school
- shredded paper used for arts and crafts activities
- plastic bag costumes = Tanks Arts Centre
- items for art show made from reused materials
- paper bags made from newspaper to replace plastic bags
- re-using cardboard from tuckshop and school and using for art work and other creations.

## Recycling

- recycling kerbside yellow bin collection and class and staffroom bins for glass, drink containers and clean plastic, paper reuse and recycling
- whole of school community recycling projects
- new recycling bins introduced by council to school
- recycling bins located across school
- introduced recycling strategies
- have a “Gold” (spray painted) recycling bin, which goes to the class which has recycled most during preceding fortnight

- collecting and recycling printer and photocopy cartridges
- paper recycled from office, photocopy room and classrooms
- recycling cans from the community with funds raised for Enviro projects
- plastic containers and cans recycled from tuckshop.

## Energy

Energy use in schools has been reportedly increasing in recent years and in general there hasn't been as much focus on this aspect of environmental sustainability as on waste and water wise programs in schools.

However, some schools targeted energy reduction as an important element in their overall school environmental sustainability strategies with activities on an individual and general school level such as:

- conducting baseline energy audits due to recent installation of number of air conditioners and goal and targets for energy reduction underway
- run energy audits with students reporting back to the whole school and developing advertising campaigns to educate all
- urn timer in staffroom as energy saver
- solar panels on Year 7 block
- school uses flouro lights
- staff member trained in energy efficiency solar trailer
- student council energy monitors to remind people to turn off lights/fans and air conditioners
- year 6 Energy monitors
- award presented on assembly to a class setting a positive example
- all staff encouraged to turn off lights when leaving classrooms
- notices in rooms to turnoff power by student council
- reduce energy use posters in each room
- weekly reports on parade to encourage minimising energy use (lights, fans, computers)
- shutting down all computers at end of the day to save energy
- Aim to be a blackout school with no electricity being used after hours
- home Power Smart game very successful with 90% families partaking
- TravelSmart program with bicycles provided to enable school staff to cycle between the Primary, Secondary and University campuses.

## Water

With widespread media coverage and increasing community awareness of the water shortage issues facing the country, schools have been playing a leading role in water wise education. Water audits were conducted, water saving devices and water tanks have been installed and whole school education campaigns are being carried out to encourage the conservation of water. As a result there have been some significant reductions in school water usage because of:

- introduction of water wise practices and reduced water use from over 4000kL/quarter to 500kL/quarter
- baseline water audit conducted and targets and goals for reductions underway
- 8% reduction in water usage achieved by monthly water audits by students and groundsman resulting in detection and fixing of leaks

- run water audits with students reporting back to the whole school and developing advertising campaigns to educate all
- upper school classes participated in calculating water usage
- water grant for installing aqua-clicks to reduce water flow on taps from 26L/min to 6L/min
- 4 Aquaclick water reduction devices fitted to taps
- water saving devices fitted – aqua clics, dual flush toilets, waterless urinals and rainwater tanks
- promotion of water saving devices and awareness raising about need for students to conserve water. water talks by salesperson for Aqua Clic and spokesperson on water conservation
- water use dropped with water saving devices on taps and in the garden beds
- water monitoring workshops run by Burnett Mary Regional Group
- school operates on rainwater
- school won 1000 gallon water tank from Action Tanks and Radio 96.1 Zinc
- two new water tanks and drip irrigation system to save water
- donation of water tanks
- water tanks purchased and donated for reduced town water usage
- required all classes to focus on reducing water
- inground sprinkler system for oval installed to reduce water wastage
- using recycled water and toilet renovations
- taps automatically turn off
- half flush toilets
- lock tops on water taps so they can't be used outside school hours
- water fountains have recycling water effect to reduce the amount of wasted water
- posters at key taps and in toilets reminding students to conserve water and turn off taps
- redirection for grey water and rain tanks for gardens
- bore stalled on oval to reduce amount of town water used
- underground water used to help slow the evaporation rate of dam water
- microsprays installed in garden beds to reduce water use and water plants effectively
- all gardens heavily mulched
- propagation and use of native trees to save water.

## Educational Outcomes

Schools have been demonstrating student learning outcomes through the orientation of their curriculum framework to incorporate environmental education for sustainability across their key learning areas, particularly Science, Studies of Society and the Environment, Technology and the Arts. Professional development and training for QESSI hub coordinators, facilitators and school teachers has increased the capacity of schools to deliver environmental education for sustainability curriculum programs across all levels of the school. The participation in programs such as the Reef Guardian and Green and Healthy Schools has allowed students to showcase their work in state and national forums. A number of Queensland schools received highly commended awards at the 2006 Australian Sustainable Living Challenge in recognition of their efforts. Specific education outcomes at individual and general school levels include:

- school staff attended QESSI Regional launches
- staff participated in professional development in Environmental Education for Sustainability by QESSI Hub

- whole Primary staff attended in-service by North Keppel Island QESSI Hub at school
- professional development on sustainability education provided by QESSI Hub to all staff members
- the teacher enviro team attended 3 QESSI in-service days at Holloways Beach Environmental Education Centre
- teacher enviro team conducted a PD session for staff at school
- all staff participated in full day of “Understanding Sustainability Education” professional development
- groundsman attending professional development on permaculture and sustainability
- identifying professional development for groundsman
- teachers reviewing current curriculum to incorporate QESSI goals and principles of EE
- curriculum planning and Curriculum Council Strategic Planning (P-12) to embed sustainable futures across the curriculum
- implemented a Waste Matters Unit to whole school through Cleanaway support
- teachers seek ongoing opportunities to include sustainability issues in all curriculum areas
- Curriculum incorporates Green and Healthy Schools program, Reef Guardian program and Sustainable Living Challenge. Action Science program, a secondary elective subject spearhead many of sustainability actions
- all year levels address principles of EE and Sustainability with SOSE and Science programs
- each year level targets an area of the environment through the school curriculum (eg Year 1 Reef Education, Year 2 Local habitat areas, Year 3 Endangered animals, Year 4 Energy)
- permaculture/Sustainability elements in all year levels (P-7) now embedded in school curriculum and culture
- preschoolers unit focusing on water and no waste Wednesdays
- lower school students learning about insects when worm farm constructed. All children were keen to work. Frequent visits made to check out the worm baths particularly when it was found out that the worms were pregnant
- lower school learnt about water cycles, how water is used and not to waste it and about catchments
- inclusion of units on water, waste, energy in curriculum plans for Years 2 to 7
- year 1 and 5 vegetable garden established with students planning, preparing, planting, monitoring and maintaining and making scarecrows, etc
- year 3 students proudly sang “Water Cycle Rap” on numerous occasions – “Water cycle, water cycle, never ever stops. Water cycle, water cycle, don’t waste a drop”
- years 3, 4, 5 making A5 sheets of recycled paper
- year 5 project of garbage audit, recycling paper products in classrooms and recyclable waste in playground
- years 5, 6, 7 promoting reuse and recycle through school newsletter, on parade and by setting an example
- year 6 song “Turn Off the Tap Jack” highlighting importance of water conservation on CD
- year 6 utilised Ergon Energy website for energy saving resources and ideas
- staff developing water wise curriculum units across all year levels and a focus for Year 4, 5, 6, and 7 camps
- year 6 did a Unit called “Blue Gold” about water
- year 7 a Unit called “Our Water, Our Future”

