

# ASEAN GUIDELINES ON ECO-SCHOOLS



one vision  
one identity  
one community



# **ASEAN GUIDELINES ON ECO-SCHOOLS**

**The ASEAN Secretariat  
Jakarta**

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## ABOUT THE ASEAN GUIDELINES ON ECO-SCHOOLS

The ASEAN Guidelines on Eco-schools was developed at the Workshop on ASEAN Eco-schools Programme held on 26-28 June 2011 in Kota Kinabalu, Malaysia, and endorsed by the ASEAN Environment Ministers at the 13<sup>th</sup> Informal ASEAN Ministerial Meeting on Environment (IAMME) on 18 October 2011 in Phnom Penh, Cambodia.

The Guidelines serves as a reference and as a regional standard for environmentally friendly model schools in the region. The Guidelines was used as a reference in the nomination of eco-schools in ASEAN Member States (AMS) for the ASEAN Eco-schools Award 2012, which aimed to recognise exemplary efforts of eco-schools in AMS in inculcating environmental awareness in every aspect of education to their students and surrounding communities.

The inaugural ASEAN Eco-schools Award 2012 Presentation Ceremony was held on 17 July 2012 in Kuala Lumpur, Malaysia, in conjunction with the ASEAN Environment Year 2012 Celebration.

The ASEAN Guidelines on Eco-schools and ASEAN Eco-schools Award Programme contribute to the implementation of ASEAN Socio-Cultural Community Blueprint 2009-2015 (Section D3 (vi)) and the ASEAN Environmental Education Action Plan (AEEAP) 2008-2012 (Target Area 2 Non-Formal Sector, Strategic Action/Priority 1), i.e., promote sustainable schools concept and practice throughout ASEAN.

1

ASEAN ECO-SCHOOLS DEVELOPMENT



## ASEAN ECO-SCHOOLS DEVELOPMENT

### NAMES OF ECO-SCHOOLS

<b>Brunei</b>	Green Schools Initiative
<b>Darussalam</b>	Eco-Clubs Initiatives
<b>Cambodia</b>	<i>Sala Kuma Metrei</i> (Child-Friendly Schools)
<b>Indonesia</b>	Eco-schools (Adiwiyata Program)
<b>Lao PDR</b>	Green, Clean and Good Quality Schools
<b>Malaysia</b>	<i>Sekolah Lestari-Anugerah Alam Sekitar</i> (Sustainable School Environment Award)
<b>Myanmar</b>	Clean, green and esteemed schools
<b>Philippines</b>	Sustainable and Eco-friendly Schools
<b>Singapore</b>	<ul style="list-style-type: none"> <li>● President Award for the Environment</li> <li>● Ministry of Education Centre of Excellence for Environmental Education</li> <li>● Ministry of Education Programme for School-based Excellence and Niche Programme Status in Environment Education</li> <li>● EcoFriend Award</li> <li>● PUB Watermark Award</li> </ul>

<b>Thailand</b>	Eco-schools
<b>Viet Nam</b>	Green, Clean and Beautiful Schools

<b>ASEAN</b>	Eco-schools
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## DEFINITION OF ECO-SCHOOLS

<b>Brunei Darussalam</b>	The national definition of eco-schools is yet to be formalised.
<b>Cambodia</b>	A Child-Friendly School is a school that recognises and nurtures the achievement of children’s basic rights and seeking all children to go to school, where environmental education programme has been permeated into all educational levels.
<b>Indonesia</b>	Adiwiyata means a good and idealistic place where all knowledge and various norms and ethics can be found as the basis for human beings towards the creation of prosperity in life and the achievement of ideals of sustainable development.
<b>Lao PDR</b>	Green, Clean and Good Quality school: <ul style="list-style-type: none"> <li>- Good teaching and excellent studying</li> <li>- Preventing and solving social problems</li> <li>- Creating good physical environment for schools and educational institutions.</li> </ul>

<b>Malaysia</b>	<i>Sekolah Lestari</i> -Environment Award is an Environmental Education process that promotes continuous environmental values in the management, curriculum, co-curriculum and greening activities and foster sustainable communities.
<b>Myanmar</b>	Individual student must acknowledge that everybody is a part of ecosystem. Therefore they must be aware that individual actions have consequences on ecosystem and natural environment. Education must fulfill sustainability of different socioeconomic sectors.
<b>Philippines</b>	Eco-schools are environmentally friendly schools that have initiated and integrated in their instruction, research, extension and/or administration, programmes which are environment-related.
<b>Singapore</b>	Eco-schools are educational institutions that have adopted systems, programmes and practices to engage the school population and the community on environmental sustainability.



<p><b>Thailand</b></p>	<p>Eco-school is a school that has adopted the Whole School Approach for Environmental Education as a tool to support education for sustainability in all aspects of school life. Children and staff of schools will have enhanced environmental citizenship and engaged in local sustainability issues with community-based education. Eco-school will provide children with knowledge, practices and skills to become an “environmental citizen”.</p>
<p><b>Viet Nam</b></p>	<p>Green, Clean, Beautiful Schools are environmentally-friendly schools that ensure safe, clean and green space, and suitable landscape; and having initiated and integrated in study, extension and programmes which are environment-related.</p>
<p><b>ASEAN</b></p>	<p>Eco-schools are recognised institutions of learning at the primary / secondary level that recognises values of environmental sustainability practices and carries out environmentally friendly school policies, teaching programmes and practices for the benefit of the school and surrounding communities.</p>

## CRITERIA FOR RECOGNITION OF ECO-SCHOOLS

<b>Criteria 1</b>	School Policy and Administration
<b>Criteria 2</b>	Teaching Modules & Learning Activities (Curriculum & Co-Curriculum)
<b>Criteria 3</b>	Facilities and Environmental Practices
<b>Criteria 4</b>	Partnership and Community Outreach

## INDICATORS FOR ECO-SCHOOLS

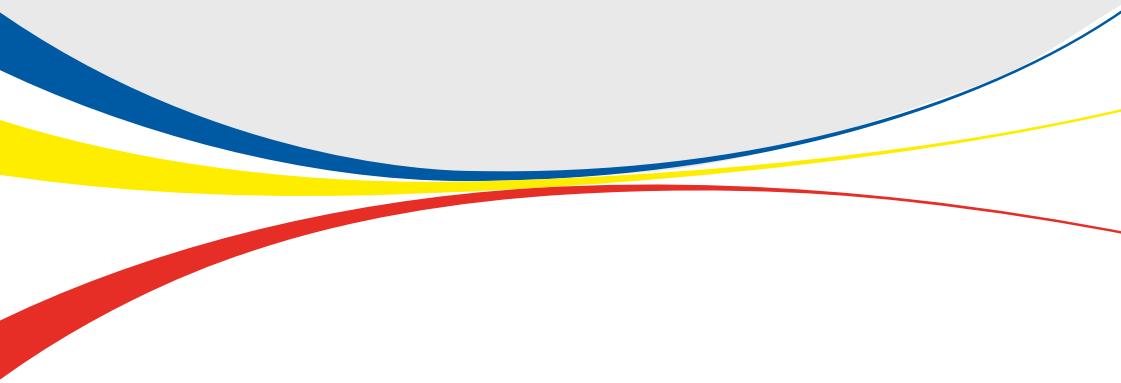
<b>Criteria 1</b>	<b>School Policy and Administration</b>
Indicator 1	Establishment of Vision and Mission that reflects environment thrusts
Indicator 2	Existence of environmental policies
Indicator 3	Establishment of an organisational and management structure to develop an environmentally sustainable eco-schools programme at the schools and oversight of the implementation of the programme.
Indicator 4	Budget preparation and financial reporting related to environmental activities
Indicator 5	Reporting system

<b>Criteria 2</b>	<b>Teaching Modules and Learning Activities (Curriculum and Co-Curriculum)</b>
Indicator 6	Environmental education is infused in various subjects and learning process in curriculum and co-curriculum
Indicator 7	Capacity building (for faculty members)
Indicator 8	Local context
Indicator 9	Teaching aids/resource materials (availability of environment-related instructional materials)
Indicator 10	Presence of active/vibrant environmental clubs

<b>Criteria 3</b>	<b>Facilities and Environmental Practices</b>
Indicator 11	Eco-friendly facilities
Indicator 12	Environmental innovations
Indicator 13	Green spaces
Indicator 14	Teaching aids/resource materials (availability of environment-related instructional materials)
Indicator 15	Environment-friendly practices

<b>Criteria 4</b>	<b>Partnership and Community Outreach</b>
Indicator 16	Number of partnerships
Indicator 17	Level of partnerships
Indicator 18	Level of support
Indicator 19	Existence of community outreach activities

# 2 | ASEAN ECO-SCHOOLS AWARD





## 2

## ASEAN ECO-SCHOOLS AWARD

## NATURE OF RECOGNITION

ASEAN Eco-schools Award may start on a non-competitive basis among ASEAN Member States initially (award given to all AMS that nominates schools selected on a competitive basis at the national level) and work towards competitive basis regionally.

