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PROCEEDINGS:

Southeast Asia

Reporting and Capacity Building Workshop

on

**MONITORING & EVALUATION OF
EDUCATION FOR SUSTAINABLE DEVELOPMENT**



23rd-24th April 2012

Bangkok, Thailand

**Davis Hotel – Oval Room, Corner Wing
88 Sukhumvit 24, Klongteov**

Organised by UNU-IAS, UNESCO and IGES

IGES Conference Report-GC-2012-01

Proceedings: Southeast Asia Reporting and Capacity Building Workshop on Monitoring and Evaluation of Education for Sustainable Development

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Acknowledgements

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IGES is also highly appreciative of the continued support from UNESCO – Asia-Pacific Regional Bureau for this project. As the lead implementing agency of the DESD, UNESCO's support and advice is very beneficial to the quality of research we are able to conduct.

The workshop managers and organisers would also like to kindly thank all of the workshop participants for their valuable contributions to the research project and for their engagement in the workshop activities.

Disclaimer

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What knowledge would support governments in strengthening ESD implementation?

What should M&E of ESD identify to support effective government interventions?

Chaired by: Mario Tabucanon, UNU-IAS

Panellists:

Mahesh Pradhan, UNEP

Masahisa Sato, Tokyo City University

Tinsiri Siribhodi, SEAMEO

Athapol Anunthavorasakul, Chulalongkorn University

Katie Vanhala, UNESCO

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Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development

Organised by UNU-IAS, UNESCO and IGES
23-24 April 2012 – Bangkok, Thailand

Workshop Concept Note

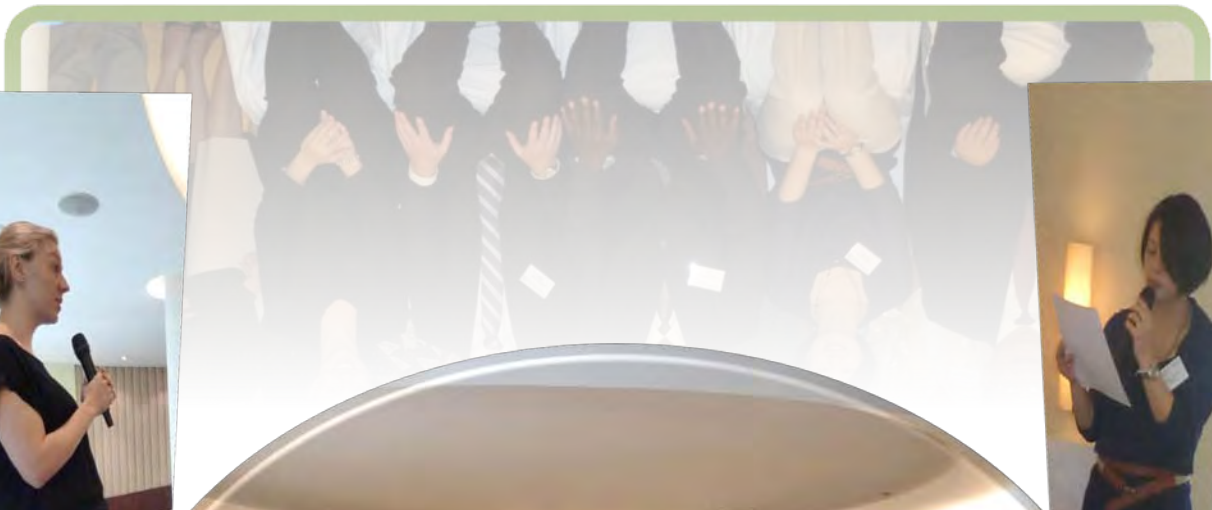
The United Nations University Institute of Advanced Studies (UNU-IAS) and the Institute for Global Environmental Strategies (IGES) are undertaking a collaborative research project in close cooperation with UNESCO Asia and Pacific Regional Bureau for Education in Bangkok. This project focuses on the Monitoring and Evaluation of Education for Sustainable Development (ESD) and aims to establish regionally-relevant Indicators of ESD to assess the implementation during the United Nations Decade of Education for Sustainable Development (2005-2014) in countries across the Asia-Pacific region.

The current research phase of the project is based on a multi-country scoping process to identify the important areas for which indicators should be developed. This research is being conducted between December 2011 and May 2012 in two rounds, starting first with selected countries in Northeast Asia and then following a refining process moving on to selected countries in Southeast Asia. During the scoping phase, research will be conducted in a total of nine countries based on an evaluation framework that was developed during a consultation with international ESD experts. The main purpose of this research phase is to enable the movement from a wide evaluation framework towards the identification of a core set of important targets and leverage points for ESD.

During the current scoping phase, research is being conducted in two complimentary formats. First, national ESD focal points are participating in a quantitative country survey regarding the national context of ESD implementation. Second, the Regional Centres of Expertise on Education for Sustainable Development (RCEs) are providing qualitative research through case studies of their flag-ship projects for comparative analysis. The findings from these two formats will be presented during the sub-regional workshops in order to identify opportunities to strengthen capacity for ESD monitoring and evaluation.

This workshop is the culmination of the research activities in Southeast Asia and provides an important reporting opportunity for the participants from Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam including both the members representing the national focal points for this study and members of the Regional Centres of Expertise on Education for Sustainable Development to share their findings on ESD implementation in their respective countries. The workshop will be supported by ESD experts from international organisations to provide further capacity building on the monitoring and evaluation of ESD. The main objectives of the workshop are threefold:

- To report on the current implementation of ESD in each country and share valuable lessons learned from each of these processes;
- To identify common leverage points in each country's ESD system for the establishment of regional ESD indicators that are relevant to each country's individual context; and,
- To strengthen capacity for effective monitoring and evaluation of ESD and to ensure that appropriate information for improving ESD policy is identified.





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Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development

Organised by UNU-IAS, IGES & UNESCO

23-24 April 2012

Bangkok, Thailand

Venue: Davis Hotel: 88 Sukhumvit 24, Klongteov, Bangkok 10110, Thailand

WORKSHOP AGENDA

Day One: Monday, 23 April 2012			
8:00-8:30	Registration		
Opening Session 8:30-9:40	Opening Remarks	UNU-IAS: Kazuhiko Takemoto	10 min.
	Keynote Speech	UNESCO: Katie Vanhala	10 min.
	Workshop Background and Agenda	IGES: Robert J. Didham	10 min.
	Self-Introduction of Participants		40 min.
Break 9:40-10:00	Group Photo		5 min.
	Coffee Break		15 min.
RCE Presentations – Session 1 10:00-11:00	Chair: Puji Astuti, Institute for Research and Community Services, University of Gadjah Mada		
	RCE Bohol	Regucivilla A. Pobar	15 min.
	RCE Cha-am	Areeporn Sittiyapaiboon	15 min.
	RCE Greater Phnom Penh	Lalita Sriwattananon	15 min.
Q&A and Discussion		15 min.	
RCE Presentations – Session 2 11:00-12:00	Chair: Sonjai Havanod, The Sirindhorn International Environmental Park		
	RCE Penang	Asyirah Abdul Rahim	15 min.
	RCE Southern Viet Nam	Phan Thi Kim Quyen	15 min.
	RCE Yogyakarta	Bambang Hendro S	15 min.
Q&A and Discussion		15 min.	
Lunch 12:00-13:15	Lunch Venue: Hotel Davis – Gallery Cafe		1 hour, 15 min.



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Session on Effective ESD Policies and Initiatives 13:15-14:45	Session Chair: Zainal Sanusi, Malaysian Ministry of Higher Education		
	The ASEAN EE Action Plan: Its coverage of ESD and how the Government of Thailand responds to this plan	Presentation: Savitree Srisuk <i>Ministry of Natural Resources and Environment – Department of Environmental Quality and Promotion</i>	15 min.
	Q&A		5 min.
	Repositioning the Environment Pillar in the ESD Context: a UNEP strategy for assisting governments in achieving their environmental goals	Presentation: Ampai Harakunarak, <i>UNEP-ROAP</i>	15 min.
	Q&A		5 min.
	Whole-school and Green school approaches to integrating ESD	Presentation: Robert Steele <i>Sustainability Asia and AtKisson Group</i>	15 min.
	Q&A		5 min.
	Strengthening Institutional Frameworks on Education for Sustainable Consumption – A pilot project in Indonesia	Presentation: Darwina Sri Widjajanti, <i>Yayasan Pembangunan Berkelanjutan (The Indonesian Foundation for Sustainable Development)</i>	15 min.
	Q&A		5 min.
Discussion		10 min.	
Break 14:45-15:00	Coffee Break		15 min.
Capacity Building Activity 15:00-17:00	Addressing the Effectiveness of Learning Performance Presentation: Paul Ofei-Manu, <i>IGES</i>		20 min.
	Group Activity Facilitators: Mario Tabucanon, Katie Vanhala, Robert Steele, Sachiko Yasuda and Robert Didham		65 min.
	Presentation of Findings and Discussion		35 min.
Dinner Cruise & Reception Departure from hotel at 17:30 Dinner Cruise starts at 19:00	All workshop participants are invited to join us for a dinner reception and opportunity to get to better know one another as we sail along the Chao Phraya River past the city lights and temples. Venue: Dinner Boat Cruise on the Chao Phraya River. The cruise begins at 19:00 Please Note: Transportation to the Venue will depart the Hotel Davis lobby at 17:30		

Day Two: Tuesday, 24 April 2012 (revised after day one)			
Reporting from Learning Performance Capacity Building 9:00-9:45	Presentations by Working Group representatives on findings from Learning Performance capacity building activity.		25 min. (5 minutes per group)
	Discussion		20 min.
Country ESD Status Presentations 9:45-11:00	Chair: Justin Alick, UNESCO		
	Malaysia – National ESD Implementation	Rona Chandran, <i>Ministry of Education</i>	15 min.
	Philippines – National ESD Implementation	Maria Cristina A Francisco, <i>Department of Environment and Natural Resources</i>	15 min.
	Thailand – National ESD Implementation	Benjalug Namfa, <i>Office of the Basic Education Commission, Ministry of Education</i>	15 min.
	Cambodia – National ESD Implementation	Meakh Sary, <i>(in absentee) Royal Academy of Cambodia</i>	10 min.
	Indonesia – Key Points of National ESD Implementation	Darwina Sri Widjajanti, <i>Yayasan Pembangunan Berkelanjutan</i>	5 min.
	Q&A and Discussion		15 min.
Break 11:00-11:15	Coffee Break		15 min.
Capacity Assessment on M&E of ESD Status 11:15-13:00	Evaluation Framework for M&E of ESD Presentation: Robert J. Didham, <i>IGES</i>		15 min.
	Group Activity Facilitators: Mario Tabucanon, Katie Vanhala, Robert Steele, Sachiko Yasuda and Paul Ofei-Manu		55 min.
	Presentation of Findings and Discussion		35 min.
Lunch 13:00-14:00	Lunch Venue: Hotel Davis – Gallery Cafe		1 hour
Panel Discussion 14:00-15:45	Questions and Topics: <i>What knowledge would support governments in strengthening ESD implementation?</i> <i>What should M&E of ESD identify to support effective government interventions?</i>	Chair: Mario Tabucanon, UNU-IAS/AIT Panellists: Mahesh Pradhan, UNEP (<i>via Skype</i>) Katie Vanhala, UNESCO Tinsiri Siribodhi, SEAMEO Athapol Anunthavorasakul, Chulalongkorn University Masahisa Sato, Tokyo City University	50 min.
	Q&A and open discussion with workshop participants		55 min.
Closing Session 15:45-16:15	Summary of Workshop	Paul Ofei-Manu, <i>IGES</i>	15 min.
	Future Activities and Research	Sachiko Yasuda, <i>UNU-IAS</i>	10 min.
	Closing Address	Hironori Hamanaka, <i>IGES</i>	5 min.
Finale	Closing Reception/Coffee Break (& Participants' Departure as required)		Until 17:00

Panel Discussion



Presentations



Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development

International Experts

	Name	Organisation	Position
1	Ms. Katie Vanhala	UNESCO - Asia Pacific Regional Bureau	Associate Expert - ESD
2	Mr. Justin Alick	UNESCO - Asia Pacific Regional Bureau	Programme Assistant - ESD
3	Prof. Mario Tabucanon	UNU-IAS & Asia Institute of Technology	Visiting Professor & Professor
4	Ms. Sachiko Yasuda	UNU-IAS	Programme Associate- ESD
5	Dr. Robert Didham	IGES	Researcher - Education Policy Specialist
6	Dr. Paul Ofei-Manu	IGES	Associate Researcher
7	Dr. Ampai Harakunarak	UNEP - Regional Office for Asia and the Pacific	Task Manager, GEF International Waters
8	Mr. Mahesh Pradhan	UNEP - Division of Environmental Policy Implementation	Head, Environmental Education and Training Unit
9	Dr. Tinsiri Siribodhi	SEAMEO Secretariat	Deputy Director, Administration & Communication
10	Ms. Savitree Srisuk	Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment	Head of Environmental Education Section
11	Dr. Benjalug Namfa	Office of the Basic Education Commission, Ministry of Education - Thailand	Deputy Secretary General
12	Ms. Wongduan Suwansiri	Office of the Basic Education Commission, Ministry of Education - Thailand	Programme Officer
13	Ms. Natchaya Menthaisong	Office of the Basic Education Commission, Ministry of Education - Thailand	Programme Officer
14	Ms. Siripakka Dhamabus	Thai National Commission for UNESCO, Bureau of International Cooperation, Ministry of Education	Foreign Relations Officer
15	Mrs. Kanittha Hanirattisai	Thai National Commission for UNESCO, Bureau of International Cooperation, Ministry of Education	Assistant Secretary-General
16	Dr. Zainal Abidin Bin Sanusi	Higher Education Leadership, Ministry of Higher Education Malaysia	Deputy Director
17	Ms. Rona Chandran	Ministry of Education Malaysia	Assistant Director
18	Ms. Maria Cristina A. Francisco	Environmental Management Bureau, Department of Environment and Natural	Information Officer III
19	Dr. Bambang Indriyanto	Center for Policy Research, Ministry of National Education and Culture	Director
20	Prof. Sary Meakh	Institute of Humanities and Social Sciences of Royal Academy of Cambodia	Head of Education Science Department
21	Dr. Regucivilla Pobar	RCE Bohol - Bohol Island State University	Professor IV
22	Dr. Sonjai Havanod	RCE Cha-am - The Sirindhorn International Environmental Park	Deputy Managing Director
23	Ms. Areeporn Sittiyapaiboon	RCE Cha-am - The Sirindhorn International Environmental Park	International Project Coordinator
24	Dr. Lalita Sriwattananon	RCE Greater Phnom Pehn - Institute of Environment Rehabilitation and Conservation (ERECON)	Program Manager
25	Dr. Asyirah Abdul Rahim	RCE Penang - Centre for Global Sustainability Studies, Universiti Sains Malaysia	Coordinator
26	Ms. Phan Thi Kim Quyen	RCE Southern Vietnam - International University HCMC- VNU	Executive Staff
27	Prof. Dr. Bambang Hendro S.	RCE Yogyakarta - Faculty of Agriculture, Universitas Gadjah Mada	Academic Staff
28	Dr. Puji Astuti	RCE Yogyakarta - Institute for Research and Community Services, Universitas Gadjah Mada	RCE Manager
29	Prof. Athapol Anunthavorasakul	R&D center for ESD Innovations, Faculty of Education, Chulalongkorn University	Assistant Dean and Director
30	Dr. Masahisa Sato	Faculty of Environmental and Information Studies, Tokyo City University	Associate Professor
31	Mrs. Darwina Sri Widjajanti	Yayasan Pembangunan Berkelanjutan (YPB)	Executive Director
32	Mr. Robert Steele	Sustainability Asia / AtKisson Group	Director / Senior Associate

OPENING SESSION: Welcome and Keynote Remarks

Day One: 8:30-9:40

Keynote Remarks:

- 1) Kazuhiko Takemoto, United Nations University – Institute of Advanced Studies
(*in absentee – remarks made by Sachiko Yasuda*)
- 2) Katie Vanhala, UNESCO – Asia-Pacific Regional Bureau

Workshop Background and Agenda: Robert Didham, IGES

Self-Introduction of Participants

Dr. Robert Didham of IGES welcomed the participants, our honoured guests and keynote speakers to the Southeast Asia Reporting and Capacity Building Workshop on Monitoring and Evaluation of Education for Sustainable Development. He expressed his appreciation to the participants for joining this workshop and for the valuable contributions they had already made to the research process on M&E of ESD. He also explained that this workshop is one part of an ongoing research project jointly coordinated by UNU-IAS and IGES to develop regionally-relevant Indicators of ESD for monitoring and evaluation of the implementation of ESD that has occurred during the UN Decade. Finally, Dr. Didham kindly introduced the two keynote speakers of the workshop: Ms. Sachiko Yasuda presenting on behalf of Mr. Kazuhiko Takemoto, senior fellow at UNU-IAS and director of the institute's ESD team, and Ms. Katie Vanhala, associate expert and ESD team leader at UNESCO's Asia-Pacific Regional Bureau.

Ms. Sachiko Yasuda, providing remarks on behalf of Mr. Kazuhiko Takemoto, began the address by welcoming everyone and thanking them for their valuable participation in the workshop. She went on to explain that this workshop and the correlating research provide an excellent opportunity for evaluating the progress of the Decade of ESD, especially in Asia. She also highlighted that monitoring and evaluation is one of the seven key strategic objectives outlined for DESD. As the seventh of the objectives, the importance of monitoring and evaluation was reiterated as a key goal for the third phase of the decade (2012-2014) at the UNESCO World Conference on ESD held in Bonn, Germany in 2009 as a mid-term meeting of the Decade. The importance of the methods used in conducting M&E of ESD was also explained with specific attention drawn to the necessity to apply participatory processes and also both quantitative and qualitative methods of assessment to the development of appropriate M&E of ESD systems.