- year 7 staff and students attended 4 day camp on North Keppel EE Centre learnt principles of EE for Sustainability
- year 8 Integrated Unit “How Can We Create A Sustainable Future?” and Year 9 “What is the Web of Life”
- year 8 Integrated Unit “What is Climate Change and how might it affect our world” in partnership with QESSI Hub and SEQ Catchments
- year 8 SOSE Water Unit
- year 11 Biology Ecology Unit
- gardens used for learning support for students with Learning Difficulties
- school camps include environmental education
- increased use of school amphitheatre for outdoor lessons for classes with experts such as a local poet
- visits from Wipe out Waste, Waterwatch and Energy Trailer
- students involved in Earth Dialogues International Forum in Brisbane and Bunya 2 Bay River Ambassadors trip as part of Riverfestival in Brisbane
- in conjunction with James Cook University involvement of students in website project to identify and record local bird species
- students and teachers involved in planning and implementing the QESSI camp for gifted and talented students to promote higher order thinking on range of topics relevant to the environment
- two River Ambassadors given role of planners and learnt use of GIS software to mark way points and build maps. Students developed skills in self sufficiency, large scale expedition planning and getting on with travelling companions and pollution and wildlife issues around waterways
- students learning how to propagate and grow plants and vegetables
- students able to tell when something is of danger and unhealthy for the environment
- students more understanding and caring about their reef environment
- students working with local environmental groups gain knowledge of their local environment
- students learnt range of new skills using latest GIS and GPS equipment
- students conducted research into local native flora and fauna and including ones that are endangered or under threat
- science students researched impacts of recent water restrictions and ways we could save water
- new frog pond area used for outdoor classes for students to observe and discuss their research
- student school sleepover with a night bushwalk to hear and see bush animals
- discovering New Technologies project using data logging equipment to measure various effects on the school ecosystems

### Economic Outcomes

The economic benefits have also been documented with schools, saving several hundreds of dollars through more efficient use of their resources.

Water efficiency initiatives have resulted in significant savings for schools particularly in the drought effected regions in Queensland. The overall impact of the Commonwealth Water Grants has not been documented as yet as this program is still in the early stage of implementation. Water consumption of state schools across Queensland was reduced by 20% between 2004/05 and 2005/06.

While waste production data is problematic to collate across the state due to the variation in data collections formula and various methods of waste management for each school, there were individual schools that have demonstrated waste reduction through comprehensive reduce, reuse and recycling policies resulting in up to 50% reduction in waste stream through the school.

As mentioned previously, the consumption of electricity does not demonstrate a similar trend with incremental increases over several years: 10% from 2002/03 to 2003/04 and a further 6% between 2003/04 and 2004/05 which can be attributed to student population increase and other factors. At least the rate of increase has declined and one school demonstrated a reduction of over 40% in energy consumption through participation in an Energy Efficiency in Schools program conducted by the QESSI regional hubs.

A range of other economic outcomes has been reported on by schools including:

- Saving of tip fees through garden waste now being recycled
- Paper use auditing begun with money saved by reducing paper use
- Green fencing with money saved from resource use reduction going to sustainability initiatives in the school
- All funds gained from recycling strategy used in future environmental projects and to fund the Green Team
- Recycling cans from the community with funds raised for Enviro projects
- Funding support from Dept Natural Resources, local council and businesses
- Muster event raised over \$20,000 for the school P&C
- Establishment of amphitheatre in school through working bees and grant funding
- Donations of plants from nurseries and tank from Maroochy Waterwise competition
- P&C allocates funds for grounds care and permaculture
- Fund raising on World Environment Day for the Ecocentre
- Received funding from local businesses for environmental projects
- Supplying canteen with food from school garden with a focus on particular product lines
- Worm “wee” sold with increasing sales of the product as word spread about its fertilizer properties
- Paper brick making as a business enterprise
- Farmers Market run Wednesdays to sell produce from the vegetable patch and worm tea generating \$30–\$40 week. Funds raised going to sponsor a child in poverty
- Printing of calico bags by student council with bags sold to community through newsletter, local shops and for library bags by student school council
- Recycled Chinese newspaper pencils sold to students

## Social Outcomes

Schools has reported improvements in student behaviour and engagement in tasks that have a real-life authentic component such as Learnscaping the school grounds, environmental audits and monitoring projects. Community engagement in school projects along with schools participating in community events like Clean Up Australia Day, Clean Beach Challenge, Sustainable Living Challenge have increased as a result of the schools focus on becoming more environmentally sustainable.

Partnerships were formed with other organisations and program providers resulting in rich social outcomes such as:

- Ergon Energy visited to conduct sustainability talks
- Partnerships with several government agencies with strongest link with Desert Channels Qld

- Partnerships with University of Sunshine Coast, Maroochy Council, Maroochy Waterwatch, Sippy Downs Community Organisation, local residents
- Local permaculture consultant contracted to established permaculture garden
- Sippy Downs & District Community Association support at sustainability committee meetings, establishment of Permaculture gardens and attendance at Froggy Awards Presentation Dinner
- School has ongoing relationship with Cleanaway involving all classes participating in litter education as start of year
- Ongoing relationship with Mooloolah Landcare and Caloundra City Council with rainforest restoration project and water quality monitoring programs
- Establishment of Bronson Hose Amphitheatre and Nestle Nature Health Track supported by parents, wider community, local radio and newspaper articles
- Clown Doctors from Royal Children’s Hospital in Brisbane, Jamie Dunn and Agro and Megan Spring from Reef Guardian Schools attended the opening
- Environment Club working with Greening Australia and Main Roads on riparian vegetation project bordering the school. Nerang Catchment Association also assisting. Environmental weeds being removed and entire length of school boundary to the creek being revegetated
- Team work, public speaking, liaising with agencies and communication skills
- Water monitoring workshops run by Burnett Mary Regional Group
- Links with Noosa Permaculture through Janet Millington and finalist in Maroochy Waterwise Garden Competition
- Connection with James Cook University – nature trail, honours student conducting surveys with school community re perceptions of school “walking the walk” re env education
- Partnerships with Reef Guardian School Program, RSPCA, Toohey Forest Environmental Education Centre, Qld Litter Prevention Alliance, Young Achievement Australia, Comalco Green & Healthy School program, Griffith University, QUT, University of Qld
- Tree Planting Day allowed student ownership of local flora and developing partnerships between the school and local community groups
- School partnership with Toohey Forest EnvEd Centre, Karawatha State Forest Rangers, Brisbane City Council, Karawatha Protection Society, Pullenvale EnvEdCentre, Jacobs Well EnvEdCentre