## CRITERIA FOR SELECTION

The criteria may be developed into two categories: core and optional criteria. The criteria will be discussed and adopted by the ASEAN Working Group on Environmental Education (AWGEE).

## ASEAN ECO-SCHOOLS AWARD

Possible categories:

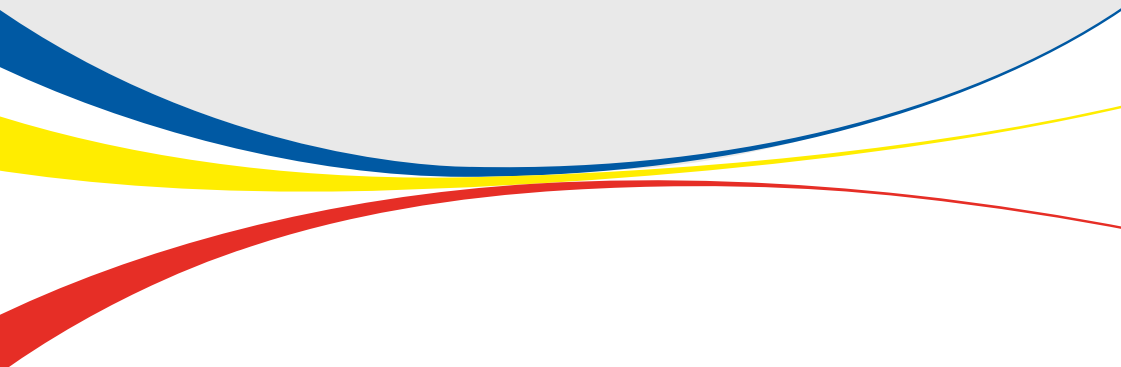
- (i) Primary schools (urban and rural areas)
- (ii) Secondary schools (urban and rural areas)

ASEAN Eco-schools Award may be presented once every three years – the first one in 2012 during AEY 2012 in Malaysia.

ASEAN Eco-schools Award Presentation Ceremony may be hosted by AMS on alphabetical rotation or in conjunction with other environment-related events.

3

MECHANISM / MODALITIES  
FOR REGIONAL COLLABORATION







## 3

## MECHANISM / MODALITIES FOR REGIONAL COLLABORATION

### NETWORK OF ECO-SCHOOLS

- Inter-ASEAN exchange between eco-schools (can be part of a broader exchange)
- Joint education and environment activities (for curriculum development)
- Regional Forum (e.g., ASEAN Environment Year to showcase schools' activities / achievements, to be attended by principals / students)
- Network of Eco-schools

### ASEAN ECO-SCHOOLS WEB PORTAL

- ASEAN Regional Web Portal as part of the ASEAN Environmental Education Inventory Database (AEEID)
- Web-based collaboration involving schools, teachers, students (eg., Facebook)

## NATIONAL MECHANISMS

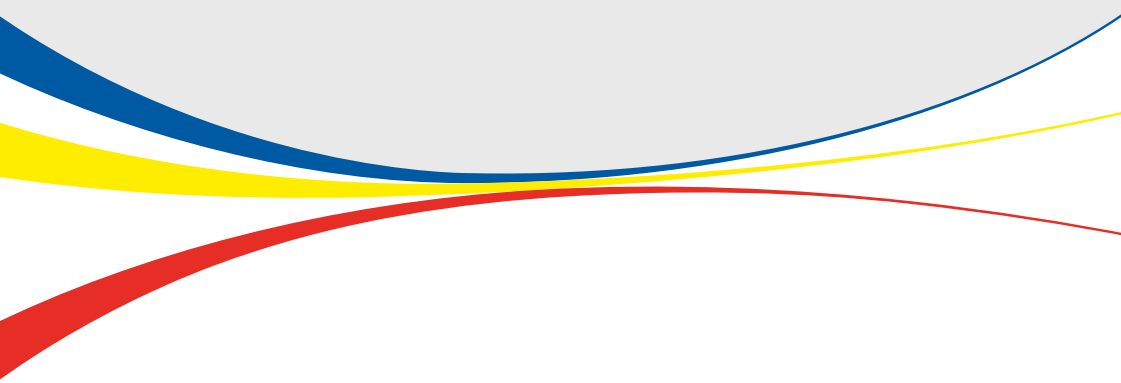
- Linking National Mechanisms to Regional and International Mechanisms (using universities to initiate)
- Information centre clearing house
- Collaboration with media (radio, TV, print)
- Contests (Eco-documentaries, Art, Songs, Solutions (e.g., Mudball))
- Joint R&D (primary/secondary schools in partnership with universities)

## FUNDING PARTNERSHIP

- Self-funding (National/local government)
- Public Private Partnerships (Share information on various partnership models (SMART, HSBC, Toyota, Shell))
- Carbon funding (GEF, energy efficiency / clean energy projects)
- ASEAN Center for Biodiversity
- Income generation by student activities
- ASEAN Dialogue Partners
- International Organisations (UNEP, UNESCO, UNICEF)
- Development Banks (ADB, World Bank, IDB)

# 4

## NATIONAL POLICY FRAMEWORK ON ENVIRONMENTAL EDUCATION





## 4

## NATIONAL POLICY FRAMEWORKS ON ENVIRONMENTAL EDUCATION

### BRUNEI DARUSSALAM

There is no specific national policy framework on environmental education. However, environment-related issues and measures are already imbued within policies, regulations or guidelines of respective core businesses of ministries.

One example is the National Environment Strategy which has eight elements, where each element has its own goals and action areas. One of the strategies is to raise environmental consciousness through the following goals:

- (i) To develop and implement a comprehensive environmental education and awareness programme by integrating these components in different elements into the strategy and programmes areas
- (ii) To enhance environmental content of the curricula and activities at primary, secondary and tertiary levels
- (iii) To strengthen public awareness for enhanced support for environmental management initiatives

- (iv) To create better informed and environmentally sensitive government, system, public sector, community, youth, women and general public, so that they are aware of environmental consequences of their own actions and are more capable of reaching well-informed choices and conclusions on environmental and sustainable development issues
- (v) To strengthen environmental information dissemination to all segments of the society

## CAMBODIA

Since environmental education (EE) was initiated in early 1990s, EE activities have been carried out in schools based on available resources. Although Cambodia has no specific EE policy, the Ministry of Environment's (MOE) strategic directives have identified a programme of work related to environmental education by focusing on human resources development; strengthening environmental education programmes; strengthening capacity, environmental information management, and technical research on environmental field; as well as implementing international conventions that Cambodia became a party to. In response to these important strategic directives, the vision on EE states that "All Cambodian citizens will have to be environmentally literate, imbued with environmental ethic, willing and capable to ensure a sustainable future".

To achieve this vision, the mission is “to achieve a coordinated and consistent approach to Environmental Education (EE) in Cambodia to better enable the conservation and protection of the environment to the benefit of people’s livelihoods, particularly the poor and disadvantaged”.

Cambodia’s Child-Friendly School (CFS) Program is considered to be similar to an Eco-school Program as it reflects two important considerations in education development in Cambodia: (i) ensure quality of education, and (ii) attract participation from all interested institutions, to jointly support the programme. A child-friendly school nurtures a school-friendly child and supports children in development and school-friendly community. Most of the core activities of CFS are to encourage students to adapt to their learning environment and work together in a team and community for environmental conservation and management purpose.

The Eco-Club, a critical part of school’s environmental activities that supports CFS program, has been initiated and implemented since early 2000s by both local and international organisations with strong policy support from the MOE and the Ministry of Education, Youth and Sport (MOEYS). The main purposes of an Eco-club are to raise students’ environmental awareness, develop the skills they need to make a difference in their environment and to cultivate a sense of responsibility and caring for their surrounding school and community. Eco-clubs teach students important life skills such as



planning, teamwork, research, communication, fundraising, and creativity as well as critical thinking. All of these skills have broader long-term benefits for students and their communities.

Therefore, the future implementation of eco-school programme in Cambodia will be built on the existing initiatives, approaches, and activities that are currently known as CFS and Eco-club.

## INDONESIA

### ADIWIYATA Program

The “Adiwiyata Program” was officially launched in 2006 by the Ministry of Environment of Indonesia. It is a cooperation programme between the Ministry of National Education and the Ministry of Environment. Through this program, each school community is expected to be involved in school activities towards healthy environment and to avoid negative environmental impacts.