Ms. Katie Vanhala thanked UNU-IAS and IGES for the opportunity to participate in this workshop and for the ongoing inclusion of UNESCO in this research process. She explained UNESCO's role in promoting ESD as the lead implementation agency of the DESD. She also explained that the Asia-Pacific Regional Bureau has worked extensively with promoting M&E of ESD based on their publication "Asia-Pacific Guidelines for the Development of National ESD Indicators" and their subsequent capacity building activities. However, Ms. Vanhala also clarified that UNESCO's objective has not been to create or identify a specific set of indicators for ESD but rather to help individual countries build their capacity to develop their own monitoring and evaluation of ESD systems and to strengthen their implementation. It was further acknowledged though that these earlier efforts by UNESCO on M&E of ESD had not achieved a consistent

monitoring and reporting process on the status of individual countries in the region. Due to this fact, UNESCO is eager to both follow and support the current research being undertaken by UNU-IAS and IGES to develop regionally-relevant indicators. Finally, Ms. Vanhala highlighted that both Climate Change Education and Disaster Risk Reduction have recently been identified as the key target areas for UNESCO's work on ESD, but also that this should not be understood as a new direction for ESD. Instead, it should be viewed as an approach to better elaborate and detail how to apply important thematic topics in a way that contributes effectively to the overall teaching of ESD.

Dr. Didham of IGES then provided a brief overview and background to the workshop along with explaining the main points of the day's agenda. He explained that there are three main objectives of the workshop:

- To report on the current implementation of ESD in each country and share valuable lessons learned from each of these processes;
- To identify common leverage points in each country's ESD system for the establishment of regional ESD indicators that are relevant to each country's individual context; and,
- To strengthen capacity for effective monitoring and evaluation of ESD and to ensure that appropriate information for improving ESD policy is identified.

He also highlighted the dual approach the research was taking to provide both aspects of quantitative and qualitative assessment to the development of appropriate ESD indicators, as indicated by the two types of research inputs from the National Focal Points on system leverage points for ESD and from the Regional Centres of Expertise on ESD for investigating effective learning performance.

Dr. Didham thanked the key note speakers for their contributions, and he concluded the session by opening the floor for all participants to provide a short self-introduction.

KEY NOTE ADDRESS

Northeast Asia Reporting and Capacity Building Workshop on Monitoring and Evaluation for ESD 23-24 April 2012

By Kazuhiko Takemoto
Director UNU-IAS ESD Programme

Distinguished participants, Ladies and Gentlemen,

On behalf of the United Nations University Institute of Advance Studies (UNU-IAS), I would like to welcome you all to the Southeast Asia Reporting and Capacity Building Workshop on Monitoring and Evaluation of Education for Sustainable Development.

UNU-IAS and the Institute for Global Environmental Strategies (IGES), in close collaboration with UNESCO Asia-Pacific Regional Bureau, have been carrying out a one-year research project, which aims to establish regionally relevant indicators to assess the implementation of ESD during the UN Decade of ESD in countries across the Asia-Pacific region. This workshop is an important part of this on-going research project and this is actually the second workshop, which targets countries in Southeast Asia: Cambodia, Indonesia, Malaysia, the Philippines, Thailand and Vietnam. The first workshop was organized in Yokohama, Japan this past February, inviting representatives from Northeast Asian countries, namely China, Korea and Japan.

As you may be aware, monitoring and evaluation is one of the seven inter-linked strategies that were identified by the DESD International Implementation Scheme to advance the Decade. The value and importance of monitoring and evaluation were also highlighted at the ESD World Conference in Bonn in 2009. However, to develop benchmarks and tools for monitoring and evaluation of ESD, implementation has been a great challenge owing to the vast thematic areas that ESD covers in various contexts and the variety of stakeholders involved.

Given the diversity and sustainable development needs of the Asia-Pacific region, it is essential to employ participatory processes in assessing the implementation of the DESD through the development of regional indicators of ESD. It is also essential to use both quantitative and qualitative methods in order to effectively monitor the Decade. I am pleased to note that this workshop is based on participatory monitoring and evaluation processes and reports on findings from both quantitative and qualitative methods.

I would like to thank the national ESD focal points who contributed to the country survey. You are kindly asked to make a presentation on the national status of ESD implementation tomorrow. I would also extend my great gratitude to those who are here today to share your expertise on ESD as

panellists and session chairs. My sincere thanks also go to RCE coordinators who have kindly submitted qualitative data in the form of 'good practice' case studies that will be also shared today. This will provide a useful comparative analysis towards strengthening capacity building for ESD monitoring and evaluation in the region.

The UNU's RCE initiative needs to be viewed as an integral part of the Decade of Education for Sustainable Development. RCEs provide useful forums that bring ESD practitioners and society together in mobilising knowledge and good practice to address issues of sustainable development.

I am happy that this workshop has brought together a diverse group of experts to share ideas and perspectives on how to strengthen ESD implementation in Southeast Asia. I do hope that you will find this workshop useful to generate new partnerships, share good ESD practices and experiences, learn about monitoring and evaluation of ESD activities in the region and share challenges that you face to implement ESD in your countries or regions, as part of capacity building processes.

It is also my sincere hope that you are going to apply useful insights and recommendations from the workshop to develop ESD indicators for monitoring and evaluation of DESD implementation in your countries. In this way, you will play a key role in charting new efforts and initiatives on ESD beyond the end of the Decade in 2014.

Without being very ambitious, I expect that through the on-going collaborative research project, UNU-IAS and IGES, in collaboration with UNESCO Bangkok, will make a meaningful contribution to DESD by advancing the Global Monitoring and Evaluation agenda in the context of the Asia-Pacific region. Ultimately, the research findings will contribute directly to regional policy making processes to reorient education towards sustainable development and also the implementation of the final phase of the Global Monitoring and Evaluation of DESD.

In conclusion, I would like to extend my sincere gratitude to the UNU-IAS ESD Team and the Governance and Capacity Group at IGES, for organising this workshop and implementing the collaborative research. We are very grateful for the tremendous support from UNESCO Asia-Pacific Regional Bureau through Ms. Katie Vanhala.

I wish to gratefully acknowledge the financial support of the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) towards the implementation of the on-going collaborative research project and today's workshop.

Thank you very much for your kind attention and I hope the Workshop will be a great success.

KEY NOTE ADDRESS

Northeast Asia Reporting and Capacity Building Workshop on Monitoring and Evaluation for ESD

23-24 April 2012

By Katie Vanhala

Associate Expert, ESD Team Coordinator, UNESCO Asia Pacific Regional Bureau

Dear Participants,

It is an honour to have this opportunity to address this workshop, and I thank UNU-IAS and IGES for the ongoing inclusion of UNESCO in their research project on Monitoring and Evaluation of Education for Sustainable Development.

From the start of the Decade, there have been discussions on the value and importance of monitoring and evaluation tools for ESD. The topic of indicators is one that has eluded the international community in their quest for ESD implementation, yet finding global, regional or even national level benchmarks that can be ascribed to the vast subject areas ESD can cover in various contexts has proven to be a great challenge. UNESCO has engaged in scoping exercises, and developed policy guidance tools to support Member States in defining the scope and implementation of ESD, so as to further support its monitoring, but to date, there are still very few tangible samples of what a set of ESD indicators might entail. With that being said, UNESCO is very supportive of IGES and UNU-IAS engaging in this initial research, and will greatly welcome any advancement towards the development of contextual indicators especially in the lead up to the end of the DESD.

As an overview, much of the work being undertaken by the UNESCO Bangkok regional bureau by way of ESD involves providing technical assistance and training on a request basis, or by recommendation if there is evidence that the work will be sustained and carried forward. During member state consultations in 2010, governments highlighted that youth and climate change were the two key issues they would like UNESCO to work on, and we are currently engaging with Member States on how best to address these areas and integrate issues of ESD into their education sectors.

For the reporting process, Rio+20 is the next event for UNESCO and other organizations to reaffirm the important role education has in instilling values and principles associated with sustainable development. Case studies and other good practices have been collected to support this case, and as we enter phase III: impacts and outcomes, we are looking to further involve school networks, communities and municipal policy-makers in activities that promote ESD at the ground level, in conjunction with our policy level commitments.

Thank you for your kind attention. I would like to wish the best success for this workshop and hope that we all find it a valuable and rewarding experience.

Capacity Building Activities & Group Work



Learning Objective/Goal	Educational Achievement
Please identify a key learning objective for this element of ESD learning?	Please identify what would be a visible outcome that would demonstrate achievement of this goal or objective?
<p>Progressive Pedagogies</p> <p>1. Constructivist 2. Collaborative 3. Problem-based 4. Inquiry-based 5. Project-based 6. Experiential 7. Reflective</p>	<p>1. Critical thinking 2. Problem-solving 3. Decision-making 4. Communication 5. Collaboration 6. Creativity 7. Innovation 8. Leadership 9. Teamwork 10. Self-direction</p>
<p>Cooperative Learning Relationships</p> <p>1. Accountability 2. Responsibility 3. Interdependence 4. Positive interdependence 5. Individual accountability</p>	<p>1. Accountability 2. Responsibility 3. Interdependence 4. Positive interdependence 5. Individual accountability</p>
<p>Sustainability Competencies</p> <p>1. Knowledge 2. Skills 3. Values</p>	<p>1. Knowledge 2. Skills 3. Values</p>
<p>Framework of Understanding & World-View</p> <p>1. Integrative & Pluralistic system for Knowledge Generation and Codification</p>	<p>1. Integrative & Pluralistic system for Knowledge Generation and Codification</p>



SESSION ONE:
RCE Presentations, part 1
Day One: 10:00 – 11:00

Session Chair: Puji Astuti, Institute for Research and Community Services, University of Gadjah Mada

Presentations:

- 1) **RCE Bohol:** *Bohol Socio-Economic and Environment Awareness Education Program*
Regucivilla A. Pobar, Bohol Island State University
- 2) **RCE Cha-am:** *The Sirindhorn International Environmental Park (SIEP)*
Areeporn Sittiyanaipon, Sirindhorn International Environmental Park
- 3) **RCE Greater Phnom Penh:** *Project on Facilitating Sustainable Agriculture for Local Farmers and Enhancing Education on Food, Agriculture and Environment for Elementary Schools*
Lalita Sriwattananon, Institute of Environment Rehabilitation and Conservation (ERECON)

RCE Bohol

The presenter, Professor Regucivilla Pobar described the background of RCE Bohol in regards to its establishment, partners, supporting entities and member organisations. She introduced the initiative titled “Bohol Socio-Economic and Environment Awareness Education Program” which just started and will last for a period of 5 years. She also described the constituent membership/partners of the initiative and mentioned the target learners as the community, school children, housewives, and out-of-school youth. The sectors covered in the initiative were 1) Early Childhood; 2) Civil society and community engagement, and 3) Out-of-School Youth. The themes addressed were 1) Overcoming poverty; 2) Health promotion; 3) Environment; 4) Climate Change Education, and 5) Natural Resource Management. Though she mentioned the presence of clear waters and white beaches in the region, problematic issues to be dealt with and improved include foul-smelling garbage found on the South Island of Bohol, the unavailability of comfort rooms (toilets), the presence of only one well serving a population of 1808, lack of drinking water and hence the need for people to buy water to drink and also child malnourishment. The mangroves along the coast also needed “reforestation”.

The focus of the initiative was to educate the community on 1) Mangrove ecology; 2) Solid waste management and several other issues. She outlined the initiative’s knowledge-based learning objectives as: 1) Promotion of the principles of health care, nutrition and sanitation, and 2) Enhancing knowledge relating to the environment, natural resources and climate change adaptation and mitigation. The objectives of skill-based learning were to apply the knowledge acquired into real life situation and develop a skill in adapting and mitigating the effects of climate change. The objectives of value-based learning were to 1) Inculcate in the beneficiaries the value of the environment and natural resources, and 2) Inspire the beneficiaries to internalize the importance of sanitation, waste management and good health. She also explained how the initiative could address the three pillars of SD. She mentioned that the benefits provided to the beneficiaries by the implementation of the initiative were the knowledge and skills gained to solving their problems like health improvement, climate change adaptation/mitigation and poverty reduction. Putting into

action the knowledge and skills learned regarding waste/solid waste, health and sanitation management was the major impact to promoting sustainable development.

Prof. Pobar also outlined the major strengths and advantages of the initiative. They include: 1) Availability of experts and other human and material resources, and 2) A strong sense of collaboration and enthusiasm of the members and partner agencies. The primary weakness was uncertainty of funding, and the major challenge was strengthening the coordination of constituent member organisations. She concluded that modest gains have been made in its short time of existence. However, there is still more to do in the quest for excellence among individuals responsible for caring for the environment and the whole ecosystem.

RCE Cha-am

The presenter for RCE Cha-am, established in March 2008, was Ms. Areeporn Sittiyapaiboon. RCE Cha-am's partners and supporting organisations, both local and international were described by the presenter with the Sirindhorn International Environmental Park (SIEP) serving as the leader and coordinator of this network. Other on-going RCE projects in RCE Cha-am are as follows: 1) Training and dissemination of knowledge and arranging of activities on Energy for Environment, 2) Mangrove Ecosystem and Rehabilitation, 3) Wastewater Treatment System (constructed wetland), 4) Coastal Erosion Protection, 5) Inland Ecosystem and Tree Planting, and 6) Biodiversity.

The title of the initiative which began in 2007 was "Sirindhorn International Environmental Park (SIEP)". Several organisations partnering with SIEP were mentioned. The focus of the initiative was on conservation of energy, alternative energy and natural resources environment at the backdrop of the Sufficiency Economy Philosophy which was characterized by moderation, reasonableness and self-immunity. The initiative had the following objectives in addition to publicising HRH Princess Maha Chakri Sirindhorn's humanitarian and environmental work: 1) To promote and develop innovation about energy, alternative energy, natural resources and environment, for the use of an informed public; 2) To develop and rehabilitate the Park's environment, including enhancing its biodiversity and to enable the Park to serve as an ecotourism park as well as a sustainable learning centre both at the national and international levels. Ms. Sittiyapaiboon quoted the annual funding requirement and mentioned the funding entities, mainly organisations. The target learners of the initiative were students at all levels of education, staff members of governmental organisations, the private sector and the general public including foreigners.

Ms. Sittiyapaiboon pointed out the six sectors that the initiative is active in and also seven ESD themes in addition to Sufficiency Economy Philosophy which she said is important for the realization of the objectives of the initiative. The presentation was very rich in pictures, some of which were of recent conferences and workshops and also several activities undertaken by the initiative. She described the primary achievements of the initiative which include awareness creation in several areas and enhancement of biodiversity. She also provided a list of knowledge-based, skill-based and value-based learning objectives. The main benefits from the multi-stakeholder partnership regarding the implementation were networking and collaboration, provision of funds, manpower and ideas for further development. The learning methodologies used included exhibition and demonstration, field studies, surveying and data collection, training courses, meetings, seminars and conferences.

Ms. Sittayanpaiboon maintained that all the activities were the types that promoted ESD learning and also the conservation of energy, natural resources and the environment, several promotional activities and the application of the Sufficiency Economy Philosophy which doubled as strengths, all promoted SD. The primary weaknesses included a low level of capacity of the personnel and unavailability of manpower. The major challenge was securing funding and maintaining the collaboration and networking among the member organisations.

RCE Greater Phnom Pehn

Dr. Lalita Sriwattananon made a presentation on RCE Greater Phnom Pehn (RCE GPP) which was established in November 2009, and she pointed out a couple of challenges facing the local people in Cambodia. Several activities undertaken by RCE GPP include: 1) Promoting food, agriculture and environmental education for primary schools and the communities; 2) Promoting sustainable use of natural resource through the SATOYAMA activity; 3) Promoting good practices for sustainable agriculture; and 4) Organising the International Conference on Environmental and Rural Development. She outlined the vision of the RCE GPP as “promoting ESD through food, agriculture and environmental education for SD of Greater Phnom Penh”.

The initiative titled “Project on Facilitating Sustainable Agriculture for Local Farmers and Enhancing Education on Food, Agriculture and Environment for Elementary Schools” aimed to promote sustainable agriculture and food production in a sound environment by enhancing education regarding these in the rural community and the constituent elementary schools in collaboration with stakeholders including the government agencies, Royal University of Agriculture, local NGOs, local schools and the community with Tokyo University of Agriculture as one of the advisors. RCE GPP also aimed to disseminate and share results at an academic conference held regularly. The focus of the initiative was to promote sustainable agriculture based on natural resource circulation with low chemical input among local farmers as well as elementary school students and consequently, increase the public awareness and perception of the importance of bringing harmony between agricultural development and natural environment conservation.

The project was started with a baseline survey of the farmers in the area to establish the amount of inorganic fertilizers and pesticides they applied and the corresponding economic cost. Through workshops farmers were given practical training in composting, making of bio-pesticides and bio-extract, and crop protection of insects using nets. Students in ten schools received knowledge and skills in food agricultural and environmental sustainability while teachers received training in sustainable agricultural practices and consequently, established and managed the organic garden and compost box in each school as well as held workshops on 'Education for agricultural successors'. To ensure the sustainability of the farming system which is very important in the lives of the farmers, a market survey was conducted to determine the sales dynamics of the agricultural products. Dr. Sriwattananon said farmers' groups promoted sustainable agriculture based on natural resource circulation with low chemical input for farmers who did not belong to such groups. The main outcomes of the initiative were that farmers' groups were formed by local farmers in the community and furthermore, the activity promoted sustainable agriculture based on natural resource circulation with low chemical input.