Other social benefit outcomes involve:

- Responsible behaviour plan for students
- Young legends projects
- Father/son sleepovers
- Newsletters and posters promoting sustainability and energy saving tips for families within school community
- Annual Tilapia Fishing competition huge success with 200 fish caught
- Wide school community involved in “hands on” permaculture activities
- P & C supportive of litter free lunch box program
- Indigenous community members invited to participate in school events
- Parents printed new menus and signs with Green Tree Frog showing school’s care for the environment
- Students enjoy playing, relaxing and learning in the new Amphitheatre
- Students ate asian greens grown in the vegetable garden using worm wee fertilizer. For many students this was the first time they had seen these vegetables

- School motto and program encourages and achieves social conscience and team work, healthy and active participation in life through community events, environmental awareness, music and sports
- Earth Dialogues involvement was well published within the school and local community through school newsletters, parades, school notice board downtown and media articles
- Sustainability program has strong student engagement and gives students at all levels many opportunities to demonstrate importance of what they were doing by speaking to members of local community including shire mayor and councilors and sharing their ideas with others
- Youth leadership, students preparing speeches and presentations for local, regional and state
- Networking with students from other schools
- School has developed partnerships with other schools on a range of projects
- Students performed plays on parade and to their peers to show importance of not littering and how litter (eg plastic bags) can affect the reef
- Students written poems for their peers on how to be environmentally friendly
- Students educating their parents on energy use, less plastic bag use and recycling
- Classes visited the botanical gardens to see the effects of the cyclone and then showed their peers the results
- Students more socially accepting of children picking up rubbish because they want to
- Students all getting involved no matter what their cultural background as protecting the environment is common ground for all
- Online student conference – Global Citizens – Yr7C group sent in a paper
- School has started a bush tucker garden to develop social and cultural links with local indigenous groups
- World Environment Day showcased sustainable student excellence
- The frog pond and viewing platform has been created as a haven for students to work, play and relax in this informal learning environment. *“Exciting to hear them sitting observing the surrounds and discussing why frogs have not yet been attracted to their new pond”*

## Governance Outcomes

The success of the whole school approach to educating for environmental sustainability is reliant on good governance and the priority it's given by the school's management team. Schools leading the way in modeling a whole school approach reinforce the knowledge gained by students through the curriculum framework. Students come to understand the real life nature of sustainability education when it is reflected in all aspects of the school's operations. Examples of such action reported by these schools involve:

- Setting and monitoring goals for each year level – driven by year 6 students, teachers and school management
- Use of environmentally suitable products in school purchasing policy
- Student centred environment portfolio led by champion teacher and supported by school administration ensured sustainability issues have become school wide and significantly influenced curriculum planning
- Sustainability outcomes now a key goal for Annual Operational Plan
- Involving Environmental Portfolio student group and curriculum council in development of the College's SEMP
- Action Science group responsible for developing and carrying out action plans that drive school's environmental activities with support of school's administration and the P & C Association

## An Evaluation of the QESSI Alliance Model

An evaluation of the QESSI Alliance Model has been undertaken by Dr Julie Davis and Jo-Anne Ferreira through Griffith University. The purpose of the evaluation was to gauge the success of the alliance model and identify ways to improve QESSI's effective use of this model. The study was carried out by surveying all members of the QESSI Alliance Steering Committee on their understanding of the aims and processes of the QESSI alliance model. Questions were also asked on how to enhance participation and on perceived barriers to this occurring. The evaluation report provides a number of recommendations to build on and improve QESSI's effectiveness through the alliance model approach.

Most respondents were able to provide details about the relationship between their organisation and the QESSI Alliance and showed a clear understanding about how the QESSI Alliance functions as a network rather than being another program. The survey results show the model is seen as a way of interlinking existing resources and providing ways for the QESSI Alliance members to join by sharing resources and activities, while at the same time retaining other autonomous programs and activities. (5)

The positive nature of the alliance model featured in the survey results with the recognition of new partnerships being developed and the formation of synergies between partner organisations. Several respondents mentioned that their involvement with other QESSI partners has shaped "their thinking about environmental and sustainability issues". The increased potential for collective impact with the strengthening of individuals and groups is also seen as a major benefit of the QESSI model. (5)

A number of barriers to participation in the QESSI Alliance were identified including time and financial constraints particularly for members from smaller organisations. The need for regular communication between QESSI Alliance members and communication pathways between Alliance members to engage with the Hubs or directly with schools was identified as being important for greater involvement. One respondent wanted to know how to quickly match schools with useful and relevant resources and another questioned the sustainability of the current system of the Ed Qld QESSI representative acting as the conduit for communication. (5)

Factors that could further enhance involvement in the QESSI Alliance were provided by respondents and included:

- Increasing the time the Ed Qld officer has to devote to managing QESSI
- Greater opportunities in meetings to discuss ideas and to be more than reporting back
- A greater focus on values, ethics and the Earth Charter
- The formation of sub-committees to promote engagement within QESSI
- The provision of an official stamp of approval for QESSI Alliance member organisations and programs from Ed Qld

Eight recommendations were suggested by from evaluation of the QESSI Alliance Model:

### **Recommendation 1:**

**Understanding the Alliance Model** – to hold a facilitated workshop to help build a shared understanding of the alliance concept to deepen commitment and assist new thinking about networks and how they function

### **Recommendation 2:**

**Using dispersed communication models** – by improving the QESSI website, arranging regular teleconferences, using e-lists, developing a communication tree, strengthening the decentralised networks via technology, and mechanisms for direct interactions between the Steering Committee and the hubs.