The word ADIWIYATA originated from 2 Sanskrit words, “ADI” and “WIYATA”. **ADI** means big, great, good, idealistic or perfect; **WIYATA** means the place where one receives knowledge, norms and ethics in social life. When the two words are joined together, **ADIWIYATA** has the meaning of a good and idealistic place where one can find all knowledge and various norms and ethics that can be the basis for

human beings towards the creation of prosperity in life and the achievement of the ideals of sustainable development.

The goal of the Adiwiyata Program is to create school communities responsible for environmental protection and management through good school governance to support sustainable development. The main mission of Adiwiyata Program is to create school institutions with environmental awareness and culture to inculcate these values in primary and secondary education in Indonesia.

To achieve the Adiwiyata goal, there are four components to be met:

- Environmentally sound school policy
- Environmentally sound curriculum
- Participation-based environmental activities
- Management of environmentally sound school infrastructure

The principles of the Adiwiyata program are:

- Participatory: school community shall be involved in school management to achieve an environmentally sound school, consisting of planning, implementation and evaluation based on respective responsibilities and roles
- Sustainable: all school activities shall be implemented in a sustainable way

The Adiwiyata Program is based on Environmental Education concept. However, many Adiwiyata schools have also explored social and economic aspects of environmental protection, for example, by

producing compost or handicrafts from used materials or nursery plants for sale, and teaching homeless people to produce compost. Environmental Education is either taught as an independent subject or integrated in existing subjects such as religion, Indonesian language, English language, math, science, social science, art, etc.

### **Institutional Arrangements of Adiwiyata Program**

The Minister of Environment and the Minister of Education and Culture are the custodians of Adiwiyata program. The Adiwiyata Board and team were formed at several levels as follows:

#### *National level*

- Adiwiyata Advisory Board: Senior officials from Ministry of Environment, Ministry of Education and Culture, universities, private sector, international Non-governmental Organisations (NGOs)
- Adiwiyata Supervisory Team: Ministry of Environment and Ministry of Education and Culture
- Adiwiyata Technical Team: Ministry of Environment, Ministry of Education and Culture, Environmental Education practitioners, NGOs

*Provincial level*

- Adiwiyata Supervisory Team: Environment Body and Education Body and/or related government institutions, universities, NGOs, mass media, etc.

*Municipal level*

- Adiwiyata Supervisory Team: Environment Body and Education Body and/or related government institutions, universities, NGOs, mass media, etc.

*School level*

- Adiwiyata Team: Headmasters, teachers, students, environmental club/students organisation, PTA (Parent-Teacher Association), school staff

**Award and Certification**

The Award is given to schools at several levels based on the percentage of compliance to Adiwiyata criteria:

Compliance	Award
90% and providing assistance to 10 schools to achieve Adiwiyata award at municipal level	Independent Adiwiyata (Adiwiyata Mandiri) Award, awarded by President

Compliance	Award
90%	Adiwiyata Award (national level), awarded by the Minister of Environment
80%	Adiwiyata Award (provincial level), awarded by Governor
70%	Adiwiyata Award (municipal level), awarded by Mayor/Regent

From 2006–2012, 123 Adiwiyata Mandiri Schools and 472 Adiwiyata Schools have been recognized.

## LAO PDR

The educational sector of Vientiane Capital is contributing to the implementation of the ASEAN Environmental Education Action Plan 2008-2012 and the Lao Environmental Education and Awareness Strategy 2020 through a visionary programme building on six core values, i.e., green, clean, safe, bright, civilised and charming.

This programme is being implemented collaboratively by the Ministry of Education and Sports and the Ministry of Natural Resources and Environment through the following campaigns:

- Good teaching and excellent studying
- Creating good physical environment for schools and educational institutions
- Green schools
- Green, Clean and Beautiful Laos
- Preventing and solving social problems

In 2006, the Vientiane Education Department of the Ministry of Education and Sports launched the Green, Clean and Good Quality School Project. Only 74 schools joined the project in the beginning but the number has increased to 325 schools. Vientiane has 831 private and public schools with 159,012 students and 6,744 teachers, of which 68% of the teachers are female and 43% work in public schools.

The objectives of the Green, Clean and Good Quality School Project are to encourage schools in Vientiane Capital to create a green, clean, beautiful and tranquil school environment which will be appealing to students, teachers and visitors alike. The project further aims at building awareness among school teachers and students on the importance and benefits of protecting and taking care of their school environment as well as their homes.

The Project envisions that a Green, Clean and Good Quality School is a place that fulfills the following criteria:

- Green: Well-maintained surroundings with big trees, flowers, garden, grass field and fences
- Clean: Clean waste bins in all classrooms, wastewater system, restrooms. Regular and frequent cleaning and awareness programmes among teachers and students about sanitation
- Good environmental school: Well-constructed buildings, well-designed classrooms, school equipment in good condition, places for relaxation and sports, National flag flown in flower garden, awareness slogans displayed to promote environmental protection, drug free lifestyle, reading, solidarity among students, etc.
- Good Quality School: School principal must implement planning and reporting system, teachers and students must respect the rules, teachers are well prepared for teaching, 85% pass rate in term examinations, and not less than 95% pass rate in the finals. The school has library, laboratory and reading room.

In addition, the school must be drug free.

Each year the Green, Clean and Good Quality School Committee will evaluate all schools enrolled in the programme and the schools that live up to the above criteria will receive a Green Flag. If a school is

able to maintain their green flag for three consecutive years, this school will receive a special Green, Clean and Good Quality School Flag.

The Committee consists of members from the Vientiane Education Department, the District Education, the Education Audit Office, the Department of Environmental Quality Promotion and school principals.

## MALAYSIA

The National Policy on the Environment which integrates the three pillars of sustainable development, i.e., economic, social and cultural development and environmental conservation, was approved in 2002. The Policy aims at continued economic, social and cultural progress and enhancement of the quality of life of Malaysians through environmentally sound and sustainable development. Moreover, the Policy is based on eight (8) interrelated and mutually supporting principles and seven (7) green strategies set to harmonise economic development goals with environmental imperatives:

### *Principles*

- Stewardship of the Environment
- Conservation of Nature's Vitality and Diversity
- Continuous Improvement in the Quality of the Environment
- Sustainable Use of Natural Resources
- Integrated Decision-Making



- Role of the Private Sector
- Commitment and Accountability
- Active Participation in the International Community

### *Green Strategies*

- Education and Awareness
- Effective Management of Natural Resources and the Environment
- Integrated Development Planning and Implementation
- Prevention and Control of Pollution and Environmental Degradation
- Strengthening Administrative and Institutional Mechanisms
- Proactive Approach to Regional and Global Environmental Issues
- Formulation and Implementation of Action Plans

In line with the Green Strategy on Education and Awareness, the Department of Environment has implemented environmental education and awareness programmes through various activities and also disseminated information/environmental messages via the media to various level of society.

### *Sekolah Lestari - Environmental Award Programme*

The *Sekolah Lestari* – Environmental Award Programme which was launched on 27 January 2005 is a programme organised by the Department of Environment and the Ministry of Education with technical support from the Institute of Environment and Development

(LESTARI), National University of Malaysia. The concept of this programme hinges on an integrated approach involving the school community as a whole, their families, local communities, government, private sector and NGOs in four (4) main components, namely, management, curriculum, co-curriculum and greening activities. The schools that participated in this programme shall also serve as a centre of learning and education that can guide the school community and local society towards a sustainable future. Since 2005, 1,190 schools have participated in this programme.

### *Guidelines/Framework of Implementation of Sekolah Lestari - Environmental Award*

*Please refer to the Handbook on Establishment, Implementation and Assessment of Sekolah Lestari-Environmental Award (First Edition) April 2007.*

### *Award and Certification*

The awards are given to two categories, primary school and secondary school.

#### *Sekolah Lestari Award (Gold)*

- School with highest mark in the national level assessment
- Winning school will receive a cash prize of RM10,000 and plaque signed by the Minister of Natural Resources and

Environment Malaysia and the Minister of Education Malaysia.

*Sekolah Lestari National Level Certification (Silver)*

- School with highest mark in the state level assessment
- School will receive a cash prize of RM2,000 and certificate signed by the Director-General of Environment Malaysia and Director-General of Education Malaysia.

*Sekolah Lestari National Level Certification (Bronze)*

- School that is successful in the state level assessment
- School will receive a certificate signed by the Director-General of Environment Malaysia and Director-General of Education Malaysia.