Question and Answers

After acknowledging that even though the relatively new RCE Bohol was working on one program and relatively older RCE Cha-am and RCE Phnom Pehn are working on several programs and only one project respectively, Prof. Mario Tubacan on asked the three RCEs whether they have monitoring and evaluation plans linked to the context of the workshop and if they did whether they were linked to ESD indicators and also whether they faced any challenges regarding that.

RCE Cha-am answered that because they receive budget annually particularly from several governmental organisations, they have to evaluate their activities and write reports in order to secure further funding. He however did not indicate whether such evaluation relates to ESD. RCE Phnom Pehn said that they conduct annual evaluation using a third party on their sustainable agriculture project and that the questioner was involved in the recent evaluation. On the larger scale she reiterated the importance of the project nationally even as Cambodia expands the export of its agricultural produce to foreign countries, particularly China. RCE Bohol answered that being a new RCE with a maiden program, they are concentrating on need analyses etc. and M&E plan had not been drawn up yet. She however stressed that when an M&E plan is drawn, it will definitely be linked to ESD indicators.

RCE-BOHOL

REGUCIVILLA A. POBAR
BISU Main Campus, Tagbilaran City
Bohol, Philippines

Background Information

Name of RCE	RCE- Bohol
Name of Main Reporter	REGUCIVILLA A. POBAR,
RCEs Date of Establishment	September 2, 2011
RCE Member Organizations/ Members	Academe, Youth, Local Government Unit, Government Agencies, Media, Business Sector
RCE Partners and Supporters	Community, Red Cross Youth, ACCES Development
Current On-going educational/ ESD projects of the RCE	
1. Climate Change Orientation 2. Organic Farming Education	

Background Information on the Selected Exemplar Case Study

Title of Selected ESD Initiative for Case Study	Bohol Socio-Economic and Environment Awareness Education Program
Starting Year and Duration of Initiative	2012 5 years
Major Members/ Partners of Initiative	Academe, Youth, Local Government Unit, Government Agencies, Media, Business Sector
Amount of Budget and Funding Source	Php500,000.00
Target Learners in this Initiative	Community, School Children, Housewives, Out-of-school youth

Sectors which the Initiative are Active In

- Early Childhood
- Civil Society and Community Engagement
- Out- of- School Youth



ESD Themes Addressed by the Initiative

- Overcoming Poverty
- Health Promotion
- Environment
- Climate Change Education
- Natural Resource Management



Major Objectives, Focus and Activities of this ESD Initiative




RCE-Bohol ESD initiative is focused on educating the community on the following:

- Mangrove Ecological Education
- Solid Waste Management
- Addressing Water and Power Issues
- Overcoming poverty
- Addressing health and Sanitation Issues
- Climate Change Awareness Education



Benefits Provided in the Implementation of this initiative

- Knowledge gained by the beneficiaries in solving the problems they have.
 - a. measures learned to climate adaptation and mitigation
 - b. preserving clean environment
 - c. promoting health
 - d. overcoming poverty / learning more entrepreneurial skills
 - e. increased awareness and concern for the environment




Learning Methodologies, approaches and strategies that have been applied to this ESD Initiative

- Home Visitation
One-On-One Interview
- Immersion
- Documentary Analysis
- Lectures/ symposium/ seminars
- Skills Training



RCE-Bohol ESD Initiative to Address each of the Three Pillars

- Environmental Pillar
 1. Encouraging and guiding the beneficiaries on how to keep their environment as natural as possible
 2. Discussing and inculcating preservation of natural resources and the environment
 3. Demonstrating waste management and inspiring solid waste program
 4. Replacing Mangroves being cut



RCE-Bohol ESD Initiative to Address each of the Three Pillars

Social Pillar

Let the beneficiaries understand the essence of ecosystem which shows the interrelationship of the natural environment and the people who are responsible for the conservation and preservation.



RCE-Bohol ESD Initiative to Address each of the Three Pillars

Economic Pillar

Teaching the beneficiaries on how to take care of their natural resources since it will give them economic value

Teaching the beneficiaries some entrepreneurial skills to make use of indigenous materials without destroying the natural environment



Main Learning Objectives of this Initiative

Knowledge Based Learning

ESD Initiative aims to:

Promote the principles of health which include proper nutrition and sanitation family members, utilization of indigenous food in the locality, childcare, care of pregnant and lactating mothers, use of comfort rooms, proper waste management (may include segregation of waste materials, no burning of garbage)



Knowledge Based Learning (cont.)

2. Develop in the beneficiaries knowledge about the programs and initiatives relating environment and natural resources such as clean and green program, Zero Waste Management, Yes to Recycling of Waste, “May Pera Sa Basura” There is Money in Garbage
3. Educate the beneficiaries about the climate change adaptation and mitigation



Skill-Based Learning

It aims to:

1. Apply the knowledge learned in the lecture into their actual life situation
2. Put into practice all the knowledge gained
3. Develop a skill in adapting and mitigating the effects of climate change such as planting more magrooves, compost pit making, applying rainfed agriculture in their backyard garden



Value Based Learning

ESD Initiative also aims to:

1. Inculcate in the beneficiaries the value of environment and natural resources.
2. Inspire the beneficiaries to internalize the importance of sanitation, waste management and good health

Impacts of achieving ESD

Learning

1. Healthy community
2. Enrichment and improvement of the people's well being
3. Mitigating climate change
4. Improved economic conditions

Promotion of Sustainable Development

1. Proper implementation of what the beneficiaries learned from RCE-Bohol like education on waste management, health and sanitation execution and solid waste management program, economic development



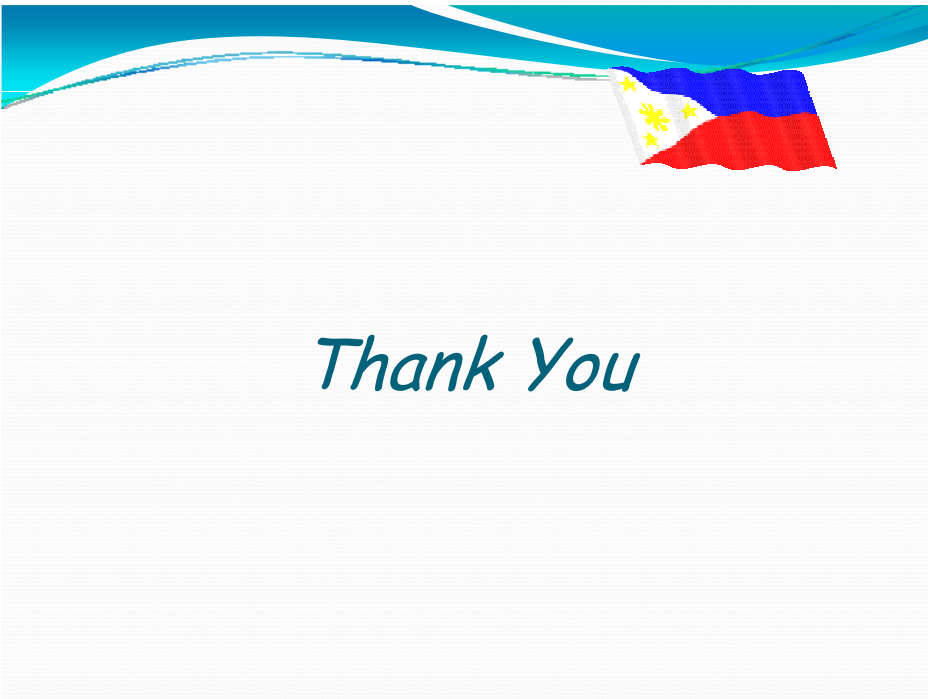
Major Strengths and advantages of this ESD Initiative

- Presence of Experts and other human and material resources
- Strong Linkage and spirit of collaboration and enthusiasm of the members and partner agencies.
- Members working on common goal of protecting the fragile eco-system
- Abundance of natural resources

Conclusion

It starts with a vision and the mission to attain sustainable development. Here is RCE-Bohol. It has now reached some of its goals in order to effect societal change such as organizing seminars, workshops, trainings and forums to prepare human resources who have the heart, the head and the hand to make a difference. There is still a need to do more in this quest for excellence among the individuals responsible for caring the environment and the whole ecosystem





RCE Cha-am



The Sirindhorn International Environmental Park
Cha-am, Phetchaburi, THAILAND

By : Ms. Areeporn Sittiyapaiboon

Introduction of RCE Cha-am :

Date of Establishment : 28th March 2008

- RCE Partners and Supporters** : Ministry of Energy, Thailand and other organizations from governmental and private sectors (from within Thailand and abroad). These also include Ministry of Natural Resources and Environment, Ministry of Education, provincial government (Phetchaburi), royal projects, academic institutions, local administrations, environmental NGOs, the media and civic organizations that work in area of sustainable development, including the conservation of natural resources, energy and environment. In addition, these include some international organization such as UNU-IAS, UNEP, FGPE, ACB, SIDA etc. The Sirindhorn International Environmental Park (SIEP) has its role as leader and coordinator of this network.



The Sirindhorn International Environmental Park has been acknowledged as Regional Centre of Expertise for Education on Sustainable Development (**RCE Cha-am**) since 28th March 2008



- On-going ESD Projects of the RCE Cha-am:**
- Training and dissemination of knowledge and arranging activities on :**
 - Energy for Environment
 - Mangrove Ecosystem and Rehabilitation
 - Wastewater Treatment System (constructed wetland)
 - Coastal Erosion Protection
 - Inland Ecosystem and Tree Planting
 - Biodiversity
 - Sufficiency Economy Philosophy



Background information on the selected case study :

- **Title of selected ESD Initiative for case study :**
The Sirindhorn International Environmental Park (SIEP)
- **Starting year :** 2007
- **Major member :** The Sirindhorn International Environmental Park



Partners of initiative :

- >> The National Energy Policy Office (NEPO), Ministry of Energy
 - >> Office of Natural Resources and Environmental Policy and Planning (ONEP), Ministry of Natural Resources and Environment
 - >> Mrigadayavan Palace Foundation
 - >> Border Patrol Police Bureau
 - >> The Institute for the Promotion of Teaching Science and Technology (IPST), Ministry of Education
- **Amount of budget :** Approx. 30,000,000 Baht per year or
Approx. 967,740 US\$ per year



Funding Sources :

- >> The Energy Conservation Promotion Fund, National Energy Policy Office (NEPO), Ministry of Energy
- >> The Institute for the Promotion of Teaching Science and Technology (IPST), Ministry of Education
- >> Wastewater Management Authority (WMA)
- >> Other organizations from governmental sector e.g. Ministry of Natural Resources and Environment, Ministry of Agriculture and Cooperatives, Thailand etc.
- >> Other organizations from private sectors and private companies (sponsoring companies) from within Thailand and abroad, state enterprises
- >> Individual donation



Target Learners :

Students of all levels, staff members of governmental organizations private sector and general public both Thais and foreigners.

- **Sectors that RCE Cha-am are active in :**
 - Primary education
 - Secondary education
 - Teacher education (especially Border Patrol Police teachers)
 - Higher/ further education
 - Non-formal education
 - Civil society & community engagement
 - Business & private & governmental sectors
- **ESD themes addressed by the initiative :**
 - Environment
 - Climate change education
 - Water
 - Biodiversity
 - Natural resource management
 - Disaster reduction education
 - Sustainable production and consumption
 - Sufficiency Economy Philosophy



Objectives :

- To publicize HRH Princess Maha Chakri Sirindhorn's honourable deeds and ingenuity in conservation of energy, alternative energy, natural resources and environment to both Thais and foreigners
- To promote the development of innovation about energy, alternative energy, natural resources and environment, and apply to the public uses.
- To develop and rehabilitate the Park's environment, and to enhance biodiversity and relationship between flora and fauna and the balanced ecosystem, and to enable the Park as sustainable learning center
- To sufficiently promote and develop the potential on eco-tourism of the Park and organize the eco-tourism activities that raise up the public awareness on conservation of energy, alternative energy and natural resources and environment
- To develop the knowledge and technology about energy and natural resources and environment, and enable the Park to be an important learning center of national and international levels



Focus :

The Conservation of energy, alternative energy and natural resources environment/ Sufficiency Economy Philosophy

Activities :

- Energy for Environment Exhibitions
- The Educative Exhibition on Sufficiency Economy Philosophy
- Energy Learning Center on Sufficiency Economy Philosophy
- Alternative/ Green Energy (solar/ wind power/ wave energy)
- Wastewater Treatment System (constructed wetland)
- Prevention of the Coastal Erosion
- HRH Princess Sirindhorn Mangrove Forest
- Training on Energy and Environment Conservation
- Tree planting activities (mangrove, land & beach forests in SIEP and schools & temples in local community areas)
- Organizing meeting/ seminar/ conference of local/ national and international levels



4th Asia-Pacific RCE Continental Conference





“Asia Regional Forum on Biodiversity” organized in Cha-am on 3-4 November 2011, with collaboration between RCE Cha-am, UNU-IAS, ACB, RCEs network and other organizations of RCE Cha-am network



Learning resources and training



Natural classroom & tree planting & bird observation activities



Learning resources in the Park



Use of Alternative Energy



Demonstration of the use of alternative energy



Energy Learning Center on Sufficiency Economy Philosophy



Tree Planting Activities : beach, and mangrove forest



Billion Tree Campaign Project in Thailand



Tree planting activities in local schools and temples



MOU with TEI for Tree Planting Project



Coastal Erosion Protection



Breakwater, Groin and Jetty

| 3-11-2009



Wastewater Treatment System
(Constructed wetland)



Dripping Irrigation and the use of Vetiver grass in the Park



October 2011

November 2011



Dissemination of knowledge on the use of Vetiver grass and the making process of compost and EM to representatives from local communities, temples and schools



International Conference/ Seminar

Conference/ Seminar



Accommodation and facilities



Arranging activities with local network (Cha-am municipality, local communities, governmental units, hotel in Cha-am) to strengthen the network



KNOWLEDGE-BASED LEARNING :

- ✓ Green Energy generated by solar power, wind power, wave energy
- ✓ Energy for Environment
- ✓ Natural Resources and Environment
- ✓ Wastewater Treatment System (constructed wetland)
- ✓ Sufficiency Economy Philosophy
- ✓ Conservation and rehabilitation of coastal ecosystem and biodiversity (Mangrove, birds and other flora and fauna species)
- ✓ Protection of coastal area

SKILL-BASED LEARNING :

- ✓ Energy Saving Methods
- ✓ Proper way for conservation of energy, natural resources and environment
- ✓ Enable to apply "Sufficiency Economy Philosophy" into daily life and the conservation of energy and natural resources and environment

VALUE-BASED LEARNING :

- ✓ Green Energy
- ✓ Energy Saving
- ✓ Sufficiency Economy Philosophy
- ✓ Value of natural resources and environment (mangrove, coastal ecosystem, biodiversity)
- ✓ Environmentally friendly method of wastewater treatment system



The main benefits that the multi-stakeholder partnership have provided to the implementation :



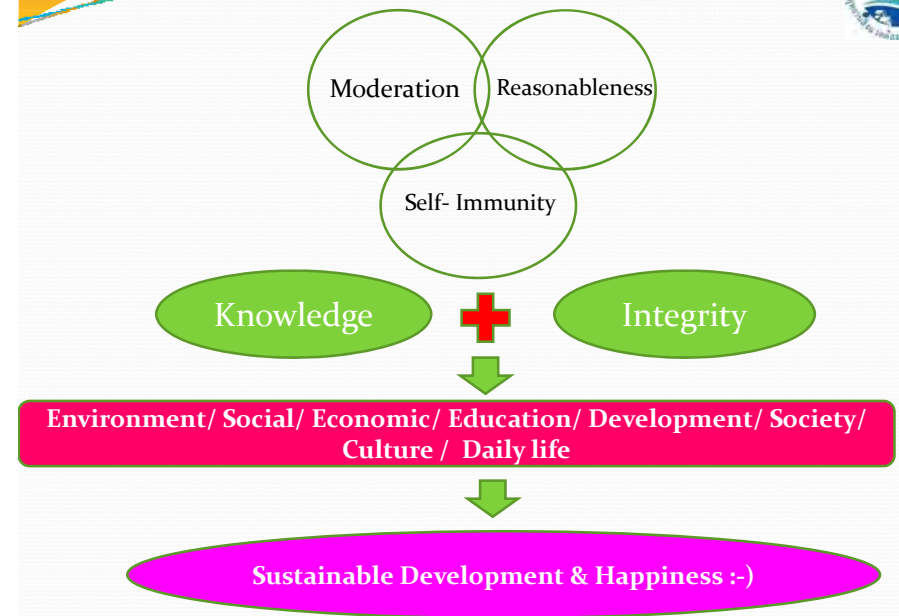
They provide network and collaboration among stakeholders, and provide source of funds, manpower and ideas for the development of future plan.