**Recommendation 3:**

**Broadening the Alliance membership** – to include all stakeholders such as teacher professional associations, school students (such as the Qld Youth Environment Council), indigenous and migrant communities and P&Cs, for example

**Recommendation 4:**

**Enhancing key EQ staff support** – additional staff support for QESSI to ensure the responsibility is not held by a single person and opportunities to spread the load amongst QESSI Alliance members be investigated to embed the sense of ownership of QESSI through the whole Alliance

**Recommendation 5:**

**Improving Steering Committee engagement in Strategic Planning** – for one meeting per annum to be devoted to engaging with the Strategic Plan to ensure the Committee fully engages in delivering and evaluating the Plan and ensure better alignment of resources and people

**Recommendation 6:**

**Celebrating success** – Hubs brought together to present their work at the end of each year to the Alliance members and an end of year letter from the QESSI Alliance to the CEOs of organisations in the Alliance outlining achievements for the year and thanking them for their contribution to the Alliance's success

**Recommendation 7:**

**Next generation issues** – one meeting per annum devoted to being proactive around emerging issues and dilemmas arising from the Alliance

**Recommendation 8:**

**Meeting restructures** – meetings restructured with less time reporting back and more time spent on discussion. Reporting to be done in writing prior to meeting with a short period for questions.

The next section covers Education Queensland reports and policies on educating for a sustainable future.

## Education Queensland's' Reports and Policies on Educating for a Sustainable Future

The MACER Report – (Report of the Ministerial Advisory Committee for Educational Renewal) – Schooling for the Smart State

The Report of the Ministerial Advisory Committee for Educational Renewal (MACER) on Education for Sustainability in Queensland Schools was commissioned to make recommendations to the Minister for Education and the Arts on key education for sustainability issues; how the issues are being addressed nationally and internationally; the risks of not acting on these challenges and priority issues for education with suggested ways forward.

According to the MACER Report, the UN Decade of Education for Sustainable Development (DESD) places expectations on three specific areas for tangible improvements in the Australian context with:

- the conservation of Australia's natural resources, biodiversity and ecosystem health
- vitality and prosperity of Australian business and industry while respecting the capacity of natural systems
- active participation of citizens of all ages for harmony within Australia's social and cultural diversity

It supports Queensland academic Professor Ken Wiltshire's belief that "educating for sustainability will help people better understand of the world in which they live, and face the future with hope and confidence, knowing that they can play a role in addressing the complex and interdependent problems that threaten our future."

The MACER Report adopts the challenge of achieving a transition to a sustainable future and sets out the principles for building sustainability into the education system in Queensland. It cites a need to review curriculum, pedagogy, assessment and institutions in the process. The report acknowledges the formidable and urgent nature of the task and states: "nothing less than the future of our society is at stake". It explains that a sustainable society is one that can persist over generations and maintains both the physical and social systems that support it.

The report reinforces Huckle and Sterling's (1996)<sup>7</sup> argument that education needs "to play a key role" because of the unprecedented changes required and that "education will itself be transformed in the process". The report also refers to the forward in the Queensland Environmentally Sustainable Schools Initiative (QESSI) Strategic Plan stating that, "education is the key, providing both awareness of the problem and more importantly, the capacity to find solutions".

The MACER Report asserts Education for sustainability needs to encompass an:

- Understanding of the impacts of human activities on natural systems
- Awareness of the finite scale of non-renewable resources
- Awareness of the limits on use of renewable resources
- Understanding of the need for durable economic activities
- Awareness of the consequences of increasing social inequality
- Understanding of the importance of cultural traditions, beliefs and practices

And have the following six characteristics:

- Inter-disciplinary and holistic, embedded in the whole curriculum
- Values-driven embodying the values and principles of sustainability
- Critical thinking and problem solving, developing confidence to tackle the complex challenges we face
- Multi method, using word, art, drama, debate, and experience, different pedagogies appropriate to the tasks and the learners
- Participatory, with learners involved in choosing how they will learn
- Locally relevant, addressing local issues as well as global, building on the learners' experience and using the languages they understand best

Reference is made in the Report for the need to involve the **whole school community** (internal and external to the school) and to use of a wide range of learner-centred teaching strategies appropriate to developing the "**heart**" (values) and the "**hands**" (action) as well as the "**head**" (cognitive learning). Further the critical need for knowledgeable, caring and committed teachers who embrace an ethic of sustainability and make it an all-pervasive part of their teaching, as has occurred with the ethics underlying multicultural, anti-racist and gender sensitive education, is highlighted. (6)

In order to develop capacities, education should give young people the ability and confidence to shape their own futures, rather than passively accepting futures imposed on them by external forces. Wise global citizens, aware of their responsibility to the rest of humanity, to the other species with which we share this planet and the future generations for whom we hold it in trust, should be the result. (6)

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7 Huckle, J and Sterling, S (1996) Education for Sustainability, published by Earthscan Publications Ltd.

The MACER Report recognizes the fact that Queensland schools have already made considerable steps toward embedding the principles of sustainability into both the formal curriculum and the overall operation of the schools, especially at the primary level. The Report **commends the dedicated work of many teachers, parents and other members of schools communities** and notes, embedding education for sustainability in all Queensland schools will require a systematic and comprehensive approach, along with considerable political will. (6)

### Living Unsustainably

The evidence that we are living unsustainably is provided in the MACER Report with reference to:

- Reliance on cheap readily available petroleum fuels for our transport systems, the assumption about its ongoing availability when oil supply is in fact one of our most urgent resource issues
- Basic human needs of clean air, water and food not being available for billions of people across the planet
- Loss of biodiversity and degradation of waterways
- Increasing population numbers – with greater use of energy, traveling further in larger cars, larger houses, consuming more resources and producing more waste

The report summarizes these points by stating the fact that ultimately they are all putting greater and greater pressure on natural ecosystems on which all life depends.

In referring to more recent media talk of an “energy crisis”, the report states there is in fact no energy shortage and that the natural flows of solar, wind, wave, geothermal and tidal energy are orders of magnitude greater than any conceivable future energy demand. A sustainable future will involve far-reaching changes in the pattern of energy and resource use. (6)

The debate that continues in the broader community and at the political level around a range of environmental sustainability issues while there are increasingly loud warnings that we are living unsustainably coming from the scientific community is emphasized. (6)

Finally, the MACER Report states that in order to live sustainably we require the ability to:

- Think critically about the magnitude of the problems and the choices to be made if we are to create a decent and humane future
- Make wise choices that will help produce a sustainable future by replacing the “paradigm of human domination” with a new one that “places us in the web of life as citizens of the biotic community”
- Value and recognize our responsibility as global citizens, rather than seeing ourselves as “isolated, self-maximising individuals.”
- Understand that the world’s economic and environmental futures are intertwined and should be seen as complementary, rather than in competition. (6)

### MACER Report Recommendations

The MACER report provides an important road map for embedding environmental sustainability into the education system with a range of recommendations. All thirteen recommendations have been officially accepted by the Department of Education, Training and the Arts.