List of Recipients for *Sekolah Lestari* Award

- i. Sekolah Lestari Award 2009/2010  
Primary School: SJK (C) Tung Hua, Sibu, Sarawak  
Secondary School: SM St. Michael, Penampang, Sabah
- ii. Sekolah Lestari Award 2007/2008  
Primary School: SK Bakri Batu 5, Muar, Johor  
Secondary School: SMK (P) Methodist, Pulau Pinang

iii. Sekolah Lestari Award 2005/2006

Primary School: SJK (C) Chi Hwa, Sandakan, Sabah

Secondary School: SMK Datuk Peter Mojuntin, Penampang,  
Sabah

### WiraAlam Project

This project is organised by the Department of Environment in collaboration with the Ministry of Education and Malaysian Nature Society. This project is divided into three stages: WiraDiri (Level 1), WiraKomuniti (Level 2) and WiraAlam (Level 3). Each participating student has to complete the task provided in the activity book in each level before advancing into the next level. Students who complete Level 3 successfully would receive the WiraAlam Award.

### Sustainable Pre-school Environmental Awareness Module

The Sustainable Pre-school Environmental Awareness Module was developed in 2010. The aim of this module is to train and educate teachers and pre-school children between ages 3 and 6 about preservation and conservation of the environment. The module consists of five (5) main topics, namely, water, air, animals, plants and recycling activity. The teaching and learning methods are student-centred, fun and interesting.

### Environmental Awareness (EA) Camps

Eight (8) environmental awareness camp modules have been developed since 1994 in collaboration with several NGOs and universities: River ecosystem, Forest ecosystem, Highland

ecosystem, Organic Farming ecosystem, Marine ecosystem, Urban ecosystem, Plantation ecosystem and My World. EA camps are held regularly for primary and secondary school children in different parts of the country. Relevant modules used are site specific to where the camps are conducted. Besides school children, trainees from teacher-training colleges also participate in the camps.

### Intersarsity Environmental Debate

Since 1991, the Environmental Debates for Institutions of Higher Learning had been organised annually by the Department of Environment in collaboration with the Ministry of Higher Education, Malaysian Universities Debate Council (MADUM) and Dewan Bahasa dan Pustaka (The Institute of Language and Literature).

The programme aims to enhance knowledge and understanding of the students towards environmental issues and policies at national and international level as well as to encourage and provide opportunity to the university students in delivering ideas, opinion, criticism towards environmental issues and ways to overcome them.

## MYANMAR

No clear defined national policy outline for environmental education has been laid down yet. However, energetic measures have been taken on environment-related issues and such measures are already

imparted within the policies, regulations or guidelines of respective sectors and ministries.

The programme is being implemented collaboratively by the Ministry of Education and Ministry of Environmental Conservation and Forestry through the following;

- Promotion of environmental education with a view to highlight the role of environmental awareness from students to the community.
- Dissemination and infusion of the environmental attitude in the society through various levels of education.
- Upgrade of environmental matters and content of the curricula and activities at elementary, secondary levels. Subsidiary role of tertiary level is strongly recommended.
- Creation of environment-sensitive society who understand the environmental consequences of individual actions.
- Establishment of society who is well-informed on environmental and sustainable development issues.

To achieve the these goals following components are to be carried out;

- Environmentally sound school policy and environmentally sound curriculum are to be established.

- The Ministry of Environmental Conservation and Forestry and Ministry of Education should jointly cooperate at the national level, divisional level, township level and school level with the help of Non-Governmental Organisations (NGOs) to fulfill the goals mentioned.
- Dynamic collaborative efforts must be targeted for education and awareness and effective management of natural resources and the environment.

## PHILIPPINES

The Philippines’ “National Environmental Awareness and Education Act of 2008, otherwise known as Republic Act 9512, seeks to promote environmental awareness through environmental education and for other purposes. The law was enacted on 12 December 2008.

The enactment of the said law is consistent with the policy of the State to protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature, and in recognition of the vital role of the youth in nation building and the role of education to foster patriotism and nationalism, accelerate social progress, and promote total human liberation and development. The State shall promote national awareness on the role of natural resources in economic growth and the importance of environmental

conservation and ecological balance towards sustained national development.

The law states that the Department of Education (DepEd), the Commission on Higher Education (CHED), the Technical Education and Skills Development Authority (TESDA), the Department of Social Welfare and Development (DSWD), in accordance with the Department of Environment and Natural Resources (DENR), the Department of Science and Technology (DOST) and other relevant agencies, shall integrate environmental education in its school curricula at all levels, whether public or private, including Barangay day care, preschool, non-formal, technical vocational, professional level, indigenous learning and out-of-school youth courses or programmes.

Environmental education shall encompass environmental concepts and principles, environmental laws, the state of international and local environment, local environmental practices, the threats of environmental degradation and its impact on human well-being, the responsibility of the citizenry to the environment and the value of conservation, protection and rehabilitation of natural resources and the environment in the context of sustainable development. Theoretical and practicum modules shall comprise activities, projects, programmes including, but not limited to, tree planting, waste minimisation, segregation, recycling and composting; freshwater and marine conservation, forest management and conservation; relevant



livelihood opportunities and economic benefits and other such programmes and undertakings to aid the implementation of the different environmental protection laws.

## SINGAPORE

### Introduction

The Inter-Ministerial Committee on Sustainable Development (IMCSD) was set up in 2008 to formulate a national framework and key strategies for Singapore's sustainable development to meet emerging domestic and global challenges. In 2009, the IMCSD launched the Sustainable Singapore Blueprint (SSB), which contains the strategies and initiatives for Singapore to achieve both economic growth and a good living environment over the next two decades.

The Blueprint highlights the need to educate people from young on the importance of sustainable development and the environmental impact of the choices they make. Schools play a vital role in this effort.

Please refer to the website for more information on the SSB:

<http://app.mewr.gov.sg/data/lmgCont/1299/Chapter09-Community.pdf>

## Formal Education

The Ministry of Education (MOE) has made environmental education part of the school curriculum. Environmental education is also one of the criteria in the School Excellence Model which is used to appraise the overall performance of schools.

MOE has incorporated environmental topics such as recycling, energy and water conservation into the formal curriculum of subjects like geography, social studies and science. Several schools have also gone one step further by developing additional dedicated environmental education modules.

Students are encouraged to participate in “Learning Journeys” to visit installations such as incineration plants, Semakau landfill, meteorological stations, NEWater plants and Marina Barrage, to better understand what it takes to keep Singapore clean and green.

Students also participate in “Community Involvement Programme” (CIP) activities, such as beach clean-up and recycling outreach or anti-littering activities, which involve and benefit the community.

## Non-formal Education

The National Environment Agency (NEA) has developed programmes to help students learn about environmental sustainability outside of classrooms. This is done through school green clubs, competitions and project works. Capacity building programmes have been

organised to encourage and train teachers and students to develop and implement their own environmental initiatives.

Under NEA, a network of Environmental Education Advisors (EEA) has been established within schools to act as a key point of contact and to promote better communication between teachers and NEA. More than 2,000 students of “Environment Champions (EC)” are groomed to act as role models or “advocates” to assist their teachers in implementing school-wide and community initiatives. In addition, NEA trains youths to conceptualise and implement projects for the community through the Youth Environment Envoy (YEE) programme. To date, more than 450 youths have been trained as YEEs.

## Moving Forward

Schools will play an even bigger role in promoting environmental education as follows:

- MOE will review and update the curriculum of environment-related subjects to generate more academic interest in, and shape future careers relating to, sustainable development, e.g., in clean energy and water technology
- The NEA will actively engage the school leadership to develop more environmental education programmes and disseminate best practices on environmental education among the local network of schools

## Recognition Platforms

Various platforms and awards are in place to recognise the contributions of education institutions towards environmental education, namely:

- *President's Award for the Environment*

The President's Award for the Environment is the highest environmental accolade for individuals, organisations and companies that have made significant contributions towards environmental and water resource sustainability in Singapore. It recognises and honours the sustained environment- and water-related contributions by environmental champions from the People, Public and Private (3P) sectors.

More information about the President's Award for the Environment is available at:

<http://app.mewr.gov.sg/web/Contents/ContentsPAE.aspx?ContId=372>

- *Ministry of Education Centre of Excellence for Environmental Education*

The Ministry of Education Centre of Excellence (COE) Programme facilitates schools to develop their own specialisations in various areas. An example of this is in environment education. Schools designated as COEs would have a proven track record of developing their niche over the years. The recognition and additional funding allow COE schools to excel in their chosen area of specialisations and to develop a strong supporting programme. Such COEs are also expected to reach out to the other schools in their cluster or zone.

- *Ministry of Education Programme for School-based Excellence and Niche Programme Status in Environmental Education*

The Programme for School-Based excellence and Niche Programmes were introduced to help schools to develop their strengths and niche areas. The initiative aims to encourage the schools to offer a diverse range of programmes to provide students with more opportunities to grow in different areas of excellence and enrich their educational experience. Through their niche programmes, schools also develop in their students various skills such as teamwork, communication and creativity.