Learning methodologies, approaches, and strategies applied to the ESD Initiative :

- >> Exhibition and demonstration (Energy & Environment)
- >> Field study of natural resources in the Park
- >> Research and collecting data
- >> Training courses on energy and natural resources conservation
- >> Meeting/ seminar and conference for exchanging of knowledge and establishing networking



Sufficiency Economy Philosophy



PRIMARY ACHIEVEMENTS :

- Public awareness on the energy saving
- Public awareness and knowledge on the conservation of natural resources and environment
- Public awareness and knowledge on Sufficiency Economy Philosophy
- Increase of biodiversity in the Park
- Green Energy in the Park

SUCCESS FACTORS IN ITS IMPLEMENTATION :

- High potential of personnel and knowledge dissemination
- Good environment of the Park (green park, good demonstrative resources, good facilities, safety)
- Good governance
- Networking



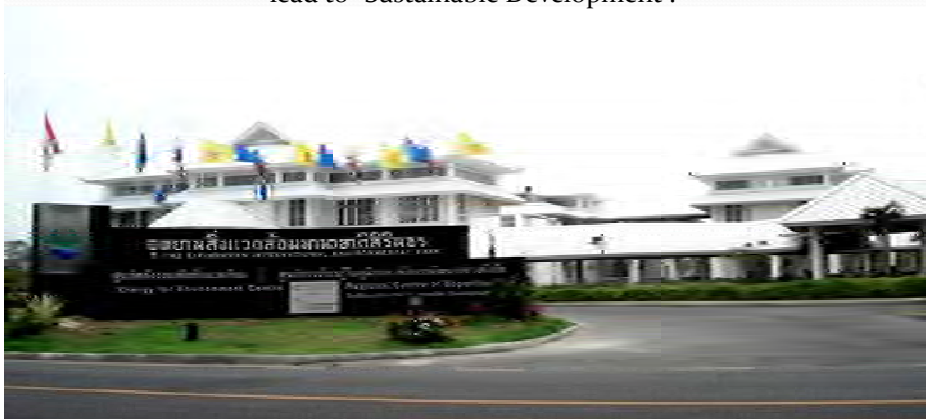
Main Outcomes and Achievements:

- **Achieving ESD learning**
 - All on-going activities are ESD learning activities which lead to sustainable development
- **The promotion of sustainable development**
 - Conservation of energy and alternative energy and the conservation and rehabilitation of natural resources and environment as well as promotion of the development of innovation about energy, alternative energy, natural resources and environment, and apply to the public uses by following “Sufficiency Economy Philosophy” will lead to the promotion of sustainable development



Major Strengths and Advantages :

Promote the conservation of energy and alternative energy and the conservation and rehabilitation of natural resources and environment by following “Sufficiency Economy Philosophy” which lead to “Sustainable Development”.

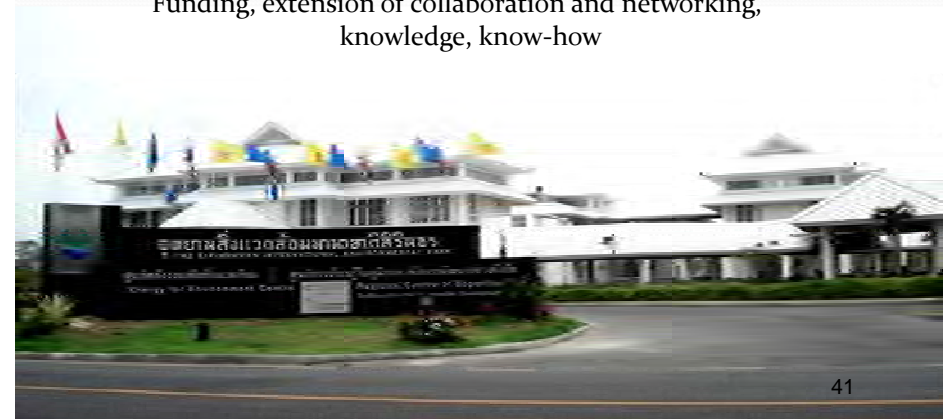


Primary Weakness and Constraints :

Funding, knowledge, know-how, manpower, collaboration and networking of local, national and international levels.

Primary Challenges and Barrier :

Funding, extension of collaboration and networking, knowledge, know-how



“CONCLUSION”

Sufficiency Economy Philosophy

Human Capacity Building

Human Capacity Building



Environment/ Natural Resources/ Energy

Sustainable Improvement of Resource & Sustainable Development & Happiness :-)

www.sirindhorn.ac.th

Thank you



Project on Facilitating Sustainable Agriculture for Local Farmers and Enhancing Education on Food, Agriculture and Environment for Elementary Schools

RCE-Greater Phnom Penh,
Cambodia

Introduction to RCE-GPP

- RCE Greater Phnom Penh (RCE GPP) is the first RCE in Cambodia.
- RCE GPP is officially acknowledged by UNU-IAS on **26 December 2009**.
- The launching ceremony was held on **4 March 2010** at Royal University of Agriculture in Cambodia during the 1st International Conference of Environmental and Rural Development (1st ICERD).

2

GPP: Geographical Scope



- The Greater Phnom Penh composes of **Phnom Penh** and **6 surrounding provinces**, **Kampong Cham**, **Kandal**, **Prey Veng**, **Kampong Speu**, **Kampong Chhnang**, and **Takeo**.
- The total area is **34,641 km²** and the population is **7,250,881**.

3

GPP: Regional Challenge

- **In the provinces around Phnom Penh, the conditions of education are much insufficient for children comparing to that in Phnom Penh.**
- **The parents in rural area need their children to work in the farmlands.**
- **The poverty of farmers is a barrier for children to continue their study at elementary or secondary schools.**
- **Big number of students who didn't continue to secondary schools starts working in agricultural sector.**

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GPP: Regional Challenge (continued)

- Currently, most farmers apply agricultural chemicals, such as chemical fertilizers, herbicide or pesticide, to maintain certain level of crop yields.
- However, the overuse of agricultural chemicals is damaging the long-term soil fertility and productivity of farmlands.
- Also, the chemicals released from farmlands to downstream cause the degradation of water environment.

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GPP: Regional Challenge (continued)

- Accordingly, as regional challenges in the **education for sustainable development (ESD)**, an attention has been paid to approach sustainable rural development.
- Although there are some factors constituting to sustainable rural development as economic growth, social development and environmental conservation, **the food, agriculture and environment education was focused as a first step for approaching sustainable rural development in the area of GPP.**

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RCE-GPP: Vision

- The vision of “RCE Greater Phnom Penh” is to promote **ESD through the food, agriculture and environment education for sustainable development** in the area of Greater Phnom Penh.

7

RCE-GPP: Objectives

- To enhance the food, agriculture and environment education for elementary schools and rural communities under the collaboration among government, university, local NGO and local community.
- The International Conference on Environmental and Rural Development (ICERD) is held regularly for promoting the discussion or sharing ideas concerning sustainable development.
(more information: www.int-erd.org)

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RCE-GPP: Stakeholders

- ❖ Royal University of Agriculture
- ❖ Institute of Environment Rehabilitation and Conservation, Cambodia Branch
- ❖ Ministry of Agriculture, Forestry and Fisheries
- ❖ Ministry of Education, Youth and Sports
- ❖ Ministry of Rural Development
- ❖ Elementary Schools in Phnom Penh
- ❖ Elementary Schools in Kampong Cham province

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RCE-GPP: Advisors

External Advisory Panel: working for technical/scientific advices in ESD or fund raising for the ESD activities.

- ❖ Tokyo University of Agriculture (TUA), Japan
- ❖ Institute of Environment Rehabilitation and Conservation (ERECON), Japan
- ❖ Association of Environmental and Rural Development (AERD), Thailand

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RCE-GPP: Activity

- Promoting the food, agriculture and environment education for primary schools and communities
- Promoting the sustainable use of natural resource through the SATOYAMA activity
- Promoting the good practices for sustainable agriculture
- Organizing the International Conference on Environmental and Rural Development

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RCE-GPP: Activity (continued)

Activities at local communities:

- ◆ Workshops on sustainable agriculture through demonstrating how to make compost box, compost, pellet compost, liquid bio-fertilizer and liquid bio-pesticide were conducted for local communities.



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RCE-GPP: Activity (continued)

Activities at primary schools:

- ◆ Several seminars on organic farming practices were conducted for the students at the primary schools.

Students learn how to make compost, bio-pesticide and check water quality



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RCE-GPP: Activity (continued)

Activities at primary schools:

- ◆ Teacher trainings on agriculture and environment conservation were conducted for the primary school teachers.

Trainings for the primary school teachers



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ESD Initiative for case study:

Project on Facilitating Sustainable Agriculture for Local Farmers and Enhancing Education on Food, Agriculture and Environment for elementary schools

Organizations involved:

- RCE Greater Phnom Penh (RCE GPP), Cambodia
- Royal University of Agriculture (RUA), Cambodia
- Tokyo University of Agriculture (TUA), Japan
- Institute of Environment Rehabilitation and Conservation (ERECON), Japan
- Japan International Cooperation Agency (JICA)

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1. Project outline

Project title:

Promoting Sustainable Agriculture for Local Farmers and Enhancing Education on Food, Agriculture and Environment for elementary schools

Target area:

Samroung commune of Prey Chhor district in Kampong Cham province

Target group:

11 villages (8,111 people in 1,714 households) and 10 elementary schools

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1. Project outline (Cont.)

Project period:

April 2011 to March 2016 (5 years)

Project area challenges:

- Amounts of agricultural chemicals applied such as synthetic fertilizer and pesticide are rapidly increasing in the last ten years
- Degradation of soil and water environment became more severe
- Local farmers have suffered from several diseases such as throat pain or dermatitis due to inappropriate application of agricultural chemicals
- Many farmers are eager to move to sustainable farming system based on natural resource circulation
- Situation of farmers with low knowledge and resources did not allow local farmers to move towards

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1. Project outline (Cont.)

Project major focus and objective:

- Focusing on local farmers as well as students in the elementary schools for promoting sustainable agriculture based on natural resource circulation with low chemical input
- Expected to increase the opportunity to build public awareness and perception of the importance of bringing harmony between agricultural development and natural environment conservation

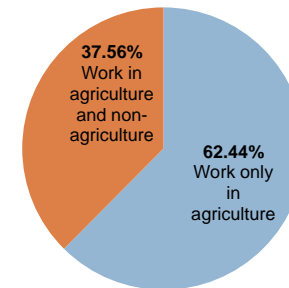
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Project Outputs for 2011 - 2012

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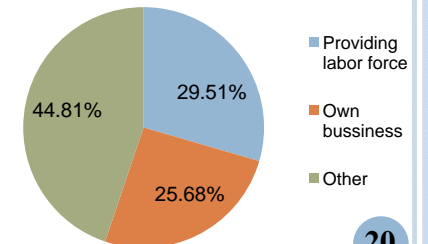
2.1 Results of baseline survey

- Period: 15th July to 15th August 2011
- Interviewees: 443 (252 male, 191 female)



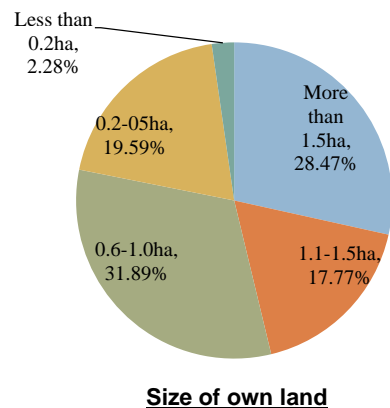
Types of works

Among Non-agricultural work



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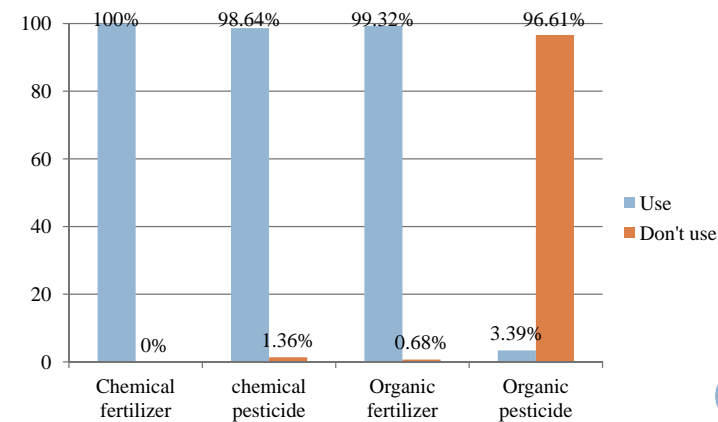
2.1 Results of baseline survey (Cont.)



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2.1 Results of baseline survey (Cont.)

Fertilizer and pesticide application

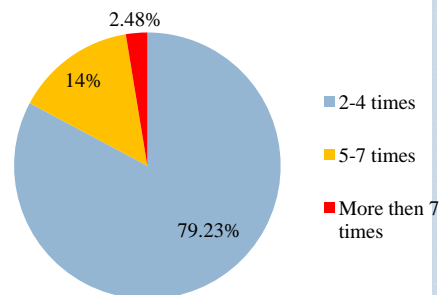


22

2.1 Results of baseline survey (Cont.)

Amount of applied chemical fertilizer per year per household

- Annual average amount of chemical fertilizer use is **415.25kg** per household
- Average expense for chemical fertilizer is **237.1USD** per household per year.



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2.2 Composting activity

- 311 farmers have received material sets for making compost boxes which totally constructed
- 9 workshops on composting, making compost boxes and making compost were conducted for the farmers
- Checking and advising on the composting process has been doing regularly



Workshop on composting



Farmers making compost box

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2.2 Composting activity (Cont.)

Some activities during checking the composting process



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2.3 Making bio-pesticide and bio-extract

- 311 farmers have received tanks and have made bio-extract and bio-pesticide
- 9 workshops were conducted for the farmers
- Main contents include the concept on bio-pesticide and bio-extract and its demonstration of making



Workshop on composting

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2.3 Making bio-pesticide and bio-extract (Cont.)



Some activities of checking farmers' practices

27

2.4 Crop protection from insects by using net

- 311 farmers have received nets for practicing
- 9 workshops were conducted for the farmers
- Main contents include the concept on crop protection and demonstration of net application



Workshop on crop protection with net application

28

2.4 Crop protection from insects by using net (cont.)



Crop protection practice farmers do after learning in the workshops

29

2.5 Food, agriculture and environment education at elementary schools

- The food, agriculture and environment education has been started at all the 10 schools of Sro Nge Elementary School Cluster
- Organic vegetable garden and compost box have been set at every school
- materials such as pumping machine, plastic tank for making bio-pesticide or bio-extract, crop-protecting net, agricultural goods, and vegetable seeds have been distributed for each school
- Training on sustainable agriculture practices was conducted for elementary school teachers

30

2.5 Food, agriculture and environment education at elementary schools (Cont.)

Photos of training for school teachers and students



31

2.6 Conducting market survey for agricultural products



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Main Outcomes and Achievements for 2011 - 2012

33

3. Main outcomes and achievements

In the first year from April 2011 to March 2012:

The contents of activity were focused on

- Setting conditions for activities
- Forming farmers groups and promoting sustainable agriculture based on natural resource circulation
- Promoting the distribution and sales of products with low chemical input
- Promoting food, agriculture and environment education for agricultural successors

There were following outcomes and achievements in the activity:

- Farmers' groups were formed by local farmers in Samroung commune
- The activity promoted sustainable agriculture based on natural resource circulation with low chemical input

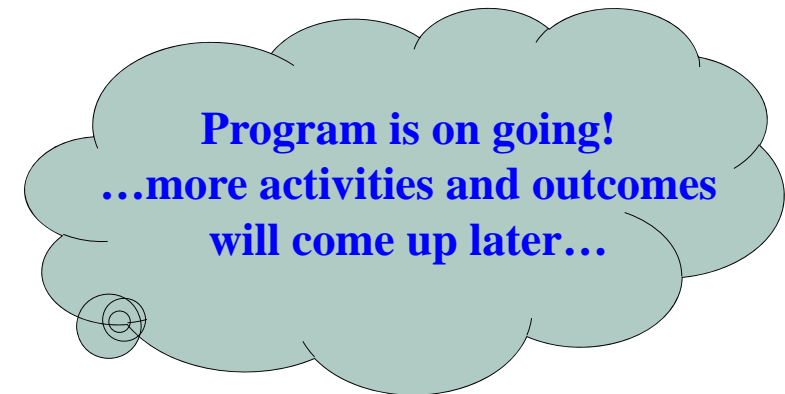
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3. Main outcomes and achievements

There were following outcomes and achievements in the activity (cont.):

- Farmers' groups promoted sustainable agriculture based on natural resource circulation with low chemical input for farmers who do not belong to the farmers' groups
- Meetings for products with low chemical input sales were held among Samroung Prenprey AC, farmers' groups, RUA, ERECON CaM, ERECON, TUA etc.
- School teachers established and managed school organic garden and compost box at each school as well as holding workshop 'Education for agricultural successors'

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Thank you for your attentions!

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SESSION TWO:
RCE Presentations, part 2
Day One: 11:00 – 12:00

Session Chair: Sonjai Havanod, The Sirindhorn International Environmental Park

Presentations:

1. **RCE Penang:** *Enhancing Sustainable Living within USM and its Neighbouring Communities*
Asriyah Abdul Rahim, Center for Global Sustainability Studies, University of Sains Malaysia
2. **RCE Southern Vietnam:** *An Experience of International University*
Phan Thi Kim Quyen, International University, Ho Chi Min City, Vietnam National University
3. **RCE Yogyakarta:** *Zero Waste Agriculture*
Bambang Hendro S., Faculty of Agriculture, Universitas Gadjah Mada

RCE Penang

The presenter for RCE Penang, established in 2005, was Dr. Asriyah Abdul Rahim. She gave an overview of the current high generation of waste, the unsustainable disposal of waste and the state of recycling in Malaysia. The initiative titled “Enhancing Sustainable Living within University Sains Malaysia and its Neighbouring Communities” was to last for one year beginning April 2011. Several institutional, residential, commercial, consumer, industrial and governmental agency stakeholders /partners were involved. The overall aim of the initiative, which had several specific objectives, was to “extend what has been promoted on the campus of USM to the neighbouring communities”. The focus was on recycling and composting and later sharing the acquired knowledge voluntarily. She added that several activities related to the initiative have been on-going since 2001. They include “Say No to Plastic” and “White coffin” which meant banning of use of Styrofoam on campus.