While all recommendations involve important aspects of sustainability education, Recommendations 5,8,9,10 and 11 make specific reference to QESSI’s role in this process. The Department’s acceptance of Recommendation 6 shows a commitment to have the Essential Learnings within the Queensland Curriculum and Reporting Framework reflect the aims and ideals of the Earth Charter.

**Recommendation 5:**

That the QESSI, through its regional hubs and member schools and the network of Outdoor and Environmental Education Centres, **provide continued professional development** and learning in “education for sustainability” (as set out in the “professional development and training” sections of this Report) to the staff and students of Queensland schools.

**Accepted by the Department** – Departmental Response: *The existing QESSI Alliance and the O&EECs will continue to deliver professional development workshops on education for sustainability and to support schools in the integration of education for sustainability into their existing curriculum frameworks*

**Recommendation 8:**

That there be **additional professional support** from appropriately qualified personnel (beyond the teaching profession) for staff involved in education for sustainability, both in schools and in outdoor and environmental education centres.

**Accepted** – *O&EE Centres and QESSI Hubs and other service providers will continue to provide training opportunities for staff to enable them to refine their practices to be more environmentally sustainable. DETA will provide opportunities for senior management, both in central, regional and O&EECentres to participate in sustainable development conferences and workshops.*

**Recommendation 9:**

That school sectors provide professional development for educators and principals on evidence-based pedagogical principles and curriculum planning involved in education for sustainability.

**Accepted** – *DETA recognizes the value of learner-centred, action-based curriculum and pedagogy. O&EE Centres and QESSI Hubs, in partnership with other service providers, will continue to provide leadership in the delivery of professional development to principals, teachers and school staff on curriculum planning to support education for sustainability.*

**Recommendation 10:**

That, as part of their regular whole school planning and review processes, schools develop **school-based Environment Management Plans**, with particular emphasis on resource management, school grounds improvement and curriculum integration of sustainability principles.

**Accepted** – *O&EECs and QESSI Hubs will support schools to embed sustainability principles and considerations through their regular school planning and reporting cycles. O&EECs and QESSI support will include an emphasis on resource management, schools grounds improvements and curriculum integration based on the principles of sustainability.*

*As part of their regular planning and reporting processes, schools will analyse asset and resource management to reduce the use of resources (ie water, energy and waste) and improve biodiversity through school grounds improvement. As part of the planning process for the Tomorrow's Schools program which has committed \$900 m over five years from 2006–07, consideration will be given to including sustainability principles in the selection criteria. For example, the initial School Community Development Fund of \$50 m for 2006–07 (part of the overall \$900 m program) will include a focus on schools developing environmentally sustainable approaches to water management.*

*DETA will also provide materials to assist school communities with landscape management including guidance on how to plan, design, maintain and initiate sustainable landscape projects for their school grounds.*

## Dept. of Education and the Arts Annual Report Highlights 2003 – 2007

### 2003–04 Annual Report Extract – Protecting the environment for a Sustainable Future

Environmental Education – “Thinking globally and acting locally”. With 2004 proclaimed the Year of the Built Environment, government, industry, environmental and community groups have collaborated to raise awareness about the environmental aspects of the buildings, places and structures in which we live, work and play.

### Outdoor & Environmental Education Centres

Department has a network of 25 OEECs that design and deliver range of quality environmental education programs and services including technologically based monitoring, adventure based experiential learning, education for sustainability and nature-based immersion.

### QESSI

Through financial assistance from the Commonwealth, a strategic action plan was developed to progress the coordination of QESSI. An alliance of key stakeholders was established to help build the capacity of schools to implement environmental education and sustainability. The lead agencies are Education Queensland and the Great Barrier Reef Marine Park Authority with other key stakeholders including Queensland Transport, Keep Australia Beautiful – Queensland, EPA and the Gould Group.

### School Awards

In 2003, 25 schools participated in the successful pilot of the Great Barrier Reef Marine Park Authority’s Reef Guardian Schools program with 117 schools registered to be involved in 2004. Students involved in the program developed many creative projects and activities in land, waste and water management and the protection of marine environments and the Great Barrier Reef. The winners of the inaugural 2003 Reef Guardian Schools Awards were Cooktown, Cardwell, Kelso and Magnetic Island State Schools.

Coomera State School was named Queensland’s Greenest and Healthiest School for 2003 and outperformed 374 other contenders from around Queensland. The 2003 Healthy Waterways Cutting Edge School Award was won by Inala West and Corinda State Schools in partnership with Oxley Creek Catchment Association.

### Environment and School Initiative (ENSI) [www.ensi.org](http://www.ensi.org)

ENSI focuses on environmental education in schools initiatives across the world. Cam Mackenzie was selected as the Australian Education sector representative and attends International Annual General Meetings of ENSI in Europe each year. Cam also provides international connection for environmental education for sustainability in the formal schooling context so that Queensland and Australian education systems are informed by and also provide input to the dialogue in this agenda, especially with respect to the UN DESD.

### Waste minimisation

Schools have been recycling, composting and incorporated waste minimization into the curriculum through programs such as Wastewise. 2003 partnership with Brisbane City Council for kerbside recycling in Brisbane schools with a potential reduction of waste identified by up to 50%.

## **Building design**

Ecologically sustainable design principles into new state school building have been endorsed by the Department of Education, Training and the Arts in 2007. They are based on the Green Star rating system. Ecological Sustainable Development design guidelines for schools grounds

## **Energy efficiency**

State school energy use and greenhouse gas emissions had increased by around 50% from 1999 to 2003. 2004 Energy Efficiency in Schools program with EPA involvement and 20% reduction in energy use in one school

## **Solar Schools Program**

Sponsored by Energex, Ergon Energy and EPA with 87 schools receiving solar panels for their schools and education on renewable energy. Solar Schools Goes Bush – EPA and Australian Greenhouse Office sponsored an additional 11 remote and regional schools under this program

## **Biodiversity**

Learnsclaping program gives landscaping an educational focus and increases the biodiversity of school grounds. The Learnsclapes Trust sponsored six learnsclaping programs at six schools and included professional school grounds designing, curriculum integration and funding for implementation. The program resulted in environmental, social and educational benefits for students, teachers, parents and the community.

## **2004–05 Annual Report extract – Environment and Sustainability**

### **Education for sustainability – support for international policies**

Depart is showing its support for the 2005–2014 United Nations Decade on Education for Sustainable Development (UNDESD) through the progressions of the Charter for Sustainability and implementation of QESSI.

### **Caring for our environment – Outdoor and environmental education centres (OEECs)**

25 OEECs. In 2004 these centres catered for 95,000 students – through programs to conserve natural resources to using renewable energy sources.