More information about the Programme for School-Based Excellence and Niche Programmes can be found at:

<http://www.moe.gov.sg/media/press/2012/04/190-schools-now-offer-niches-o.php>

- *EcoFriend Award*

There are many environmentally-proactive people in Singapore who have made contributions to the environment, each in their own ways. From all sectors of the community - school teachers, students, youth and volunteers in non-government, private, people as well as public sector organisations. The NEA has initiated the EcoFriend Awards to recognize their efforts and achievements, as well as encourage them to continue and expand their efforts in caring for the environment.

More information about the EcoFriend Awards is available at:

[http://app2.nea.gov.sg/ecofriend\\_awards.aspx](http://app2.nea.gov.sg/ecofriend_awards.aspx)

- *Watermark Award*

The Watermark Award was introduced in 2007 to recognise individuals and organisations for their outstanding contributions and commitment to protect and raise awareness of Singapore's precious water resources. The aim is to inspire and encourage Singaporeans to take ownership of our water resources and contribute towards Singapore's water sustainability.

For more information about the Watermark Award, please refer to:

<http://www.pub.gov.sg/events/Awards%20And%20Incentives/Pages/WatermarkAward.aspx>

- *Singapore Environment Council Schools' Green Audit Award*

The Schools' Green Audit Awards Programme is administrated by the Singapore Environment Council, and supported by the NEA.

The programme is designed as an environmental audit programme for all schools in Singapore. The aim of the programme is to enable the schools to adopt a holistic approach to environmental management and encourage continuous improvement. It addresses issues such as waste minimization, resource conservation, and greening of the school grounds amongst others.

For further information and audit guidelines, please refer to:

<http://202.150.216.211/~admin/sgaa/>

## THAILAND

Thailand has significant elements that may be construed as principles, purposes and guidelines for environmental education. These may be found in Thailand's laws, policies and important plans such as the Constitution of B.E. 2550, National Environmental Quality Promotion and Conservation Act of B.E. 2535, National Education Act of B.E. 2542, the Tenth National Economic and Social Development Plan

(2007-2011), the National Policy and Plan for the Promotion and Conservation of Environmental Quality (1997-2016) and Thailand Master Plan on Environmental Education for Sustainable Development (2008-2012).

The National Education Act of B.E. 2542 underscores the importance of a learning process that promotes environmental awareness and instill environmental ethics, while the Basic Education Curricular of B.E. 2544 specify Environmental Education for Sustainable Development (EESD) contents and standards in various field of education, particularly science, social studies, religion and culture, health and physical education. The Act also emphasises that teachers have a responsibility to integrate environmental education into the instruction of various subjects or organise a multidisciplinary learning.

## VIET NAM

In recognition of the importance of sustainable development and in accordance with the Rio Declaration on Environment and Development (1992), the Johannesburg Declaration on Sustainable Development and the Plan of Implementation (2002), the Government of Viet Nam promulgated ‘Strategic Orientation for Sustainable Development in Viet Nam’ (Viet Nam Agenda 21) in 2004. This national framework strategy on sustainable development identifies the enhancement of education quality, public awareness and



professionalism as a priority area of national sustainable development efforts. The Viet Nam Agenda 21 marked a major political commitment to sustainability that explicitly included education as an integral aspect of the Strategy.

Shortly thereafter, in 2005, the Government of Vietnam established the National Council on Sustainable Development (NCSD) in order to assist political leaders with the complexities of guiding the country down the path towards sustainability. The intention of creating a high-level, multi-sectoral communication and implementation channel was proven more difficult than expected, thereby prompting the restructuring of the Council in 2009. This restructuring has provided an excellent opportunity to promote Education for Sustainable Development (ESD) nationally.

The development of a new Education Strategy, up to 2020, is currently underway thereby providing a window of opportunity to integrate ESD into the formal education system. Viet Nam's education reforms have increasingly aligned national curricula with the vision and goals of sustainable development.

Recognising the importance of Environmental Education in environmental protection cause, the Vietnamese Communist Party and Government have promulgated policies and programmes towards

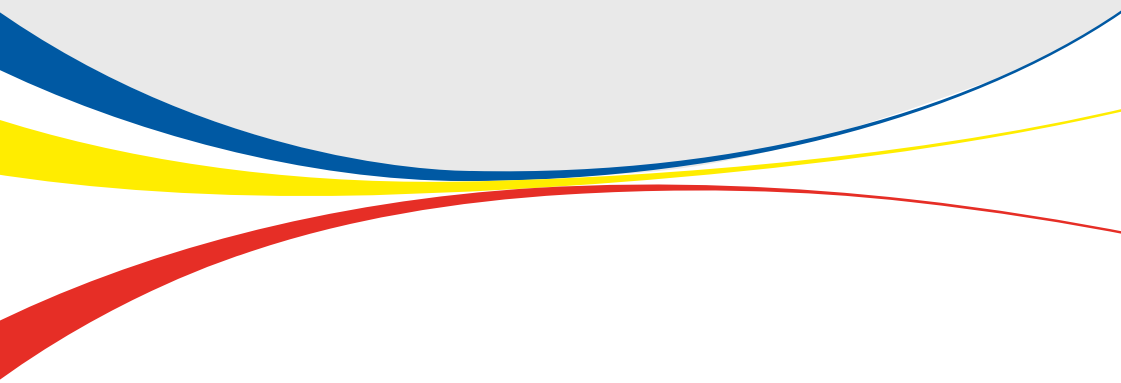
several aspects of environmental protection and has made significant achievements as follows:

- Resolution No. 41-NQ/TW on environmental protection during the period of accelerated industrialization-modernization of the country dated November 15, 2004 issued by the Central Committee of Vietnamese Communist Party
- Directive No. 29-CT/TW on further promotion for implementation Resolution No. 41-NQ/TW dated January 01, 2009 issued by the Secretariat of Vietnamese Party
- Decision No. 256/2003/QD-TTg on Strategic Environmental Protection up to 2010 and orientations towards 2020 dated December 02, 2003 issued by the Prime Minister
- Decision No.1363/QD-TTg on Inclusion of environmental conservation into curricula of national education dated December 17, 2001 issued by the Prime Minister



5

ENVIRONMENTAL EDUCATION CURRICULA





## 5

## ENVIRONMENTAL EDUCATION CURRICULA

## BRUNEI DARUSSALAM

Environmental Education (EE) has not been taught as a single subject in Brunei Darussalam education system, but issues related to the environment have already been integrated the formal curriculum in various subjects offered at primary and secondary schools. Examples of topics studied in social studies and science are: (1) Our Resources; (2) Global Warming; (3) Pollution; (4) Deforestation; (5) Personal Health; and (6) Conservation of Water.

In addition, numerous initiatives to raise awareness on environment have also been conducted by schools as their co-curricula activities. Such initiatives include the formation of clubs like Environmental club, Energy club, Green club, Nature club, Recycling club and Forestry club; conducting 3R activities, tree plantings and cleaning campaigns. It has been an encouraging observation to note that the schools immediate communities also participate in such initiatives including parent-teacher associations (PTAs).

## CAMBODIA

Environmental education (EE) has permeated the formal education sector at the primary, secondary and tertiary levels, including formal monk education. EE for primary school is not taught as a standalone subject, but integrated into existing subjects such as literature, mathematics, social studies, storytelling, etc.

Nevertheless, EE for secondary school levels (lower secondary and upper secondary schools) have been taught as standalone subject, where a textbook on “Earth Science and Biology” is used at lower secondary school and a textbook on “Earth Science” is used at upper secondary school level. Major environmental subjects for secondary school level are: (1) General environmental concept; (2) Natural resources; (3) Environmental pollution; (4) Biodiversity; (5) Climate Change; and (6) Water resources, etc.

Moreover, the implementation of “Life Skills” programme and “Eco-Club” programme has been conducted by schools as their co-curricular activities. Such activities involve tree plantings, classrooms and schools cleanup, cleanup campaign for community, living in harmony with nature, waste management (composting at rural schools and recycling at urban schools), and camping.

## INDONESIA

Based on Republic of Indonesia's Minister of National Education's Decree No.23 Year 2006 regarding the Standard of Graduate Competence, graduate students of elementary and secondary schools should have competence in environment. Accordingly, some subjects provide environment materials/content, such as geography, civic, science, etc. However, with the existing materials, there is the tendency to develop and explore more cognitive aspect of students' environment skills, instead of affective and psycho-motoric aspects.

National curriculum provides flexibility to infuse environmental issues to any subjects as well as opportunities for interdisciplinary and holistic learning or to include local content in a single subject dedicated for environmental education environment. Schools with environmental awareness take this flexibility as an opportunity to provide more knowledge on EE to the students, either by integrating EE in all subjects, or by including local content in a single subject dedicated for EE.