Dr. Rahim also described the research the university was involved in with the local community as constituting three phases: 1) Situational analysis and preparation of a sustainable lifestyle kit, 2) Data collection and community engagement, and 3) Analysis, assessment and dissemination of the research findings. She stated further that even though Phase 2 involved M&E, it was mainly to feed the research aim, but not necessarily on ESD indicators. The learning methodologies included 1) Conduction of a workshop for stakeholders on Logical Framework Analysis; 2) Setting up compost stations and teaching students how to prepare compost, and 3) Awareness creation involving the local community. She outlined how the initiative addressed the 1) Environmental pillar by promoting sustainable lifestyles towards zero waste; 2) Social pillar by increasing awareness of sustainable lifestyles through the activities that will lead to healthier lifestyles of the people in such urbanized space; and 3) Economic pillar by considering recycling as an income generating activity for the community and school and also introduce to the society the potential of waste as an alternative resource for the production of new products.

Dr. Rahim explained that the achievements and successes of the initiatives include 1) Increased acquisition of knowledge on the processes and importance of composting and recycling; 2) Recognition and adoption of the initiative content by the lecturers as part of the teaching pedagogy;

3) Recognition by the neighbouring community that composting and recycling enhance sustainable lifestyle; 4) The revelation of ESD as a multi-disciplinary approach to solving sustainability problems; 5) Knowledge transfer from the university to the community via informal and non-formal learning, and 6) Construction of a four chamber and two chamber composting systems for garden waste and food waste, respectively. She described the strengths of the initiative as following: 1) Good teamwork, cooperation and collaboration among the stakeholders; 2) contribution from the multi-disciplinary experts; 3) Sound financial support; and 4) Continued interest and participation of all partners. The weakness included 1) Limitation on time and number of students allowed to participate in the initiative's activities; 2) The high level of contamination of the recycling bins on the school premises and university campus; and 3) Luke-warm response towards the activities by some community members. Among several conclusions she added that the initiative had also strengthened the university-community engagement.

RCE Southern Vietnam

Being the newest RCE that reported at the workshop, for the first half of her presentation, Ms. Phan Thi Kim Quyen introduced to the participants the history of the establishment of RCE Vietnam, the major partners from both the formal (including Open University, Ho Chi Min City; University of Technology) and non-formal (including the Institute of Educational Research) educational institutions. The objectives include the following: 1) Develop formal education curricula on key areas that affect the human environment; 2) Undertake researches on issues relevant to higher education and also engage schools and colleges, and the communities in ESD; and 3) Develop student's knowledge, experience, attitude and skills to act sustainably. She also described the general planning schedule of the impending activities, and the general networks of knowledge, namely climate change, sustainability education and public training.

The second half of her presentation was focused on the ESD-relevant activities in the International University (IU) consisting of 1) ESD on teaching curricula, 2) ESD on Seminars, 3) ESD on Researches and 4) ESD on Extra Curricular Activities. She then went on to describe each activity in detail. For example, for ESD on teaching curricula, the RCE centre studies the syllabus of each school/faculty in IU to see whether the integration of the concept of SD into the syllabus was suitable or not. ESD is then integrated into the curriculum after discussions with the course's lecturers and Dean of schools. A report is then sent to the Rector for approval after which teaching of the course could begin. Consequently, ESD was being integrated across the board, from natural sciences to social sciences and humanities. Ms. Quyen said researches on Human Resource Development, Environment and Applicable Technology were being conducted in IU. She also said that IU organizes seminars particularly on climate change, food science and renewable energy. Finally, she pointed out two types of extracurricular activities in IU, namely activities on leading ethically-led lifestyles and activities related to volunteerism.

RCE Yogyakarta

With the mission to “Develop the concept and technology supporting sustainable development and implement it based on community empowerment”, RCE Yogyakarta collaborated with 9 major partners with funding primarily from Universitas Gadjah Mada (UGM) and other organisations. In addition to the ESD initiative reported at the workshop by Prof. Bambang Hendro titled “Zero Waste Agriculture”, RCE Yogyakarta was involved in other projects including 1) ESD-based community development at Kemadang village; 2) ESD implementation through herbal medicine development at Yogyakarta; 3) Community based Reforestation Development at Jambi, East and Central Kalimantan, Central Java; 4) ESD implementation and community forest development at Gunung Kidul District; and 5) ESD on Disaster Adaptation and Mitigation. The major objective was to re-orient the mindset of people regarding the three sustainability components of environmental quality, economic equity and human (social) justice.

The initiative was focused on sustainable integrated farming using several principles such as the 6 M (man, money, materials, method, machine and market; many materials) and 7 R (reduce, reuse, recycle, replant, replace, repair and report) in order to realize zero waste integrated farming. The main learning objective regarding knowledge-based learning was to increase the knowledge and understanding of ESD, particularly zero waste agriculture. Skill-based learning was for the target population to experience how to manage eco-friendly agriculture and apply the techniques and methods of zero waste agriculture, and for value-based learning, people could contribute through their actions to realize zero waste agriculture in the environment, thereby promoting and expanding the importance of this practice to society. The main contribution to the initiative provided by the partnership established by the RCE was the increased change of mind-set of the participants who would then serve as agents of change in their communities. Prof. Bambang further explained how the initiative addressed the three pillars of SD.

The main achievements regarding ESD learning include participants’ awareness of the importance of applying the ESD concept through their actions. Regarding the achievements towards the promotion of SD, after completing the study in integrated farming, the trainees emerged as the agents of change by impacting other people’s behaviour to manage the environment and practicing sustainable agriculture in their own company or regions towards sustainability. Prof. Bambang further pointed out the success of the initiative as follows: 1) The application of Zero Waste method has been internationally recognised and adopted by a number of countries across the globe. For example, farmers in Namibia, Africa have successfully applied this method in large areas, and 2) The use of environmentally friendly pot for tree planting in East Java forest. Prof. Bambang said the strengths and advantages of the initiative include the use of environmentally-friendly fertilizers, herbicides and pesticides. He mentioned the limited number of resource persons to upscale the method, language barrier and the need to upgrade the tools and facilities for training as some of the weaknesses. He concluded that the initiative has significant contributions to make to the development of sustainable agriculture in the region.

Question and Answers

Dr. Tinsiri Siribhodi asked the presenters how they were able to convince the people of the holistic nature of their initiative and hence impact regarding ESD since all the activities implemented seemed to have begun from the environmental perspective. Dr. Asyirah Rahim of RCE Penang explained how their initiative addressed all the three aspects: Using recycling and composting, they also included the social aspect by educating the people about the implications of creating waste and also how to convert the waste already created to wealth. Regarding M&E, she said the idea came up midway in another project which will be reported elsewhere even though the evaluation conducted on the reported project was mainly to address the research aim. Being a new RCE, no research has yet begun in RCE Vietnam, however Ms. Phan Quyen said that students of the International University are currently being exposed to social and economic aspects of evaluation which might prove useful in future work. Prof. Bambang Hendro of RCE Yogyakarta answered that farmers are made to understand that the rice straw gathered from harvesting is used meet economic needs by making organic fertiliser and also biogas instead of burning which uses oxygen needed by humans and reduces the quality of air they breathed. For M&E, he said the university is engaged in some form of evaluation but not in the form put by the questioner.

RCE PENANG Good Practice Case Analysis in ESD Implementation & Partnership Collaboration

By:
Asyirah Abdul Rahim
RCE-Penang@USM



ENHANCING SUSTAINABLE LIVING WITHIN USM AND ITS NEIGHBORING COMMUNITIES

Centre for Global Sustainability Studies, Universiti Sains Malaysia (Leader)
School of Industrial Technology, Universiti Sains Malaysia
RCE Penang
Penang Municipal Council
Solid Waste and Public Cleaning Management Corporation, Penang
Bukit Jambul Secondary School
Bukit Gambir Secondary School
Datuk Haji Mohd Nor Ahmad Secondary School
Sungai Gelugor Primary School
Minden Heights Primary School
Bukit Gambir Primary School
Residents' Association of Jalan Akuarium, Penang
Residents' Association of Taman Tun Saardon, Penang
Residents' Association of Sungai Gelugor, Penang
Giant Hypermarket, Bayan Baru, Penang
Cincaria Sdn Bhd
Green Crusaders [community-based recycling activists]
Consumer Association of Penang, CAP [NGO]



Overview

- In Malaysia, we produce 19,000 tones of waste everyday and majority of that ends up in landfills.
- Penang, meanwhile, produce 700-800 tones a day, while that on mainland comes up to about 800 tones, each Penangite generates about 1kg of waste a day.
- Government re-launched its recycling campaign on 2000, targeted 22% of waste to be recycled by 2020.
- Unfortunately, recycling rates amongst the citizen are still low compare with other countries.
- Recycling and composting –changing urban lifestyles to reduce waste.



Objectives

AIM: To extend what have been promoted in the campus of USM to the neighboring communities

OBJECTIVES:

1. To promotes and diffuse the sustainable lifestyle within USM campus to the surrounding neighborhoods
2. To engage participants from various levels of community in the sustainable agenda
3. To create an enabling environment towards realizing a sustainable community and
4. To explore the challenges for the comprehensive implementation of sustainability



Focus

- This project tries to extend what has been promoted in the campus of USM to neighboring communities.
- Many programs such as University in the Garden, Kampus Sejahtera, “White Coffin”, “Say No to Plastic”, etc.
- Neighboring communities represent a good showcase for mini urban lifestyle activities as there are various urban land uses within 5 km radius of USM.



Stakeholders

Partners/ Stakeholders	Detail
1. Institutional	- Secondary school (SMK Bukit Jambul, SMK Dato Haji Mohd Nor Ahmad, SMK Bukit Gambir) - Primary school (SK Sg. Gelugor, SK Minden Height, SK Bukit Gambir)
2. Residential	- Taman Tun Sardon, Taman Brown, Jalan Aquarium
3. Commercial	- Giant Hypermarket, Bayan Baru
4. Industrial	- Cincaria Sdn Bhd
5. Government agencies	- Majlis Perbandaran Pulau Pinang (MPPP), Perbadanan Sisa Pepejal & Pembersihan Awam (PSPPA)



Process

Phase 1 – Situational Analysis are expected to create digital maps, collate recommendations and ideas from the stakeholders and preparation of the sustainable lifestyle kit for the “*USM Sustainability Neighborhood Area*”.

Phase 2 – Data Collection and Community Engagement would see an increase in awareness and education activities starting with the launching of the project, followed by road shows, campaigns, seminars and workshops. A monitoring and assessment program will be conducted throughout this phase.

Phase 3 – Analysis and Assessment will provide findings on project implementation and suggest improvements for the project. Dissemination of research findings to various stakeholders via newsletter, progress reports and project report will be the next step to be taken.



the main benefits of multi-stakeholder partnership

- research fund,
- Sharing of experiences,
- knowledge transfer and sharing,
- information sharing and
- in term of space



How ESD initiative has worked to address SD pillars

- Environmental pillar – the ESD initiative aims to promote sustainable lifestyle towards zero waste
- Social pillar - The activities conducted with the community increase awareness on sustainable lifestyle that leads to healthier life of the community.
- Economic pillar – introduce to the society the potential of waste as alternative resources for producing new products. Recycling also can be an income generating activity for community and schools



Workshop

Logical Framework Analysis (LFA) Workshop with stakeholders



Setting up Composting Station

Heap composting (garden waste) with Prof. Sultan Ismail in USM



Awareness campaign at primary schools Recycle and Compost



Sharing Experiences

Visit to SMK Seri Balik Pulau- Recycle Bank



Awareness with the Residents and Local Council - Cleaner, Greener & Safer Penang Programme



Community Program- Awareness campaign at Giant Hypermarket, Bayan Baru





Knowledge-based learning objectives are:

- the importance of recycling to reduce waste
- the importance and the process of composting to reduce waste
- the concept of degradation of material

Skill-based learning objectives are:

- the skill to identify recyclables and non-recyclables
- the skill to manage recyclables
- the skill on different methods of composting
- the skill on composting processes involved in different types of composting

Value-based learning objective

- sustainable lifestyle starts with the individual within the community
- community plays an important in promoting sustainable lifestyle
- sustainable consumption
- concept of “from waste to wealth”

• Achievements and success

- Schools – students’ knowledge on the processes and importance of composting and recycling increased between the series of campaigns
- University students – the composting and recycling stations initiated by this project has been recognized and adopted as part of teaching pedagogy by the lecturers
- Neighbouring community – recognizing efforts in composting and recycling to enhance sustainable lifestyle
- Knowledge transfer from university to the community via informal and non-formal learning
- The initiative has initiated a multi-disciplinary approach in ESD with focus on composting and recycling activities

STRENGTHS

- the good team work and cooperation
- contribution and collaboration from the multi-disciplinary experts
- the financial and management support received
- A major milestone achieved in this initiative was the construction of a functional four chambers composting system (for garden waste) and a functional two chambers composting system (for food waste from café).
- continued interest and participations of all partners



WEAKNESSES

- The limited time given and number of students allowed to participate in the activities due to tight formal teaching
 - However, after the first series of campaigns were conducted, most schools showed more interest on the impact of the activities and outcome to the school.
- Recycling activities in the schools and university campus were faced with very high contamination of recycling bins.
- Community members from the respective residents' association showed mixed commitment to the programmes and activities conducted at their area.
- A major challenge is to overcome the dependency of the partners in the maintenance of the recycling bins and composting system.



CONCLUSION

- Based on the monitoring conducted by the research team, discussion with some partners, and observations, it can be concluded that this initiative has achieved to a certain extent its objective to promote sustainable development with focus on sustainable lifestyle.
 - receiving more invitations to conduct talks, exhibition booth and demonstration by the schools and also the residents.
 - more students are organizing/ managing the composting and recycling stations around the campus.
 - networking with other organizations and initiatives in the region.
- Lastly, this ESD initiative also strengthen the university-community engagement.



RCE SOUTHERN VIETNAM



EDUCATION FOR SUSTAINABLE DEVELOPMENT

*AN EXPERIENCE OF
INTERNATIONAL UNIVERSITY*

ESTABLISHMENT

The launching ceremony of RCE Southern Vietnam was on February 23rd, 2011.

Signing the decision to officially establish Center of RCE Southern Vietnam at IU on September 30th, 2011



MAJOR PARTNERS

Formal Education Institutions

- **Open University – Ho Chi Minh City**
- University of Technology,
- University of Natural Sciences,
- University of Social Sciences & Humanities,
- University of Information Technology,
- Faculty of Economics and Institute for Environment and Resources

Non-formal Education Institutions

- **Institute of Educational Research, University of Education – Ho Chi Minh City**
- **Institute for Environment and Resources, VNU-HCM**
- **Centre for Testing and Quality Assurance, VNU-HCM**
- **Department of Resources and Environment – Ho Chi Minh City**

OBJECTIVES

Develop formal education curricula on key areas that affect the human environment.

Engage policy makers and other stakeholders in dialogue on public transport, environmental pollution and climate change adaptation in the region.

Engage and undertake researches on issues relevant for higher education.

Strengthen cooperation on ESD within the region

Develop student's knowledge, experience, attitude and skills to act towards sustainable development

Engage schools and college, communities in ESD.

NETWORKS OF KNOWLEDGE

Climate change



Sustainability Education



Public training



PERFORMED ACTIVITIES

Orienting for RCE Southern Vietnam's operation in short-term
Warming up other partners in RCE Southern Vietnam Network to prepare for plan.

Joining in RCE global and RCE region to strengthen relationship among RCE network as well as follow RCE organization's objectives.

Keeping connection on RCEs network by virtual environment
Integrating contents of ESD into IU's undergraduate curriculum

Discussing with school of Biotechnology to find grant on projects of sustainable development

Joining with department of Industrial System Engineering on research of Traffic and Hospital in HỒ Chí Minh City.