### **QESSI**

13 Hubs established across Queensland to work with existing regional and local organisations and agencies to assist schools on their journey towards a more sustainable future.

**Environmental awards – Green and Healthy Schools Award** – Dirranbandi P-10 State School for 2004

**South East Queensland Healthy Waterways Schools Award** – Cabbage Tree Creek Cluster of schools

**Reef Guardian Schools Award** – Mount Larcom State School 2005

## **Sustainable Water Use**

Schools were encouraged to adopt water management practices to reduce water use with many schools incorporating “Waterwise” education programs into their curriculum. Reduction of more than 8% occurred between 02–03 and 03–04”

## 2005–06 Annual Report extract – Environment and Sustainability

### Minimising water consumption

Development of Department's website *Water Management and Conservation Measures* to provide schools and the Department with current information and advice on water efficiency strategies.

Commenced water retrofits at five schools identified through Government Buildings Water Conservation program. These retrofits will establish benchmarks for water use and water retrofits at other schools.

Promoting Federal Community Water Grants Scheme. Round with over 100 schools having received grants to undertake water efficiency projects in Round 1.

### Finding energy alternatives

Increasing energy use/greenhouse gas emissions from 2000 to 2005

Actions to reduce this consumption:

- Introduction of a new government green power initiative, in conjunction with energy providers, to power more than 1000 state schools, to varying degrees, from sources of renewable energy
- Retrofits of lights, and appliances and implementing energy saving strategies at select schools, resulted in annual energy savings of up to 15%
- Continuation of Solar Schools program

### Minimising waste

Range of programs including Wipe Out Waste, Green and Healthy Schools actively supporting schools to reduce waste

### Engaging international initiatives

Twelve QESSI Hubs are working with schools and supporting the objectives of the UN Decade on Education for Sustainable Development (2005–2014)

### Taking action at the local level

Outdoor and Environmental Education Centre programs delivered to 89,000 students and 191 schools registered in Reef Guardian Schools program

### Achieving success

368 schools entered 2005 Green and Healthy Schools Awards. Other awards – 2005 Aust Recycling Cartonboard comp (\$10,000 prize); Reef Guardian (\$4000) for school with outstanding excellence; 2006 Healthy Waterways School Award; Terry Palmer Award for outstanding accomplishment in environmental education

### Challenges for the future

- Changing mindsets and obtaining sufficient resources to implement energy and water conservation measures
- Implementing new design requirements for landscaping and toilet projects for high water users and ecological sustainable development
- Establishing water and energy advisory roles to advise and assist high use schools to reduce water and energy consumption

- Continuing audits and retrofit programs for targeted schools
- Implementing outcomes of the 2006 Brisbane Festival Earth Dialogues including embedding the Earth Charter in the curriculum for state schools and contributing to the establishment of the Youth Environment Council, which will provide young people with a voice on sustainability

### 2006–07 Annual Report extract – Environmental Sustainability

Environmental sustainability is a matter of both corporate responsibility and operational practice for the Department. The Department has a direct impact on the environment through its services and infrastructure. It has a critical role to impart to students and the community the skills needed for sustainable management and care of the environment.

South-East Queensland is in the grip of the worst drought on record, with water storage levels at historic lows. Because of this, we must conserve our water resources carefully.

#### Committed to saving our water

The Department is introducing water-saving initiatives and encouraging changes in behaviour to reduce water usage. Initiatives are being implemented across schools, TAFE institutes and departmental offices to minimise water consumption.

The Queensland Water Commission (QWC) Water Efficiency Management Plans (WEMPs) help organisations to achieve best practice in water efficiency, through three key activities: accounting for water use, identifying water-saving measures, and preparing a plan to implement the identified measures.

In 2006–07 the Department’s water saving initiatives included:

- submitting WEMPs for 11 schools, exceeding 20 megalitres of water use per annum, to local councils to implement water reduction initiatives and comply with QWC requirements
- developing WEMPs for 49 schools using 10–20 megalitres per annum for submission to local councils to comply with QWC requirements
- \$3.5 million to fit flow restricting devices to all taps and showerheads in 381 schools in South-East Queensland
- installation of water storage, including tanks and rainwater harvesting
- commencing the conversion to Desert Ecosystem waterless urinal operation in several schools

#### Getting results in water usage reduction

In 2005–06 water consumption in state schools was reduced by 1,600 megalitres – the equivalent of 5,000 swimming pools.

Examples include:

- Aspley State High School reduced its usage from 11.4 megalitres to 3.1 megalitres
- Newmarket State School reduced its usage from 0.69 megalitres to 0.29 megalitres
- Inala State School reduced its usage from 11.6 megalitres to 2.7 megalitres.

#### Taking action at the local level

The Department encourages and educates students and the community to take action to develop their knowledge and skills to participate in a sustainable future. During 2006–07 activities included:

- delivering environmental education programs to over 92,000 students through the Department’s Outdoor and Environmental Education Centres

- engaging with the Brisbane Festival to stage Earth Dialogues Brisbane 2006. Delegates from around the world attended the three-day event to discuss the sustainable management of natural resources. Mikhail Gorbachev, former President of the Soviet Union and current president of Green Cross International, spoke about the need to recognise that we are guests, not masters of nature. As a result of the forum, Green Cross Australia was established with headquarters in Brisbane.
- conducting the Earth Dialogues Challenge program in conjunction with Earth Dialogues Brisbane 2006. 8,000 students across the state engaged in on-line learning modules to investigate issues of sustainability. Many students watched the webcast of Education Day in Brisbane City Hall and 500 students also heard Mr Gorbachev speak.
- establishing the Queensland Youth Environment Council (QYEC) where 30 young people provide the ministerial advice on key environmental and sustainability issues
- releasing the Ministerial Advisory Committee on Educational Renewal (MACER) report on *Education for Sustainable Futures: Schooling in the Smart State*. This report contained 13 recommendations to improve education for sustainability in Queensland schools.
- developing the Earth Smart Action Plans to implement the relevant recommendations from the MACER report
- creating the Department's Sustainability Steering Committee.

### Implementing sustainable schools initiatives

The Department is increasing awareness of sustainable development through the regional implementation of the Queensland Environmentally Sustainable Schools Initiative (QESSI). The combined efforts of 18 QESSI Alliance members and 12 QESSI regional hubs support the objectives of the United Nations Decade on Education for Sustainable Development (2005–2014).

QESSI is the integration of existing environmental education and sustainability programs for schools into a holistic process that has measurable environmental, economic, social and educational outcomes.

QESSI supports the nationally agreed common elements for the Australian Sustainable Schools Initiative. It involves schools managing resources more effectively to reduce their ecological footprint through reduction of their energy usage, waste, water consumption and through improvements in biodiversity in their school grounds. This approach is integrated into the existing curriculum and daily operations of the school.