The increasing development of management-based schools where schools have the flexibility to manage the schools also provides a chance for EE development, especially if the schools have EE as one of their priorities through the ever expanding Adiwiyata school (school with environmental awareness) programme. Many schools view the



Adiwiyata programme as an attractive school development program with multiple benefits.

Many Adiwiyata schools have shown their strong motivation in EE and become a model of EE implementation in school level. Many have also succeeded in facilitating students to observe the link between environment, economic and social through their teaching and learning process, for example, producing compost or handicrafts from used materials or nursery plants for sale, or teach homeless people to produce compost, etc.

The growing number of Adiwiyata schools also leads to the issues of available appropriate EE materials or resources and professional development/training on EE for teachers and government officers who are involved in education.

Furthermore, many non-Adiwiyata schools have also conducted numerous initiatives to raise people's awareness on environmental issues through co-curricular clubs such as mangrove planting clubs, environmental clubs, energy clubs, or green clubs. They have also conducted co-curricular activities such as 3R activities, tree planting, waste police patrol and cleaning campaigns.

## LAO PDR

Since 1994, many areas of environmental studies have been integrated into the curriculum for formal and non-formal education. It can be seen in different books such as the “World Around Us” series for primary school, and integration of environment concepts in natural science and social science for lower secondary schools.

For upper secondary school, environment studies are included in geography, biology and population studies. In addition, there are supplementary reading books that have environment themes in their contexts. For example, population studies, education for ethnic girls, health promotion campaign in school and education for dealing with natural disasters, etc.

There are also a number of environment subjects taught in the different faculties at National University of Laos such as Faculty of Environment, Faculty of Architecture and Engineering, Faculty of Social Science, Faculty of Forestry, etc.

## MALAYSIA

Environmental Education (EE) has been introduced into the Malaysian School Curriculum since 1992, following the Stockholm Convention on

Human Ecology in 1972, the Langkawi Declaration in 1989 and the Earth Summit in Rio de Janeiro in 1992.

EE is not taught as a single subject but elements related to the environment are integrated into the formal curriculum at pre-school, primary and secondary school levels and through co-curricular activities. Environmental topics integrated at the pre-school, primary and secondary school levels curriculum are as follows:

- God is the Creator of the Universe and All Living Things
- Earth and the Universe
- Non-Living Things and Natural Resources
- Living Things and Their Environment
- Interaction between Man, Animals and Plants
- Environmental Management

### Implementation Strategy

The Ministry of Education through the Curriculum Development Centre (CDC) has adopted the following strategies;

- (i) EE is integrated into the school curriculum
- (ii) Advocating of spiritual, moral and student-centred approaches in the teaching and learning of EE using EE learning stations that can easily be set up. Schools are encouraged to set up EE learning stations in the school compound and also in the surrounding areas. These stations are set up for the purpose of practical work and hands-on activities. For example, at the Station on Plants, students would be able to compare and

contrast leaf shapes and bark textures for identification, etc. Examples of the learning stations that can easily be set up in the school compound are:

- Station on Various types of Pollution
  - Station on Plants
  - Stations on Animals
  - Station on the Uses of Various Types of energy
  - Station on the Recycling of Waste Materials
- (iii) The teaching and learning methods are student-centred, fun and interesting and these include practical work, self-discovery, experiments, projects, study tours, games, demonstrations, discussions, etc;
- (iv) Evaluation and monitoring to ensure that environmental programmes are carried out in schools and to gauge the success of the programmes;
- (v) Preparation of EE materials to be used in pre-school, primary and secondary school such as:
- Teacher's Guidebooks on the Infusion of Environmental Education Elements in the Pre-school, Primary and the Secondary School curriculum
  - Marine Education Kit (in collaboration with Department of Fisheries)

- Greening of School (in collaboration with World Wide Fund for Nature Malaysia)
  - Translated version of Mobius Curriculum: Understanding the Waste cycle (in collaboration with United Motor Works Malaysia)
- (vi) EE is a compulsory subject for trainees in teachers-training colleges;
- (vii) “Environment” is one of the elements in the humanities pillar emphasised in the Malaysian School Curriculum

## MYANMAR

Clearly oriented curricula regarding environmental education are yet to be prescribed. The curriculum linking processes are actively practiced. Existing curricula were complemented with environmental senses and knowledge. Dynamic and collaborative contribution of parents-teachers associations and school board of trustees are reflected in school environmental activities.

Co-curricular and extra-curricular activities are well encouraged that oratory contests such as debates and impromptu talks were timely organized by school authorities and communities. Union government organised essay contests at the state level, and all primary, secondary and higher education institutions are eligible to take part in the contests. Seasonal environmental activities such as tree planting are conducted annually.

In higher education sector, a number of subjects are taught in different academic departments at University of Yangon and University of Mandalay. Both master and doctoral degrees are conferred in respective universities. University staff members related to environmental disciplines actively participate in environmental impact assessment (EIA) processes.

## PHILIPPINES

### Initiatives from the Department of Education (DepEd)

The Department of Education, particularly through its Bureaus of Elementary Education, Secondary Education, and Alternative Learning Systems, continues to play a lead role in ensuring integration of protection/conservation of the environment in the school curricula, particularly on the advocacies for climate change adaptation, war on waste, tree planting, cleanliness campaign and overall environmental care and protection.

Various DepEd memoranda and orders as follows have also been issued: “Pledge to Philippine Flag”, which includes a portion on care for the environment; DepEd Memorandum No. 234, Series of 2008, directing the planting of horse radish in schools, DepEd Memorandum No. 2, Series of 2009, disseminating Republic Act (R.A.) No. 9512 (National Environmental Awareness and Education Act of 2008); DepEd Memorandum No. 81, Series of 2009, disseminating the National Search for Sustainable and Eco-friendly Schools; DepEd

Order No. 72, Series of 2003: Establishment of the Youth for Environment in Schools Organisation; DepEd Memorandum No. 480, Series of 2010: 2011 National Search for Sustainable and Eco-Friendly Schools; DepEd Order No. 52, Series of 2011: Strengthening Environmental Education in Public and Private Schools; DepEd Order No. 93, Series of 2011: Mandated Programs, Projects and Activities of the Youth for Environment in Schools Organisation; and DepEd Advisory No. 154, Series of 2012: 2013 National Search for Sustainable and Eco-Friendly Schools.

Further, DepEd enhanced curricula with environmental concepts for the following learning areas:

### *Elementary Education*

- Science and Health (Grade II)
- Civics and Culture (Grades I to III)
- Geography, History and Civics (Grades IV to VI)
- Values Education (Grades I to VI)
- Technology and Livelihood Education (Grades IV to VI)

### *Secondary Education*

- Science
- Social Studies
- Values Education
- Technology and Livelihood Education
- Music, Arts, Physical Education and Health

Moreover, Earth and Environmental Science is taught as a separate subject in special science high schools.

### *Alternative Learning System*

- Communication Skills
- Problem Solving and Critical Thinking (scientific literacy and numeracy)
- Sustainable Use of Resources and Productivity
- Development of Self and a Sense of Community
- Expanding One's World Vision

### **Initiatives from the Technical Education Skills and Development Authority (TESDA)**

The TESDA, through its few selected schools of arts and trades and provincial training centers, has produced the following: video on ozone science for refrigeration and air-conditioning sectors; module on repair and retrofitting air conditioning and refrigeration, and recovering and recycling freon in these same sectors; powerpoint slides on basic occupational safety and health; composting kit; module on fabrication of shredder for composting; poster on energy conservation and good housekeeping. However, all of these materials would generally be in single or very few copies.



## Initiatives from the Commission on Higher Education (CHED)

Pursuant to R.A. 9512, the CHED enjoined all higher education institutions (HEIs) to integrate environmental education in the curriculum, particularly the Civic Welfare and Training Service component of the National Service Training Program (CWTS-NSTP).

Pursuant to Executive Order No. 774, CHED spearheaded the conduct of an inventory of the flora and fauna in the terrestrial and marine ecosystems in the country, mobilising its Zonal Research Centers and Program Cluster Implementers to facilitate the conduct of the said inventory. The same were used to establish the Biodiversity Database.

In compliance with the requirement of the New Revised NSTP implementing rules and regulations dated November 13, 2009, CHED, the Department of National Defense and TESDA issued The Minimum Standards for the NSTP Common and Specific Modules. The minimum standard for the common module (for all 3 components of NSTP – CWTS, Literacy Training Service and Reserved Officer Training Course) includes Disaster Risk Reduction and Management Awareness, Environmental Protection and other National Security Concerns such as Peace Education.