PLANNING

	ACTIVITY	TIME TO PERFORM -2012
	Documenting RCE Southern Vietnam mechanism	May
INSIDE	Organizing the meeting of RCE Southern Vietnam Network	May
	Studying other syllabus in other schools to integrate ESD	Regularly
	Searching and studying materials relating to ESD	Regularly
	Building and updating a website for RCE Southern Vietnam	June
OUTSIDE	Maintaining RCE global network by attending workshops of "UNU-IAS-IGES Joint Research Project on ESD M&E" and "Integrating Sustainability into existing Engineering and Built Environment Curriculum"	July
	Continuously connect with other RCEs via virtual environment	Regularly
64	Cooperating with other partners to strengthen RCEs' activities	Regularly

LIMITATION

Experience

Human resource

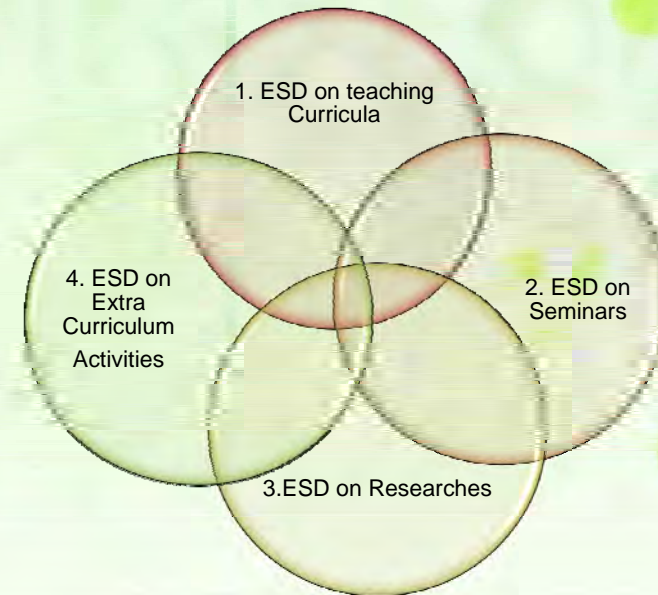
Finance



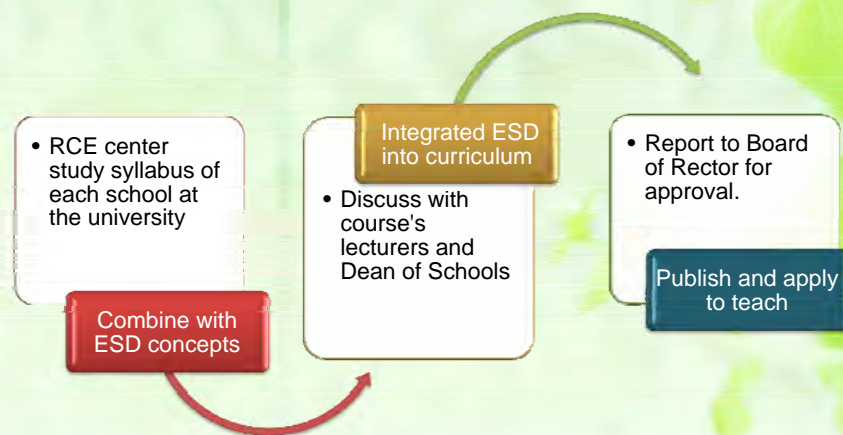


AN EXPERIENCE OF INTERNATIONAL UNIVERSITY

ESD ACTIVITIES IN IU



ESD IN TEACHING CURRICULA



Process to integrate ESD into curriculum at IU

ESD ON TEACHING CURRICULA

- Business, Ethics and Society *in Business Ethics course*
- Corporate Social Responsibility *in Strategy Management course*
- Conservation and Aquaculture Management *in Introduction of Managment and Development of Aquaculture Resources course*
- Microorganisms for Safety Food *in Introduction of Sciences and Technologies for Foods*

ESD ON RESEARCHES



Bridging the gap between academy, industries and local community, a critical problem

→ IU targets to develop the research based on diversified life aspects

Research on Human Resources Development

Research on Environment

Research on Applicable Technology

ESD ON SEMINAR

On
Climate
Change

On Food
Science

On
Renewable
Energy

ESD ON EXTRA CURRICULUM ACTIVITIES

Activities on Training Ethics-Lifestyle

“Please being polite in campus”;

“Say NO to bad behavior in teaching and learning”;

“Green- clean- beautiful in Vietnam National University area”;

“Green Sunday at the campus”.



Activities on Campaign of Volunteer for Community

- Green summer campaign.
- Teaching for unprivileged children campaign (250 classes)
- Teaching English for workers in industrial parks campaign
- Environmental sanitation campaign:
 - Rural road clearance (1500 meter)
 - Land clearance (6000 square meter)
 - Dredging canal (1300 meter)
- Propagation about tools avoiding AIDS, H1N1, pregnant in youth...



FURTHER ACTITVITIES

Continuous
Integrating
ESD on
Curricula

Planning Extra
Curriculum
Activities

ESD
Information
Exchange

Joint Action
Research

Organizing
Seminar



RCE Southern Vietnam

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RCE Yogyakarta

- Universitas Gadjah Mada is the proponent of **Regional Center of Expertise (RCE) Yogyakarta**. The acknowledgement was awarded from the UNU on August 31st, 2007
- **Mission** : Develop concept and technology supporting sustainable development and implement it based on community empowerment
- Currently : **SCS-CEL** is the major program towards implementation
 - 9 major partners
 - Funded primarily by UGM, and partners

April 23, 2012

RCE Yogyakarta

Current Projects

1. Training on “Zero Waste Integrated Farming” by University Agricultural Field Laboratory
2. ESD-based community development at Kemadang village, Gunung Kidul District, Yogyakarta, Indonesia
3. ESD implementation through herbal medicine development at Yogyakarta
4. Community based Reforestation Development at Jambi, East and Central Kalimantan, Central Java
5. ESD implementation on community forest development at Gunung Kidul District
6. ESD on Disaster Adaptation and Mitigation

April 23, 2012

RCE Yogyakarta

The major objectives, focus and activities of this ESD initiative

- The major objective is to develop the mindset of people to increase **the good thinking for three components**: sustainable for the environment, profitable for the economic and rightful for the humanity.
- The focus and activity of ESD initiative at University Farm of Gadjah Mada is Sustainable Integrated Farming with the use of **6 M and 7 R** principles for the final target as **Zero Waste Integrated Farming**.

April 23, 2012

RCE Yogyakarta

The 6 M, are: **man, money, materials, method, machine and market; many materials** are produced in University Farm of Gadjah Mada

- a. **The supplement and nutrition:** Dragon fruit, Rochelle tea, Matoa fruit, Durian fruit, Cow milk, Chickens, Goats, Cows, Fishes etc.
- b. **The materials product for organic farming:** organic leaf compost, liquid fertilizers, several types of manure, organic pot, vertical agriculture (verticulture), renewable energy (biogas), low energy water pump etc.
- c. **The conservation and development of several animal and vegetation by the research:** Bali cows, Pelung chickens, Yogyakarta orchids, several fruit plants, several herbal plants, Melon plants, corn plants etc.



The 7 R, are: **reduce, reuse, recycle, replant, replace, repair and report**; the University Farm has some innovation activities: out bond, eco and farm tourism, farm training, collaboration research, training of trainer etc.



RCE Yogyakarta

The main learning objectives of this initiative

1. Knowledge-based learning

Increase the knowledge and understanding about the principal of education in the field of ESD particularly in zero waste agriculture.

2. Skill-based learning

The targeted people experience how to manage eco-friendly agriculture and apply the techniques as well as methods of zero waste agriculture.

3. Value-based learning

People could contribute to the action of zero waste agriculture for sustainable environment. They can promote and expand the importance of this practice to the society.



The main benefits that the multi-stakeholder partnership established by the RCE have provided to the implementation of this initiative

The main benefit for stakeholders is the increase of the members' mindset about RCE; after following the programme in Gadjah Mada University Farm, the member of stakeholders can provide and apply RCE principles in their places, company or regions, and they can also become development agent (agent of change) to stimulate the surrounding men / conditions.



The three pillars of sustainable development

1. Environmental

ESD initiative with the role of photosynthesis of the vegetation can open the mindset of training members to treat the environment rightly to obtain green and clean environment not only for the growth of the plants but also for all living on the earth.

2. Social

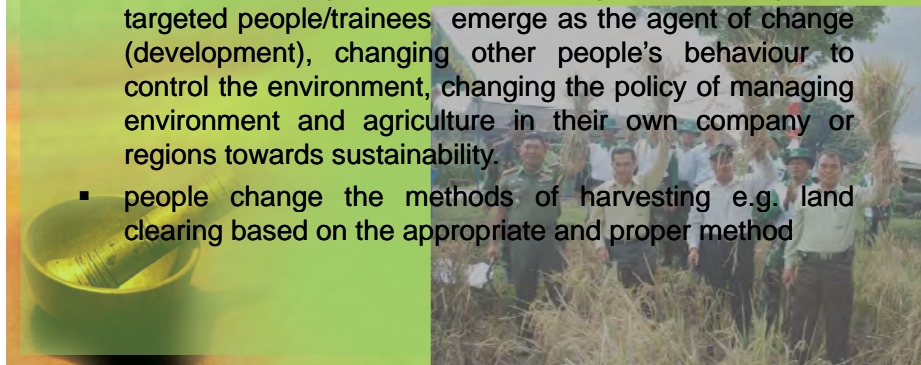
ESD initiative shows the training members that all processes in the world must be in equilibrium conditions, so every activities of a person must be in harmony with other people, animals, and the environment; we can not leave anything behind.

3. Economic

A person who works rightly and harmonically with the environment can automatically find good opportunities and relations which can be used for business.

The main outcomes and achievements of this initiative

- 1) Achieving ESD learning
 - society awareness to apply three pillars of ESD
 - awareness of the importance in applying ESD concept through the actions
- 2) The promotion of sustainable development
 - after completing the study in integrated farming, the targeted people/trainees emerge as the agent of change (development), changing other people's behaviour to control the environment, changing the policy of managing environment and agriculture in their own company or regions towards sustainability.
 - people change the methods of harvesting e.g. land clearing based on the appropriate and proper method



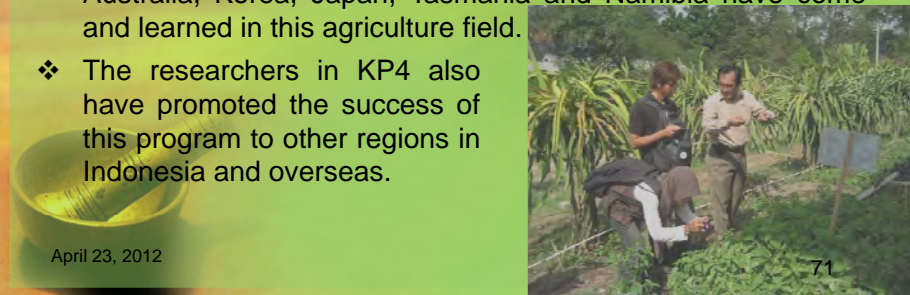
Primary success in its implementation

- The methods and the management of this zero waste agriculture has been adapted by the farmers from Namibia, Africa and has been successfully applied in large area around 300 ha.
- Ngawi Forestry Board, East Java has applied the organic pots for planting perennial plants in sandy area for coastal plantation.
- KP4 has been successfully provided qualified rice seed (certified) for local farmers.



Major strengths and advantages

- ❖ KP4 (Gadjah Mada University Farm) has many examples of zero waste agriculture application such as bio-fertiliser, bio-herbicide, bio-pesticides which are advantageous to the environment as the methods are non destructive to the environment.
- ❖ This techniques increase the income of local farmers.
- ❖ The method of zero waste agriculture has been recognised and admitted internationally as a number of countries such as Australia, Korea, Japan, Tasmania and Namibia have come and learned in this agriculture field.
- ❖ The researchers in KP4 also have promoted the success of this program to other regions in Indonesia and overseas.



The primary weaknesses and constraints experienced during this ESD initiative

Weaknesses:

- The tools and facilities for training need to be upgraded.
- The limitation in the number of human resources in accommodating the need of facilitating the courses for huge amount of people.

Primary challenges:

- The increase of certification for other varieties of rice.
- The increase of the capability of human resources for English language since the targeted people/trainees also come from overseas.



Conclusions:

The ESD initiative has great contribution to the development of ABCG (Academic, Business, Community, and Government) within the region:

A: centre of learning process and research land area

B: media for CSR (Corporate Social Responsibility)

C: knowledge, skills and income of local farmers

G: increase the capacity building of government staff



SESSION THREE:
Effective ESD Policies and Initiatives
Day One: 13:15 – 14:45

Session Chair: Zainal Sanusi, Malaysian Ministry of Higher Education

Presentations:

- 1) *The ASEAN EE Action Plan: Its coverage of ESD and how the Government of Thailand is responds to this plan*
Savitree Srisuk, Ministry of Natural Resources and Environment –Department of Environmental Quality and Promotion
- 2) *Repositioning the Environment Pillar in the ESD Context: a UNEP strategy for assisting governments in achieving their environmental goals*
Ampai Harakunarak, UNEP-ROAP
- 3) *Whole-school and Green school approaches to integrating ESD*
Robert Steele, Systainability Asia and AtKisson Group
- 4) *Strengthening Institutional Framework on Education for Sustainable Consumption – A pilot project in Indonesia*
Darwinia Sri Widjajanti, Yayasan Pembangunan Berkelanjutan (The Indonesian Foundation for Sustainable Development)

The ASEAN Environmental Education Action Plan

Ms. Savitree Srisuk talked about the ASEAN Environmental Education Action Plan, set between 2008-2012 and adopted the theme “Environmental Education for Sustainable Development”, the Plan’s coverage of ESD and how the Government of Thailand is responding to it. She mentioned the aims of the Action Plan and its four Target Areas, namely: 1) Formal sector; 2) Non-formal sector; 3) Human resource capacity building and networking; and 4) Collaboration and communication and their corresponding strategic actions/ priorities. She described the implementation mechanisms as involving 1) ASEAN Working Group on Environmental Education which implements and facilitates regional cooperation and communication; 2) ASEAN Member States where individual states implement actions as well as M & E of the Plan’s activities. This, she said was done through a Working Group on EE that each country has and a National EE Focal Point where the Ministries of Education and Environment link to coordinate the implementation, and 3) ASEAN Secretariat that acts as the coordinator of the Working Groups.

Ms. Srisuk further described Thailand’s response to the Action Plan which include 1) Designation of working areas in education, training and research of the environment in the Ministry of Education’s Department of Environmental Quality Promotion (DEQP) and Ministry of Natural Resources and Management (MONRE) where EE sections in their respective departments exist, and 2) Annual Working Group Meeting in May 2012 when reporting will be done on achievements under the Plan. She pointed out that Thailand is also involved in several regional events and national activities. To fully benefit from this regional network, a full EE-ESD working group in each country is really needed,

not just a focal point. Ms. Srisuk concluded that the regional cooperation should be seen as a window of opportunity to develop the quality and effectiveness of EE/ESD implementation in Thailand.

Question and Answers

Prof. Mario Tabucanon asked what monitoring form/structure was being used, whether there was a set criteria, and how that would be reflected in the next round. She answered the form/structure was actually difficult to respond to and it was not easy to link the activities in question to M&E. Her personal opinion was that change in action in individuals' daily lives should be considered as an effective though indirect way of judging the effectiveness of a project or initiative.

Repositioning the Environment Pillar in the ESD Context

Dr. Ampai Harakunarak introduced United Nations Environment Programme's (UNEP) on-going mission of using Environmental Education and Training (EET) to promoting attitudes and values systems that influence behaviour. She also spoke about UNEP's key messages including UNU serving as a catalyst, advocate, educator and facilitator to promote the wise use and SD of the global environment. She stressed that recently, UNEP has reorganised itself into 6 priority areas (four of which are Climate change, Ecosystem management, Environmental Governance and Resource Efficiency/Sustainable Consumption and production) based on scientific evidence and also emergence from global and regional consultation.

Dr. Harakunarak went on to address: 1) UNEPs EE policy support and initiatives, particularly the use of UNEP's EET Strategy to strengthen the environment pillar during the UN DESD (2005-2014); 2) Building climate resilience through adaptation network (i.e., knowledge building and information exchange, access to finance and capacity development), and 3) Promoting sustainable lifestyles and resource use (i.e., resource management, cleaner production, sustainable consumption, sustainable urban development, and policies for resource efficiency). She then showed examples from Asia and the Pacific of the support UNEP is offering in terms of resource efficiency and SCP. She also said UNEP is also working with ASEAN through database development and other ways with respect to EE/ESD policy and practice.

Dr. Harakunark drew an analogy regarding the need to link EE to people and hence implement the four thrusts of ESD for a lasting impact by referring to the recent flooding in Thailand and the resultant browning of all tree leaves yet some survived based on the depth of their roots. On ESD M&E, she stated that the most important indicators is from the budget, the institutions and mandates, because once they are given authority to effect implementation, they have to go through their own auditing process. She pointed out that the publication "Here and Now" makes several recommendations related to specific policy and initiative interventions that governments could make to help improve the quality of their ESD implementation.

Question and Answers

Dr Ofei-Manu asked whether there were overlaps taking place regarding the six UNEP priority areas and if so what was being done. She answered that for UNEP, the six priority areas emerged from global and regional consultation trying to bridge them into other agencies' areas as well.

Whole-school and Green school approaches to integrating ESD

Mr. Robert Steele first introduced the System Iceberg concept where events, outcomes and tensions are impacted by human patterns and behaviours. Human behaviours in turn are impacted by the systems in place (the infrastructure, laws, policies, etc.) and our world-view/mindset shapes the systems we put in place. He said leveraging change at the systems level therefore was crucial and that was the focus of the presentation in the context of the whole school approach. He pointed out that at the beginning of the decade, first education was “about” sustainability; then it moved towards education “for” sustainability and finally to education “as” sustainability.

Referring to sustainability as Transformative Education, Mr. Steele also touched on the four pillars of learning (education) in UNESCO's seminal publication titled “Learning: the treasure within”. He then linked the “learning to transform” pillar to the factors that drive whole school transformative change, namely: values, relations, structures and teaching strategies. It was further explained that the dimension of the whole school must start with values and a vision, then move on to principles and guidelines, and then become real in practices and behaviours. ESD must be included in materials of all disciplines, the methodology and pedagogy, and the ethos and culture, and finally it should engage with the wider community. The main features of the whole school approach we also explained as: 1) How a school is organised and operates; 2) School design; 3) Development and management of school grounds; 4) Reduction and minimisation of resource use by the school; 5) Enhanced connections between the school, its community and other educational institutions; 6) Conservation and protection of heritage values in the school and its grounds; and 7) Reorientation of the curriculum and the teaching and learning towards sustainability.