### Education for a sustainable future

Outdoor and Environmental Education Centres (O&EECs) promote and deliver highly effective outdoor and environmental education programs for schools and the community. The centres offer environmental education programs in unique locations including forests, tropical reef-fringed islands, beaches, outback and rural Queensland and estuarine and freshwater habitats.

Education for a sustainable future and valuing biodiversity are key themes within O&EEC programs, which reach approximately 92,000 students per year. All outdoor and environmental education programs are linked to the school curriculum, team building and leadership objectives. O&EECs foster strong links with local communities by providing information about environmental issues, and serve as venues for community forums.

O&EECs provide specialised learning programs in archaeology and heritage interpretation, environmental arts, urban renewal, waterwatch and environmental investigations. Several centres are part of QESSI offering support for schools participating in the journey towards a more sustainable future.

### Recognising success

The winner of the 2006 Green and Healthy Schools Award was Miles State High School. Despite the challenges of the drought, the school offers lush and interesting gardens, providing a relaxed learning environment for students. All students study the environment, covering topics such as waste management, energy and water conservation, landcare, flora, fauna and ecosystem management. Students are enthusiastic and involved in a number of activities within the school and the community. The school boasts an excellent waste management system, as well as a paper and telephone book recycling regime.

They also recycle materials from animal husbandry activities for gardening. It also features sustainable building design to collect rainwater, and uses solar photovoltaic cells. The students participate in the school's youth council and were also involved in community art projects and local conservation activities. The school has an environment committee that works hand-in-hand with the youth council, encouraging involvement in events such as National Tree Day and Clean Up Australia Day.

In 2006–07, 20 schools received a \$500 grant through the inaugural Ripples of Change Schools Award towards an environmental project. Gympie East State School won the Reef Guardian Champion Award, demonstrating its role as a local leader in environmental education through the sharing of knowledge, networking and cluster mentoring.

## Dept of Education, Training and the Arts – Strategic Plan 2007–2011

**Environmental Sustainability** Is one of six core values of the Strategic Plan

**Economic, Social and Environmental Well Being** is one of the Department's four priority areas in the Strategic Plan and will occur through contributing to the development of a society where individuals can enjoy personal fulfillment, economic prosperity, cultural engagement and a sustainable environment and preparing people to be successful in the labour market.

**Strategies** to improve the capability of individuals to participate in their communities and build capacity for sustainable communities

**Managing our performance** through reduction in the environmental impact of the operations of the Department

**Department's Support Priorities** Workforce Capability Strategies: Provide strong professional development to build organisational leadership development capability

**Organisational Capability Strategies:** Ensure the principles of sustainability inform corporate decision-making and the management of the learning environment and facilities.

## Comparative Assessment: Australian Sustainable Schools Initiative Pilot Program in NSW and Victoria

As mentioned earlier in this report Sustainable Schools Initiatives commenced in NSW and Victoria in 2003. The models used in each state are based on the same principles but have significant differences in strategy and implementation. A comparative assessment of the initiatives in these two states has been conducted to discover the lessons learnt from each approach to help other States and Territories consider these in the implementation and review processes of their Sustainable Schools Initiatives. The assessment was not intended to judge different aspects of the states' initiatives as "better" than others because a "one size fits all" model isn't seen as desirable or workable given different state jurisdictions and circumstances.<sup>8</sup>

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8 Larri, L (2006) Comparative Assessment: Australian Sustainable Schools Initiative Pilot Program in NSW and Vic for Australian Government Department of Environment and Heritage.

The similarities reported with the Sustainable Schools Initiatives in each state involve:

- A similar purpose and objectives
- A facilitation model being a catalyst for change management and diffusion
- A high degree of funding and sponsorship from government and support agencies
- High workloads and reports of extensive unpaid overtime
- Ambitious expectations of facilitators
- The same strengths, weaknesses, enablers and barriers identified by schools
- Similar processes in determining the characteristics of target participant schools
- A range of identifiable educational, social and community benefits
- Short and long-term impacts
- Schools giving similar reason for participation in the Australian Sustainable Schools Initiative (AuSSI) pilot
- Mechanisms to generate awareness and commitment in school communities and achieve broad-based involvement and ownership of decision-making
- Responses to preferring ongoing rewards and recognition mechanisms rather than end-point accreditation

The major differences between the two states are:

- The historical and policy contexts
- Approaches to program delivery, the size of the facilitator group and consequently the training and support of facilitators
- The degree of flexibility in the strategic planning approach at the school level
- The emphasis placed on curriculum integration early in a school's interaction with the AuSSI Pilot
- Determination of baseline data standardized by the program or determined by each school

Victoria's success with curriculum integration resulted from their insistence on completion of the Core Module (including the State of the School Report as a first step) before moving on to implementing the 4 Year Plan. <sup>6</sup>

Schools in both states reported identifiable educational, social and professional benefits and for most schools the benefits outweigh the costs or were equal. The study recommends schools and school system strengthen resource usage monitoring as well as encouraging and enabling schools to reinvest savings to fund further progress in environmental work. <sup>6</sup>

Both states found that impacts most likely to endure and be sustained as a result of the AuSSI pilot were routine practices around the school and asset or infrastructure improvements. Schools recognized that they had just begun and that it takes much longer to embed a sustainability approach. Schools also reported on what was happening within the school rather than impacts related to networking with the community. The major impact from the school perspective was the focus, structure and framework for environmental activities and opportunities that the initiatives provide. They also felt opting in and having a choice to do environmental activities was important. (9)

When asked what was needed to sustain progress many NSW schools referred to the need to increase the level of activity and embed it as ongoing practice. Both schools saw loss of key and passionate staff members as a threat to progress and saw a need to spread interest more widely amongst teachers and students. Schools were also concerned about potential loss of access to their facilitators. Both states mentioned the momentum generated by the facilitator's ongoing interest. There was some evidence that schools were becoming more self-sufficient through developing their own strategies and networking with others. <sup>6</sup>

Community groups in NSW saw the ongoing coordination and support role of the AuSSI facilitators as important in relation to the limited time or one-off contribution that community groups could make. They had been disappointed in the past with schools being unable to maintain their contribution or build on it. They saw the AuSSI pilot as adding value to their work, making it more viable and more sustainable. <sup>6</sup>

For around 80% of schools the main reason for participation was the way in which the AuSSI Pilot provided a, *holistic approach to our environmental management and sustainability program and its integration into teaching and learning*. Other significant reasons related to gaining access to expertise, resources, or funds, as well as recognition and/or accreditation. Just over half (58%) of NSW schools recognized that this was a way of being supported to *implement the DET Environmental Education Policy*” <sup>6</sup>