The revised undergraduate Teacher Education curriculum (CHED Memorandum Order No. 30, Series of 2004) prescribes special topics courses including Environmental Education. These special topics are

in addition to General Education courses, and specialisation/content courses that are entry points for education for sustainable development (e.g., social studies, values education, biological sciences).

### **Initiatives from the Department of Environment and Natural Resources (DENR)**

The DENR is synchronised in its nationwide conduct of several environmental events year-round, beginning from World Wetlands Day (2 February), World Forest Day (21 March), World Water Day (22 March) and Philippine Water Week (third week of March), International Earth Day (22 April), Philippine Earth Month (April), International Day for Biological Diversity (22 May), National Ocean Month (May), Philippine Eagle Week (4-10 June), World Environment Day (5 June), Arbor Day (25 June), Philippine Environment Month (June), National Clean Up Month, and National Ozone Protection (September), International Ozone Day (16 September), International Coastal Clean Up Weekend (third weekend of September), Tamaraw Month (October), National Clean Air Month, and National Environmental Awareness Month (November), Global Warming and Climate Change Consciousness Week (19-25 November).

Several activities to commemorate the above-cited events ranged from civic parades (Walk for the Environment), “Less Plastic-Less Garbage” programmes, Free and No-Apprehension Motor Vehicle Emission Testing, Tune Up to Clean Up the Air, Bike for Clean Air,

“Muffler Watch”, Free Mobile Air Conditioning Inspection, Recyclables’ Collection Event, Environmental Caravan, Tree Planting, Environmental Exhibits in Malls and other public places, Environmental Lectures/Conferences/Workshops, Film showings, Environmental Kids’ Storytelling, Kids’ Fair, Poster-making, Painting/Essay Writing Contests, Youth Camps, launching of the Philippine Youth Environment Network, Coastal and River Clean Up/Adopt-an-Estero programmes, “Water Educational Field Trip”, Project Water Education for Teachers, Launch of Recognition Awards for Eco-friendly Government Offices at the National Level, Environmental Quiz Bee, Distribution of Environmental Education Materials, Fora, Radio-Television guestings, among others.

The DENR, in partnership with the DepEd, the CHED, and Smart Communications, Inc., recognised that “the school system is a vital part of our basic learning system and a powerful vehicle for change.” As such, in 2009 and 2011, they pursued the National Search for Sustainable and Eco-friendly Schools, which is going on also for 2013.

Sustainable and Eco-friendly Schools may be described as environmentally friendly schools that have initiated and integrated in their instruction, research, extension and/or administration, programmes which are environment-related. The promotion of this programme for the establishment and/or strengthening of sustainable and eco-friendly schools in the country had been enshrined as a priority in the United Nations Decade of Education for Sustainable

Development (2005-2014); the ASEAN Environmental Education Action Plan (2008-2012) and likewise in the Road Map for the Implementation of Republic Act No. 9512 (National Environmental Awareness and Education Act of 2008) under the National Environmental Education Action Plan (2009-2014).

### **Initiatives from the Department of Science and Technology (DOST)**

The Science Education Institute of the DOST, which is mainly involved in science and mathematics education developed a computer-aided instructional material which features simulations, animated graphics and images of selected lessons in elementary science (Grades 3-6) and mathematics (Grades 1-6) that include some environment-related topics. Through the different simulation lessons, the students experience something closely related to real life. They involve the learner in a vicarious experience of events or processes, thus engaging the pupils to different fascinating, and virtually realistic opportunity to learn about scientific phenomena – matter, energy, environment, reproduction, photosynthesis, interactions and relationship between living and non-living things.

## SINGAPORE

The Ministry of the Environment and Water Resources (MEWR), the National Environment Agency (NEA) and PUB, the National Water Agency (NWA) have worked closely with the Ministry of Education to incorporate environmental education into the formal curriculum at primary and secondary school levels. Presently, environmental topics are concentrated mainly in Science and the Humanities subjects, as well as languages.

Apart from the formal academic curriculum, environmental education has also been weaved into other aspects of formal education, such as:

- Learning Journeys Programme –Where students visit key installations such as the waste-to-energy plants, Semakau Landfill, etc., to understand the operations and infrastructure that helps keep Singapore clean
- Community Involvement Programme – Students participate in NEA’s Seashore Life Programme and the Recycling Outreach programme which involve and benefit the community

Schools may increase the environmental education content of the formal syllabi and develop their own customised environmental education syllabus. Students are also encouraged to work on environment programmes and projects through their project work that

forms part of the curriculum, as well as school environment clubs that are co-curricular activities to complement the formal curriculum.

### Capacity Building and Resources

The NEA and PUB also recognise the importance of building the capacity of students and teachers, to groom them to be catalysts for change in the schools.

At the primary and secondary school levels, the Environment Champions (Schools) Programme equips students with the relevant knowledge and skills to spearhead and implement environment programmes for their schools. It complements the Environmental Education Advisors programme for teachers, who guide and advise students on their projects.

### Key Platforms

The annual Youth for the Environment Day (YED), launched in 2011, is a key platform for Singapore youths to renew their commitment to care for the environment. It is held in conjunction with Earth Day on 22 April each year. Schools observe this day by organising environment-related activities to promote energy efficiency, recycling, good public health practices, nature appreciation and a litter-free environment.

NEA also organises the nationwide Clean and Green Singapore Schools' Carnival, an annual platform for schools and their corporate partners to showcase their joint environmental projects and achievements for the year. Environment themed competitions are organised in conjunction with the event, as an informal way for students to learn about the environment.

## THAILAND

The National Education Act of B.E. 2542 underscores the importance of a learning process that promote environmental awareness and instill environmental ethics, while the Basic Education Curricular of B.E. 2544 specify EESD contents and standards in various field of education, particularly science, social studies, religion and culture, health and physical education. Teachers have a responsibility to integrate EESD in the instruction of various subjects or organize a multi-disciplinary learning. The Basic Education Core Curriculum covers eight (8) learning areas and learner development activities:

### Learning Areas

Learning areas comprise bodies of knowledge, skills or learning processes and desirable characteristics, attainment of which is required for all basic education learners. The contents are divided into eight learning areas:

- Thai Language

- Mathematics
- Science
- Social Studies, Religion and Culture
- Health and Physical Education
- Arts
- Occupations and Technology
- Foreign Languages

EE elements already exist in some courses of those learning areas, e.g.:

- *Life and the Environment*
  - local environment; relationship between the environment and living things; relationship between living things in the eco-system
  - management of natural resources and local environment on a sustainable basis
- *Economics*
  - principles of Sufficiency Economy for leading a balanced life

### Learner Development Activities

Learner Development Activities are divided into three types as follows:

- *Counselling Activities.* These activities are aimed at encouraging and developing learners to know themselves, know how to protect the environment, be able to make decisions, solve problems, set



goals and make plans in regard to their education and future careers and adapt themselves appropriately

- *Student Activities.* These activities are aimed at instilling self-discipline, ability to lead and follow teamwork, responsibility, problem-solving ability, appropriate decision-making, rationality, helpfulness and generosity, care, concern and unity. Student activities include:
  - Boy Scout organisation, Girl Guides, Junior Red Cross, social service and territorial defence
  - Activities of various clubs and societies
- *Activities for Social and Public Interest.* These activities are aimed at encouraging learners to devote themselves and provide voluntary services for the benefit of society, their communities and local areas in accord with their interests.

## VIET NAM

Viet Nam's formal education system includes primary and secondary schools, Technical and Vocational Education and Training (TVET) and Higher Education.

Vietnam has incorporated EE at all levels of formal education by promoting research on EE/ESD issues and preparing documents and curricula on EE/ESD at all levels:

### *Kindergarten*

Three curricula and ten materials have been developed for 3 target groups: kindergarten, preschool teachers, and parents with some concrete goals relating to life-skills of children of 4-5 years old, i.e., personal hygiene, environmental hygiene, hygiene in eating and drinking; know-how to avoid some common diseases; acknowledgement of insecurity and dangerous places and know-how to avoid these places; and understanding to some extent the environment around and nearby society.

### *General Schools*

Three curricula have been developed for general school levels by the orientations of innovation to meet the need of comprehensive education, ensuring harmonious development of personality and professional orientation, forming and developing necessary capability for serving national industrialisation, modernisation and international integration

- *Primary Schools*

Importance is given to community life-skills, adaptable to daily changes in modern society such as communication, negotiation, leadership, cooperation, creativeness, problem solving, and decision-making. Other aspects have been taught in primary schools, for example, personal and environmental hygiene; disease prevention; health and nutrition education; security at home, in schools and public places; and how to combat stress.