Mr. Steele gave examples of sustainable school frameworks of Oregon in the US which uses 6 key dimensions and UK's Sustainable School Initiative that uses the integrated approach. He proceeded to define a Compass School as any school that actively uses the Compass sustainability tool, be it in the classroom, as a planning tool or as a model for actual sustainability. He explained how the Compass School actively integrates and infuses sustainability education into all aspects of the school, including its vision and mission, how it is shaped around N-ature, S-ociety, E-conomy, W-ell-being. Next, he talked about the portals of entry namely 1) School Leadership & Governance; 2) Teaching and Learning (including the curriculum); 3) Operations and Support Services; 4) Buildings and Grounds; and 5) Networking and Partnerships with external community and others. The Compass School then puts the 4 dimensions and 5 portals into practice by involving most of the stakeholders in the local area. Finally he talked about the Green School in Bali, Indonesia, its philosophy of making full use of the land and several other practical sustainability features of the school.

Question and Answers

Prof. Mario Tabucanon asked that since a school is only a part of a school system, existing with other schools, the local governments, etc. whether the presenter would take a new look at the definition of the term “whole school”. Mr. Steele acknowledged the dilemma they are constantly faced with trying to introduce the Compass tool. He answered that they are presently working primarily with international schools, and to want to change the system within the system at this point in time, slightly re-orienting the existing accredited frameworks in the schools with some modification in the context of the Compass is better.

Strengthening Institutional Frameworks on Education for Sustainable Consumption

Ms. Darwinia Sri Widjajanti initially talked about the importance of SCP and then gave the background to the Marrakech Process. She also discussed several practices covered under framework of Green Growth. She then described the components of the sustainable production side (life cycle of the production process – eco label –safety assurance) and those of the sustainable consumption side (behaviour).

Ms. Widjajanti pointed out the features of the type of consumption that should be promoted namely 1) Minimum use of natural resources; 2) Minimum negative impacts to the environment; 3) Respect for social equity; and 4) Use of local products, local resources, and local knowledge and culture. She continued that ESC is more realistic and relates to our daily life activities and can link to larger ideas of sustainable development. Also, she described the basic learning outcomes and competencies expected from ESC.

Regarding the mainstreaming of ESD in Indonesia, Ms. Widjajanti further provided the historical and operational background of EE/ESD/ESC. She said that in practice even though the two concepts are currently inseparable, EE is more popular, while ESD is still relatively new for policy makers and the public in general. Policy-wise, the Ministry of Environment and the Ministry of Education are now engaged in the joint implementation of ESD in addition to other interagency linkages among the ministries. The Adiwiyata Program, led by the Ministry of Environment, has been promoting green school/whole school models in over 6,000 schools.

Ms. Widjajanti explained the background to the current pilot project in Indonesia initiated by UNEP for Strengthening Institutional Frameworks on Education for Sustainable Consumption. She also talked about the informal and non-formal Education in Indonesia, touched on the various strategies by which ESC is disseminated and listed the relevant national SD priority themes as follows: 1) Safety and Healthy Food; 2) Saving water and energy; 3) Food security; 4) Eco-friendly public transportation; 5) Biodiversity preservation; 6) Development of new renewable energy; and 7) Waste management. She said the follow-up actions include the following: 1) Development and dissemination of ESC guidelines, 2) Implementing the various pilot projects, 3) Monitoring and evaluation by documenting the learning processes; and 4) Recommendations for ESC development in the future.

Question and Answers

Mr. Justin Alick asked if there was any engagement with religious organisations as a form of education and if there has been any engagement with members of clergy as trainers or teacher trainers in ESD. He wondered if anyone had any interesting story to tell regarding approaching religion as an educational institution since that has a lot of potential entry points for ESD. Ms. Widjajanti responded by giving an example of the “Eco-Pesantenan”, a Muslim school that tries to use the water collected from their prayer rituals to water their organic gardens.

The ASEAN EE Action Plan:

Its coverage of ESD and how the Government of Thailand responds to this plan

Ms.Savitree Srisuk
Environmental Education Section
Department of Environmental Quality Promotion

ASEAN EE Action Plan :AEEAP 2008-2012

The plan adopts the theme **Environmental Education for Sustainable Development**

EE is the key to the overall ESD strategy since humanity's value for and understanding of nature, and its sustainable use and management of natural resources form the basis for sustainable economies, harmonious societies and healthy people. The increase capacity and development of EE in the AMCs activities will contribute directly towards the Asia-Pacific Regional Strategy for Education for Sustainable Development.

ASEAN EE Action Plan **Aims** : AEEAP 2008-2012

The AEEAP 2008-2012 serves as an effective framework for enhancing the awareness of environmental management for sustainable development, and acts to accelerate the development and advancement of environmental education as a key integrating component in the AMCs in close concert with the UN DESD.

ASEAN EE Action Plan **Target Areas and Goals** : AEEAP 2008-2012

Target Area 1 : Formal Sector

Goals :

- EE incorporated at all levels of the formal sector (relative to national and directives) in each of AMS
- Advancement of EE through active and continuous research

4 Strategic Actions / Priority

1. Establish a baseline assessment on the extent of EE/ESD included in national curricula
2. Establish a baseline assessment on the extent teacher education/training program address EE/ESD theory and practice
3. Ensure that QA (national standards) require the inclusion of EE/ESD issues in relevant disciplines
4. Promote research on EE/ESD issues

ASEAN EE Action Plan
Target Areas and Goals : AEEAP 2008-2012

Target Area 2 : Non-formal Sector

Goals :

- Non-formal sector enhanced in AMS through the integration of cultural, traditional and contemporary knowledge with EE to address local, regional and international environmental issues.

5 Strategic Actions/Priority

1. Promote sustainable schools (Eco-school/green schools) concept and practice.
2. Develop EE curricula, materials and resources-locally relevant / ESD complement
3. Promote EE as a key integrating tool for the development of “environmentally sustainable city” in each AMS
4. Use appropriately designed and targeted EE for promotion of environmentally sustainable business practices
5. Promote ASEAN Environmental Week

ASEAN EE Action Plan
Target Areas and Goals : AEEAP 2008-2012

Target Area 3 : Human Resource Capacity Building

Goals:

- Trained human resources pool on EE and ESD in each AMS

4 Strategic Actions/Priority:

1. Establish a baseline of EE for SD training needs for stakeholders.
2. Provide EE/ESD training opportunities for key stakeholders.
3. Provide ASEAN EE for SD Leadership Training Programs for key target groups.
4. Create an ASEAN EE/ESD scholarship scheme for region's stakeholders.

ASEAN EE Action Plan
Target Areas and Goals : AEEAP 2008-2012

Target area 4 : Networking, Collaboration and Communication

Goals:

- Improved manner of exchange of info./skills/resources in region
- Increased EE support/training through networks at local /national, regional and international levels

5 Strategic Actions/Priority:

1. Actively promote/manage AEEID as central platform for info dissemination, exchange and learning for EE/ESD
2. Develop ASEAN-wide Youth for SD Network.
3. Establish ASEAN sustainable/eco/green school network.
4. Establish annual ASEAN EE Conference/Forum for the region.
5. Build and strengthen existing networks of NGOs, universities and media for EE/ESD.

Implementation Mechanisms

- ASEAN Working Group on Environmental Education (implementation/facilitate regional cooperation and communication)
- AMS (implement state's actions/monitoring and evaluation of the Plan's activities)
National EE Focal Point (country level coordinator for implementation at national level/ monitoring and evaluation of country activities and achievements)
- ASEAN Secretariat

Respond of Thailand

- Attended the Conference on Education for SD Formulating an Action Plan for ASEAN (2008 - 2012) , 11-13 July 2006 in Yangon, Myanmar
- DEQP has designated from MONRE as National EE Focal Point since 2009
- Attended the Annual Meeting of AWGEE (Brunei, Cambodia, Indonesia)
- Up-coming 4th Meeting during 29-30 May in Vientiane, Laos PDR.- Report of AEEAP 2008-2012 Implementation

Respond of Thailand

Regional Activities 2008-2012

- Environmental Youth Camp – Brunei
- Environmentally Film Festival “Change the Climate Change” – Thailand
- ASEAN+3 Leadership Program on Sustainable Production and Consumption - Philippines/Thailand
- ASEAN Eco-school Award- Malaysia
- ASEAN Environment Year 2012- Malaysia

Respond of Thailand

National Activities

- Thailand EESD Master Plan 2008-2012 has publicized
- The 1st Thailand State of EESD 2009-2010
- Expansion of EE target groups and actors
- Implementation on EESD from non- governmental agencies /private sector are actively and vigorously developing
- Eco-school program (DEQP)/ Honda Green School
- Youth Training/Camp
- EE network widening
 - awareness raising groups/create communication platform/diverse activities
 - green consumption issues

View on Regional/ASEAN Cooperation

- Regional cooperation should be seen as *a window of opportunity* to develop the quality and effectiveness of EE/ESD implementation in Thailand
 - needs both national/regional platform of sharing regularly
 - officially national EE/ESD network or working group



Repositioning the Environment Pillar in the ESD Context: a UNEP strategy for assisting governments in achieving their environmental goals

Mahesh Pradhan (Nairobi) and Ampai Harakunarak (Bangkok)
Division of Environmental Policy Implementation (DEPI), UNEP

UNU-IAS, IGES & UNESCO Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development
Bangkok, 23 April 2012

Contents



- UNEP mission
- EE for SD
- UNEP EE policy support and Initiatives
- Resource efficiency and green economy in ESD context: ESC policy recommendations

UNEP mission



Key messages:

- United Nations Environment Programme (UNEP) acts as a catalyst, advocate, educator and facilitator to promote the wise use and sustainable development of the global environment.
- UNEP uses its expertise to strengthen environmental standards and practices while helping implement environmental obligations at the country, regional and global levels.
- To accomplish this, UNEP works with a wide range of partners, including United Nations entities, international organizations, national governments, academic and research institutions, non-governmental organizations, the private sector and civil society.



1972-2012:
Serving People and the Planet



UNEP mission



Six priority areas:

Climate Change	Post-Conflict and Disaster Management	Ecosystems Management	Environmental Governance	Harmful Substances and Hazardous Waste	Resource Efficiency/Sustainable Consumption & Production

UNEP mission



UNEP EET

UNEP's Environmental Education and Training (EET) promotes attitudes and value systems that influence environmentally ethical behavior by developing understanding, skills and values that will enable people participate as active and informed citizens in the development of an ecologically sustainable and socially just society.

The Environmental Education and Training Unit (EETU) is responsible for the implementation of Environmental Education and Training activities in UNEP. The EETU is located in the Division of Environmental Policy Implementation (DEPI).

Division of Early Warning and Assessment (DEWA) Peter Gilruth <ul style="list-style-type: none"> Office of Chief Scientist Scientific Assessment Early Warning Capacity Development UNEP-WCMC UNSCLEAR 	Division of Environmental Law and Conventions (DEL/C) Bakary Kaite <ul style="list-style-type: none"> MEA Implementation Support Environmental Law and Governance Strategic Policy and Facilitation 	Division of Technology, Industry and Economics (DTIE) Sylvie Lemmer <ul style="list-style-type: none"> Sustainable Consumption and Production Energy International Environmental Technology Centre (IETC) Chemicals Economics & Trade OzoneAction
Division of Regional Cooperation (DRC) Tomoko Mitsuoka <p>Coordinates:</p> <ul style="list-style-type: none"> UN Delivering as One at regional / country level South-South Cooperation Collaboration with Major Groups and Stakeholders <p>UNEP regional offices:</p> <ul style="list-style-type: none"> Africa (Nairobi), Asia/Pacific (Bangkok), Europe (Geneva), Latin America and Caribbean (Panama City), North America (Washington DC), West Asia (Manama) <p>UNEP liaison offices:</p> <ul style="list-style-type: none"> Addis Ababa, Brussels, Cairo, New York and country offices (Beijing, Brasilia, Mexico City, Moscow, Pretoria) 	Division of Environmental Policy Implementation (DEPI) Ibrahim Thiam <ul style="list-style-type: none"> Coastal and Marine Fresh water and Terrestrial Ecosystems Climate Change Adaptation Ecosystem Services Conflict and Disaster Management Environmental Education Training Programme Planning UNEP / UNEP Poverty & Environment Facility 	Division of Communications and Public Information (DCPI) Nick Hurrell (i.i.) <ul style="list-style-type: none"> Media Speech-Writing & Editing Internet Publishing Audio-Visual Library Special Events Billion Tree Campaign Children, Youth, Sports and Environment

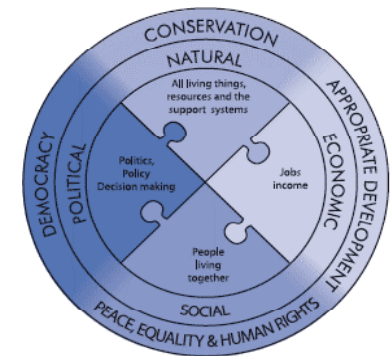
AS OF SEPTEMBER 2011

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EE for SD



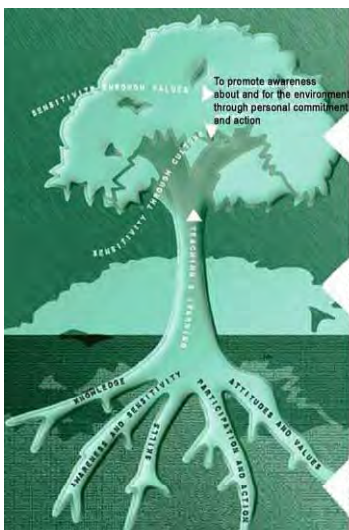
The framework of the DESD International Implementation Scheme (2006) suggests that full-fledged ESD requires integration of the three SD dimensions (socio-cultural, environment, and economic).



UNESCO's model of the interlocking dimensions of sustainability

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EE for SD



Environmental Education (EE) is a multi-disciplinary approach to learning that develops the knowledge, awareness, attitudes, values and skills that will enable individuals and the community to contribute towards maintaining and improving the quality of the environment.

- **Awareness and sensitivity** to the environment and related issues;
- **Knowledge and understanding of the environment and the impact of people on it;**
- **Attitudes and values** that reflect feelings of concern for the environment;
- **Skills** involved in identifying, investigating, and problem solving associated with environmental issues;
- A sense of responsibility through **participation and action** as individuals, or members of groups, in addressing environmental issues.

Source: <http://efs.tki.org.nz/Curriculum-resources-and-tools/Environmental-Education-Guidelines/The-Aims-of-Environmental-Education>

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UNEP EE policy support and Initiatives



UNEP's Environmental Education and Training (EET) Strategy clearly articulates an appropriate path for UNEP to **strengthen the Environment pillar** during the United Nations Decade of Education for Sustainable Development (2005-2014) by adopting a holistic approach (biophysical, social, cultural, political, and economic) and the interrelationships among them.



UNEP's EETU supports and strengthens implementation of UNEP's six cross-cutting thematic priorities by harnessing the potential of universities as vehicles of change and transformation within communities. This is accomplished through educating, training and creating awareness within universities and across governments, training centres, non-governmental organizations' and the private sector.

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UNEP EE policy support and Initiatives



Building climate resilience through adaptation network

As part of the global initiative to fill up large gaps in knowledge regarding climate change adaptation, UNEP in partnership with key UN and other international and bilateral agencies organize Climate Change Adaptation Forum that aims at:

- providing **knowledge and information** on adaptation
- facilitating **access** to international adaptation **finance mechanisms**
- informing development **planning and investment** decisions to support adaptation
- **developing capacity** of national and local planners, development partners and communities



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UNEP EE policy support and Initiatives



Promoting sustainable lifestyles and resource use

- **Resource management:** Particular focus on water, energy, waste and minerals
- **Cleaner production:** work in various sectors in order to decrease the environmental footprint of the industry; life cycle approach; sustainable product design
- **Sustainable consumption:** Eco-labels, accreditation and certification schemes, campaigns; sustainable public procurement
- **Sustainable urban development:** Sustainable buildings and climate initiative, green architecture
- **Policies for resource efficiency:** Green Economy Initiative, International Panel on Resource Management.

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What UNEP is doing – Resource Efficiency and Sustainable Consumption and Production



Some examples from Asia and the Pacific

- **Viet Nam:** Supporting the development of a national action plan on SCP
- **Lao PDR:** Capacity building and national planning on SCP and resource efficiency
- **India:** Supporting the development of a national set of criteria on sustainable tourism
- **Philippines:** Support capacity building and assessment of opportunities for SCP and green economy
- **Indonesia:** Study on greening the agriculture sector
- **South Korea:** Independent review of the national green growth strategy
- **Regional:** Support the development of policies on SCP (regional capacity building and policy support)



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UNEP EE policy support and Initiatives



To address current global multiple crises, there is a need to lay a solid foundation for shared growth and sustainable development - a green economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

The shift towards a **green economy requires education for sustainable development** including training in new job skills and newly required health systems.



In joint efforts with various partners, UNEP through the Green Economy Initiative (GEI) is focusing on robust economic research and policy analysis. The GEI is leveraging significant green economy expertise within its global network of partners, which includes other UN organizations, academic institutes, think tanks, businesses, and environmental groups. An area of GE expertise aims to **identifying the enabling conditions and policy options for making a shift towards a green economy.**

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UNEP EE policy support and Initiatives



ASEAN EE/ESD policy and practice



- Under the ASEAN Cooperation on Environmental Education for Sustainable Development initiative, through the **ASEAN Working Group on Environmental Education (AWGEE)**, the first **ASEAN Environmental Education Action Plan (AEEAP 2000-2005)** was adopted by the environment ministers in October 2000, and the second AEEAP (2008-2012) in September 2007.
- AEEAP serves as a framework for collaborative action in the development and implementation of EE activities in ASEAN whose aim is to enhance overall management of the environment in a sustainable manner. Target areas of AEEAP include formal education, non-formal education, manpower capacity building, and networking, collaboration and communication.