The study recommends that schools need to have realistic expectations about AuSSI so they can realistically plan their involvement and understand their level of resourcing. It also found that external support people need knowledge and experience of the ways schools prioritize their involvement with innovative programs and the ability to identify and use the capacity in schools to support the establishment and maintenance of the momentum required for whole school change. It is suggested they also need to understand the ways in which schools achieve change and consider the lead and lag times in planning and implementing. Greater access to and communication with key teachers and staff within schools as well as their expertise in managing the required tasks were seen as important drivers of progress. <sup>6</sup>

In order to develop school community interest and awareness in environmental sustainability, the use of the school’s communication strategy such as through the school newsletter and Annual Report is recommended. Incentives in the form of recognition and acknowledgement of achievement are seen as important to encourage ongoing initiatives. <sup>6</sup>

This comparative study highlights the importance of collecting baseline data together with ongoing monitoring and analysis of the schools resource use. The external facilitators were found to have provided essential support for school staff in developing the expertise to set up the system of collecting their school’s data. <sup>6</sup>

The AuSSI framework was found to provide schools with a systematic approach to assessing their current environmental impacts and issues and confirming strategic and action plans to address them. Having a written plan integrated into the school management policies and plans was also found to help institutionalize sustainability. <sup>6</sup>

In both states it was recognized that the Principal (or Deputy) was the driver in developing a school’s capacity for broad-based involvement in decision-making. Many examples were provided where the Principal’s leadership and commitment to participative processes meant there were strong mechanisms in place for students, staff and parents to contribute to environmental sustainability in meaningful ways with a sense of ownership. <sup>6</sup>

Principals from the Victorian case study schools were asked to provide their leadership “hints and tips” in relation to implementing AuSSI. Most schools mentioned the importance of integrating and embedding sustainability strategy and practices into schools policies and activities. <sup>6</sup>

Finally, the external AuSSI school facilitators felt the following factors contributed to the successful engagement of schools in the AuSSI Pilot:

- Support of a Principal and/or the Leadership Team who are engaged in the process because they will ensure that key people are available, have the time and are supported

- The involvement primarily of the students, as well as parents, staff and wider community
- The interest level of teachers
- Having a structured approach that involves strategic planning
- Having easy, simple systems
- The ability of sustainable schools facilitators to be creative, innovative and energetic so that the activities are fun
- Ensure continuous improvement

## Conclusion and Recommendations

A strong case for the urgent need to progress environmental education for sustainability is made in this report, backed up by the findings of the recent Australian State of the Environment Reports and the MACER Report evidence that we are living unsustainably.

The UN Decade of Education for Sustainable Development (2005–2014) provides further support for this urgency and places QESSI role in the context of the global movement toward achieving a sustainable future for all.

This report commends the Department of Education, Training and the Art's commitment to environmental educating for sustainability and acknowledges the very effective role of the Central Office coordinator of QESSI, the QESSI Alliance members and the various QESSI Hubs. The coordinator, Alliance members and QESSI Hubs have been bringing people together; harnessing energy; encouraging; providing information and professional development as well as helping to consolidate current school projects and provide future direction.

This report also supports the MACER Report recognition of the dedicated work of teachers, parents and other members of schools communities and the steps taken by many Queensland schools towards embedding the principles of sustainability in their school system. The different national, state and regional Award programs play an important role in showcasing and valuing their great work, inspiration and the generosity of people from various school communities. It also provides an important opportunity to stop and celebrate these achievements.

A challenge exists for coordinators, providers, key teachers and other champions in the school communities to balance their enthusiasm in advancing sustainability education with the time and energy they are able and supported to give. There is a skillfulness that needs to be cultivated in enlisting the necessary support and involvement of institutions and other people.

The aggregated sustainable schools' outcomes across the state are impressive and the QESSI concept is demonstrated to be an effective model of achieving positive outcomes through developing synergies amongst potentially competitive organisations, all focused on a single vision and agreed set of common goals, by generating co-operation and tangible benefits to us all. The QESSI concept is acknowledged as a best practice model for the education industry to support schools on their pathway towards improving their sustainability and eco-efficiency.

### What is needed to continue progressing toward QESSI's vision and learning to live sustainably?

Along with consideration of the NSW and Victorian Comparative study findings and additional to the recommendations of the MACER Report and the QESSI Evaluation Study, the following recommendations and ideas are suggested as important to make progress toward "all schools in Queensland being environmentally sustainable":

### **Earth Charter Values and Joy of Living Sustainably**

Support to embed the Earth Charter values in schools and for these values to be meaningfully reflected throughout whole of school processes

Encouraging the recognition that learning to live sustainably is a fun, simple and creative process

### **Valuing Indigenous perspectives**

Supporting the indigenous custodians who have cared for this beautiful country for thousand of years to provide guidance to schools and institutions on how to listen to and understand the land and live within nature's limits

### **Teacher training courses**

Work to ensure that teacher training courses provide new teachers with the required skills to educate for sustainability at Universities across the state

### **Department commitment to Environmental Education for Sustainability**

A review of the resource support for the QESSI regional hubs is suggested to maintain the viability of regional support for clusters of sustainable schools.

An assessment of the human resources to coordinate QESSI across the state is also recommended in line with the recommendations of the QESSI Evaluation Study from Griffith University and QUT.

### **State of the School Reports and School Environment Management Plans (SEMPs)**

Require schools being supported by QESSI to undertake a State of the School Report prior to signing an MOU with the QESSI Hubs

Provide directives for the development of School Environment Management Plans (SEMP) as part of school's Annual Operational Plans and encourage them to be active living documents with regular planning, action and evaluation processes

### **Educating Principals for Sustainability**

Provide specific Professional Development in Educating for Sustainability to principals given the awareness of their central role in enabling the development of a school's capacity for broad-based involvement in decision-making

### **Ecological Footprint and Lifecycle Analysis**

Promoting the use of the Ecological Footprint and Lifecycles analysis tools to help schools and students develop an understanding of the impacts of our everyday decisions and how they impact on each other along with local and global environments

### **Sustainable Business Models**

Encourage schools and students to learn from and gain experience with environmentally sustainable business and industry operators so that Queensland develops as a place where people sustainably.

## Biodiversity and Energy Programs

Promote school partnerships with local councils, environmental education centres and community groups to develop long term connections with a protected local natural area for their biodiversity education. Foster a range of education activities such as identifying and monitoring local native species; weed identification and eradication; bushland/streambank restoration planning and action and other curriculum connection opportunities.

Encourage projects that support schools to reduce their energy use and support renewable energy uptake.

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