Developed 7 materials with integrated environment protection education content in primary school subjects: History, Geography, Sciences, Nature and Society, Vietnamese, Arts, Ethics and Extra activities

- *Lower Secondary Schools*

Through development of objectives, curricula and methodology, importance is given to developing lifelong learning ability by teaching students with the orientation: learning to know, learning to do, learning to be, learning to live together. We developed 7 materials on environmental protection which are integrated into Physics, Biology, History, Literature, Geography, Technology, and Civic Education

- *Upper Secondary Schools*

Curricula in upper secondary schools were revised in such a way that objectives and contents of education will help in training human resources for national industrialisation and modernisation. Together with the development of methodology, some contents of ESD-related issues such as environmental protection, gender, and transportation security have been integrated into curricula and textbooks at all levels in fields such as Physics, Chemistry, Biology, Geography, Literature, Technology and Civic education

### *Universities, Colleges, Vocational Secondary Schools*

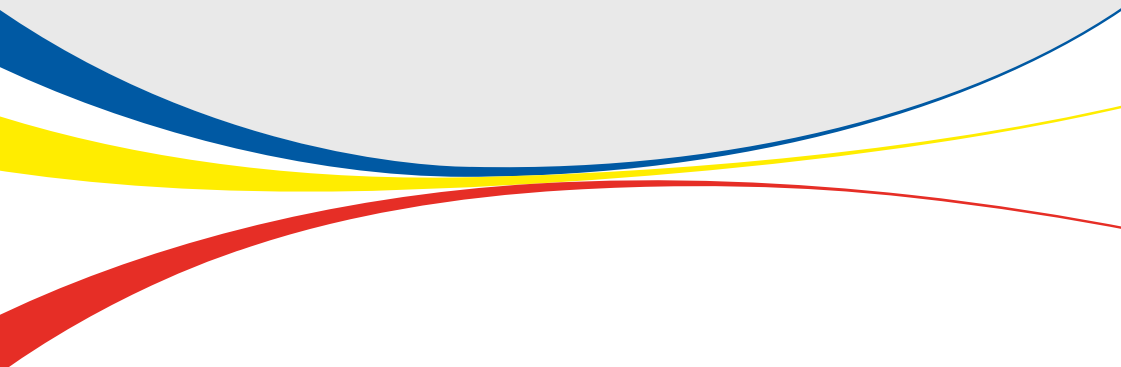
The following environment-related contents have been taught separately or inclusively in other subjects:

- Two curricula on environmental technology in university and college education level
- Seven curricula on environmental education
- Thirty materials on environmental protection for Construction, Mining and Geology, Transport, Agriculture, Forestry and Fishery, Pedagogy, Social Science and Humanity
- Seven materials on environmental protection for students in pedagogic fields



# 6

## ECO-SCHOOLS PROGRAMMES / ACTIVITIES





## 6

## ECO-SCHOOLS PROGRAMMES / ACTIVITIES

## EXISTING ECO-SCHOOLS ACTIVITIES

Eco-schools in AMS have carried out a variety of eco-schools activities to promote environmental protection, *inter alia*:

**Greening**

- Fruit tree planting
- Greening and keeping learning gardens
- Planting native plants
- Organic farming
- Mangroves planting

**Energy**

- Create good circulation and natural lighting in schools to reduce electricity use
- Building retrofits such as motion detectors, energy efficient light bulbs



### *Water Conservation*

- Campaign for school community to save water
- Students bring one bottle of used water for plant watering in school
- Rain harvesting
- Plastic bottles in toilet cistern to reduce water use

### *Resource Conservation*

- Waste management, including composting, making biogas, pesticide and other agricultural products
- Reduce, Reuse, Recycle, Repair, Rethink (5Rs) all materials, such as recycled used furniture

### *Cleanliness and Health*

- Banning snacks/food with artificial flavour/colour (e.g., Monosodium glutamat (MSG)), plastic packaging
- Encouraging/asking students to bring their own water bottle and food container to reduce waste
- Mosquito eradication programmes
- Banning of non-polystyrene on school grounds
- Community biking initiatives to reduce pollution
- Sanitation, including monitoring cleanliness of school bathrooms and use of restroom slippers made from reusable materials

### *Rehabilitation*

- Community and service learning, such as mudballs to filter and clean up rivers, community trash pickup, bake sales using school grown products, and anti-litter campaigns.
- Presence of partners and partnerships with stakeholders in the community
- Anti-litter campaigns

### *Environmental Learning / Outreach / Awareness*

- EE learning stations throughout school campus
- Celebrating global events, such as earth day, earth hour and environmental hour
- Seminars and workshops for teacher and student training in EE
- Presence of a vibrant eco-organisation on school grounds, such as associations, squads, clubs, youth clubs and other organisations
- Mass media and public outreach campaigns on EE, such as radio programming, magazines, brochures, etc.
- Manuals for teachers and students on EE, such as environmental text books
- Televised environmental youth debate programme
- Training curricula developers in EE
- Environmental friendly games
- School sponsored outdoor activities, such nature walks, hikes, camping, etc.

- Marine education, such as sustainable practices in fisheries and coral management
- Establishment of school hubs that excel and coordinate EE networks

### *Innovation, Entrepreneurship and Incentives*

- Student awards and badges for good performance
- Establishing and managing school fishery activities and gardening
- Environmental Art contests such as fashion show using recycled materials, photo competition, poster contests, etc.
- School rating system on performance on EE indicators



## ABOUT OUR KEY COLLABORATOR – THE HANNS SEIDEL FOUNDATION

Based in Munich, Germany, the **Hanns Seidel Foundation (HSF)** is a state-financed, non-profit political foundation committed to promoting the values of humanism through educational activities with more than 35 years of experience in civic education in Germany and in international cooperation around the world. HSF is represented in more than 65 countries worldwide providing specific country-based projects.

The HSF office in Indonesia was founded in 1993 with programmes developed and implemented jointly with local, national and international partners. One of its pillars is to focus on the promotion of Environmental Education and Protection through capacity building training programmes such as trainings for decision makers and related stakeholders, public awareness programmes, knowledge transfer as well as institution buildings.

HSF aims at helping people to help themselves, and to support economically and ecologically sustainable development. This includes improving and utilising human capacities, taking into account the

social, political, cultural and economic framework of the country in promoting a democratic community which is able to express their rights for living in a feasible and appropriate environment.

## **HSF in ASEAN**

Through partnership with the ASEAN Secretariat, HSF has assisted ASEAN in implementing many regional environmental initiatives, among which are the publication of the ASEAN State of the Environment Reports, the ASEAN Environmental Education Action Plans, and the ASEAN Environmentally Sustainable Development Film Festival. All these activities were implemented in partnership with the United Nations Environment Programme Regional Office in Bangkok.

## **HSF contribution to the ASEAN Eco-schools Programme**

Cooperation between HSF and ASEAN on the promotion of eco-schools started in 2011, when HSF in collaboration with the ASEAN-US Technical Assistance and Training Facility provided support to the Workshop on ASEAN Eco-schools Programme which was held in Kota Kinabalu, Malaysia, on 26-28 June 2011. The Workshop brought together government officials with environment and education perspectives to exchange ideas and views on environmental education policies and eco-schools programmes in AMS which formed the basis of the ASEAN Guidelines on Eco-schools. HSF also provides support to the publication of the Guidelines.



## ABOUT OUR KEY COLLABORATOR – THE ASEAN-US TECHNICAL ASSISTANCE AND TRAINING FACILITY

The U.S. Government-funded **ASEAN-U.S. Technical Assistance and Training Facility** (TATF) is a collaborative, demand-driven, and flexible assistance programme that provides comprehensive support for ASEAN to become a fully integrated community by 2015. Housed in the ASEAN Secretariat in Jakarta, Indonesia, ASEAN-U.S. TATF's strategy is aligned with ASEAN's Roadmap for an ASEAN Community 2009-2015 that incorporates blueprints for Political-Security, Economic, and Socio-Cultural Communities with substantial activities being carried out to support education and environment initiatives since 2009.

The development of an ASEAN eco-schools programme offered an opportunity to maximize collaboration between education and environment-focused activities, and between donors. ASEAN-U.S. TATF was pleased to be able to provide joint-support with the Hanns Seidel Foundation for the Workshop on ASEAN Eco-schools Programme in Kota Kinabalu, Malaysia on 26-28 June 2011. During the workshop, environment and education government officials

exchanged ideas and perspectives on environmental education policies and eco-schools programmes in ASEAN Member States, which in turn led to the founding of the ASEAN Guidelines on Eco-schools.

The ASEAN-U.S. TATF strongly supports the finalization of the ASEAN Guidelines on Eco-schools to provide children with crucial early exposure to eco-friendly practices and values in their schools.



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