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UNEP EE policy support and Initiatives



ASEAN EE/ESD policy and practice



- The AEEAP 2008-2012 theme is “**Environmental Education for Sustainable Development**,” with the aim to serve “as a framework for enhancing the awareness of environmental management for sustainable development, and acts to accelerate the development and advancement of environmental education as a key integrating component for achieving sustainable development in the AMS in close concert with the UN DESD.”
- Apart from wider collaboration with ASEAN EE initiatives, UNEP as a partner in implementing AEEAP 2008-2012, supports the commission of ASEAN Environmental Education Inventory Database (AEEID) - a dynamic and interactive on-line resource for networking, collaboration, and exchange of information and experiences.

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ESC policy recommendations



Resource efficiency in ESD context

To realize concrete actions towards fulfilling the recommendations of the Johannesburg Plan of Implementation related to the development of a 10-year framework of programmes for sustainable consumption and production, UNEP’s publication on Education for Sustainable Consumption <*HERE and NOW! Education for Sustainable Consumption: Recommendations and Guidelines* (2010)> focuses on education within the context of formal education and although life-long learning and professional training.

The purpose of *Here and Now!* is:

1. to provide policymakers with an instrument to understand the importance of education for sustainable consumption in supporting other policy goals such as citizenship and democratic participation, environmental protection or energy and climate policies.
2. to give policymakers guidance on how to integrate ESC into existing educational and sustainable development strategies
3. to provide educators with tools and instruments in order to include ESC in curricula.

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ESC policy recommendations



Specific ESC policy and initiative interventions (before the end of 2014) that governments could make to help improve the quality of their ESD implementation are recommended by *HERE and NOW!*, including:

1. Ensure that **education institutions** (*executive agencies/commissions, legal, funding, M&R*) reflect in their daily management the priorities given to sustainable development.
2. Include themes, topics, modules, courses and degrees about education for sustainable consumption in **established curricula**.
3. Encourage **research** in education for sustainable consumption-related areas.
4. Strengthen **connections** between researchers, lecturers, teacher trainers and socio-economic actors and stakeholders.
5. Enhance **cooperation** between professionals from diverse disciplines in order to develop integrated approaches to education for sustainable consumption.

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ESC policy recommendations



Specific ESC policy and initiative interventions (before the end of 2014) that governments could make to help improve the quality of their ESD implementation are recommended by *HERE and NOW!*, including:

6. Facilitate **teaching and teacher-training** that strengthens global, future-oriented, constructive perspectives within education for sustainable consumption.
7. Reward **creative, critical, innovative thinking** related to education for sustainable consumption.
8. Ensure that education for sustainable consumption respects the importance of **indigenous knowledge** and recognizes alternative lifestyles.
9. Foster **intergenerational learning** as an integrated aspect of education for sustainable consumption.
10. Provide opportunities for practical application of theoretical study through **social involvement** and community service.

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Thank you!!



For more information:
<http://www.unep.org/>



Session on Effective ESD Policies and Initiatives

Effective education for sustainability or ESD is not just a curriculum issue. It requires the involvement of the whole school.

Whole School and Green School approaches to ESD

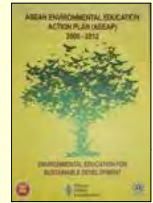


AEEAP 2008 – 2012 STRATEGIC ACTION/PRIORITY 3

4.2.2 Establish an ASEAN sustainable/green/eco-school network (ASEAN Level Activity).

Activities Required to Implement this Strategy

1. Creation of a regional technical group to develop criteria and policy for what constitutes an ASEAN eco-school.
1. Identify existing eco-/sustainable/green schools in each AMC.
2. Identify private sector partners to support the network.
3. Branding of 'ASEAN eco-/sustainable/green school' and creation of recognition programme (certificate, medal etc).
4. Disseminate information on ASEAN eco-/sustainable/green schools via AEEID and ASEAN EE newsletter and create web portal for eco-/sustainable/green schools to communicate with each other and for exchange of experience and ideas.
5. Create regional exchange platform at future ASEAN EE Forum for eco-/sustainable/green schools.



Sustainability Asia / AtKisson Group International 2012

Sustainability as Transformative Education

- ❑ **Education “about” Sustainability – Accommodating...** is an awareness lesson or theoretical discussion (emphasis on content, information, knowledge... easily integrated into curricula and existing paradigms ... may not change values and behaviours).
- ❑ **Education “for” Sustainability – Adaptive – Learning for change** ... is the use of education as a tool to achieve sustainability (includes knowledge, values and skills ... reorientation of curricula but within existing paradigms... values contradictions between theory and practice)
- ❑ **Education “as” Sustainability – Transformative – Learning AS Change** ... Emphasis on process, quality learning, development of the whole person, involvement of the whole school community, and transformative learning experiences. Schools provide the role model for sustainable practices through values & behaviour, holistic learning experiences, and participative, collaborative, shared leadership / decision-making.

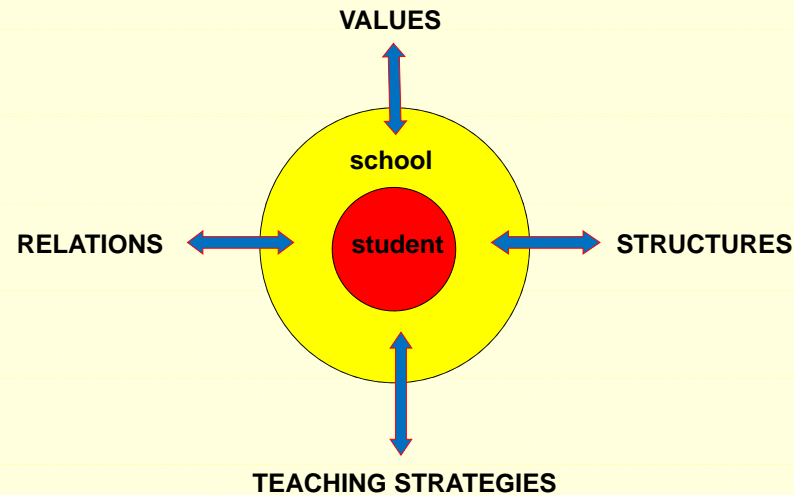
Source: S. Sterling, Sustainable Education, Re-visioning Learning and Change, 2001.

Sustainability Learning Competencies for the 21st Century

In the UNESCO report 'Learning: the treasure within' (UNESCO, 1996), Jacques Delors (1996) recognizes four pillars for education of 21st Century:

- Learning to be
- Learning to know
- Learning to do
- Learning to live together
- Learning to transform

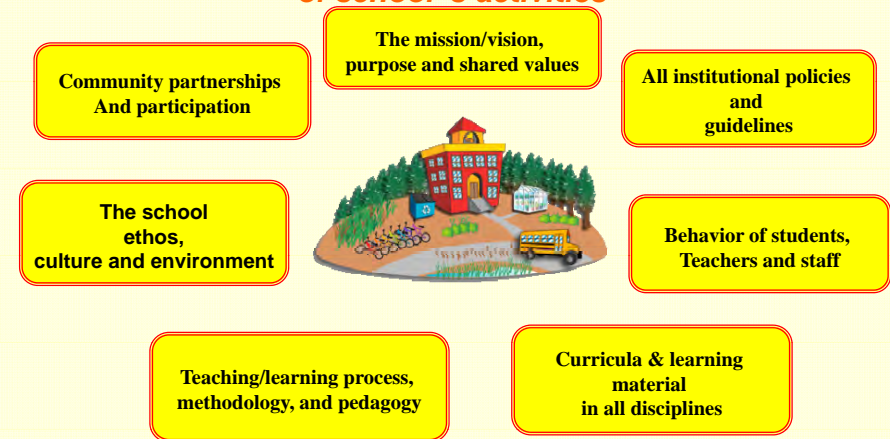
Whole School Transformative Change



Sustainability Asia / AtKisson Group International 2012

Dimensions of a Whole School Approach

Values, Principles and Practices reflected in every aspect of school's activities



Sustainability Asia / AtKisson Group International 2012

What a whole-school approach to Sustainability means ...

A whole-school approach to sustainability emerges from the school vision and is articulated in all facets of school life:

- ❑ how the school is organised and operates;
- ❑ school design (within the limitations of existing structures);
- ❑ development and management of school grounds;
- ❑ reduction and minimisation of resource use by the school (water, energy, products and materials);
- ❑ enhanced connections between the school, its community and other educational institutions;
- ❑ conservation and protection of heritage values in the school and its grounds; and
- ❑ reorientation of the curriculum and the teaching and learning towards sustainability.

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Features of a Whole School Approach to ESD

Using a Whole-School Approach Means...

- ❑ **School leadership** uses democratic and participatory whole-school decision making processes & includes EE in school planning
- ❑ **Whole School participation** in action & improvement plans
- ❑ **Reciprocal** community, family and stakeholder **partnerships**
- ❑ **Participatory learning approaches** to develop critical thinking skills, intercultural understanding, participation and citizenship
- ❑ **Integration of EE and ESD approach across all curriculum subjects**
- ❑ **Key concepts & values** reflected in hidden, non-formal curriculum
- ❑ **Professional development** for teachers, managers and partners
- ❑ **Greening** the school environment
- ❑ **Reducing the school's ecological footprint and use of resources**
- ❑ **Monitoring, reflection & evaluation** inform future actions
- ❑ The school becomes a **'learning organisation'**
- ❑ **Reflective practice and action research** among teachers

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SUSTAINABLE / GREEN / ECO SCHOOL FRAMEWORKS & EXAMPLES

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Oregon Sustainable Schools Framework



Source: Sustainable Oregon School Initiative: <http://www.zerowaste.org/schools/about.htm>

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The Oregon Sustainable School Framework

Category	Topic Area	General Topic Area issues
FACILITIES AND OPERATIONS	Buildings/Facilities	New construction, building operations and maintenance
	Landscaping	Landscaping design and maintenance
	Indoor Environment / Toxics	IAQ (indoor air quality), chemical management (pesticides, cleaning, lab, other)
	Energy	Amount and source of all energy used
	Water	Water coming to and from facility, both piped and naturally.
SYSTEMS AND SERVICES	Material	Waste prevention, recycling, product stewardship
	Food and Wellness	Choices / sources of foods, Wellness policies, food gardens, farm to school, fitness
	Transportation	School vehicles, maintenance shop practices, alternative transportation options
	Purchasing	Sustainability of goods and services, product stewardship, purchasing infrastructure; Bulk and cooperative purchasing
COMMUNITY & CULTURE	Managing Sustainability	System and framework to guide school district progress toward sustainability
	Community Involvement	Community support to school, learning opportunities in community, partnerships, school outreach to community
	Cultural Proficiency	Student and staff diversity, cultural understanding, language, communication
EDUCATION	Student/Teacher Sustainability Education	Formal (classroom), Non-formal (outside classroom) and informal education (school environment), service learning
	Sustainability Education for Non-instructional Staff	Opportunities and needs for sustainability education of staff (operations, administrators)

Source: Sustainable Oregon School Initiative: <http://www.zerowaste.org/schools/about.htm>

Source: [http://www.teachernet.gov.uk/sustainableschools/upload/s3%20\(2008\).pdf](http://www.teachernet.gov.uk/sustainableschools/upload/s3%20(2008).pdf)

Integrated Approach



Curriculum

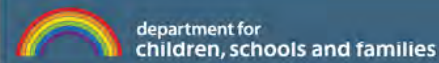
- Teaching and learning
- Pupil achievement
- Pupil well-being

Campus

- Operating and capital budgets
- Pupil involvement
- Staff morale
- Built and natural environment

Community

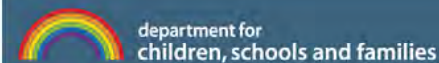
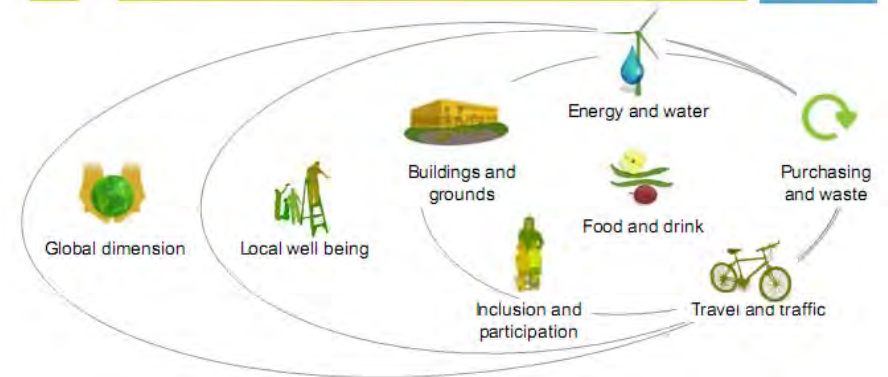
- Trust
- Parental involvement
- Local influence



Creating Opportunity
Releasing Potential
Achieving Excellence

Source: <http://www.ewecentre.org.uk/EWEpages/welcome.htm>

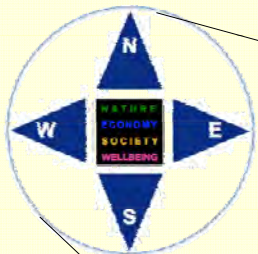
Doorways



Creating Opportunity
Releasing Potential
Achieving Excellence

Source: <http://www.ewecentre.org.uk/EWEpages/welcome.htm>

AtKisson Group's Compass Education Compass School Concept

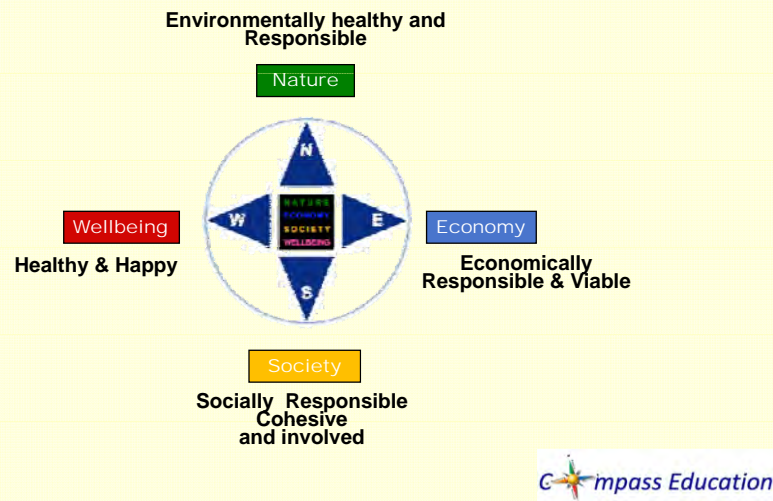


A Compass School is ...

- ... is a school which actively incorporates the *Sustainability Compass* into any or all aspects of school life in order to assist with reorienting education to incorporate the mindset and values of sustainable development in teaching and learning.



The Compass is an Orientation Tool for Transformative Teaching, Learning and Thinking



What is a Compass School?

- ❑ A *Compass School* is simply a school that takes its role and responsibility for helping to build a sustainable global human society very seriously.
- ❑ A *Compass School* actively integrates and infuses sustainability education into all aspects of the school, including its vision and mission (education), decision-making, its management and operations, the school buildings, the school culture and its external relationships with its surrounding community and others, by using the Compass tool/ lens to do so.
- ❑ A *Compass School* takes a Whole School Approach to Sustainability Education

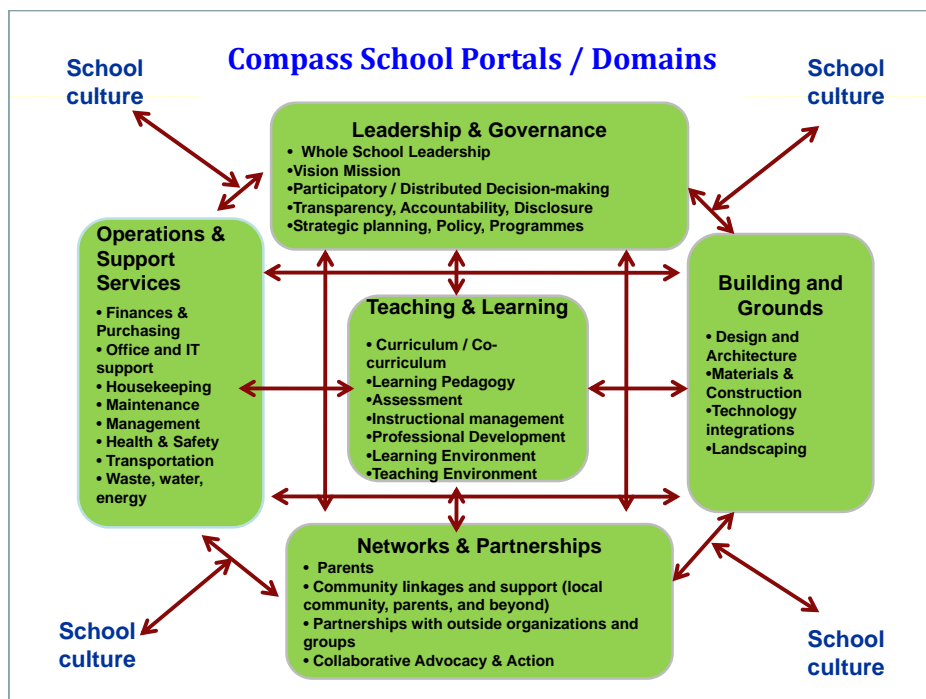
The Compass School is a Whole School Approach

The Compass School approach & methodology translates and links the four general Compass dimensions with the specific working areas of school life, which we call *Compass School Portals*

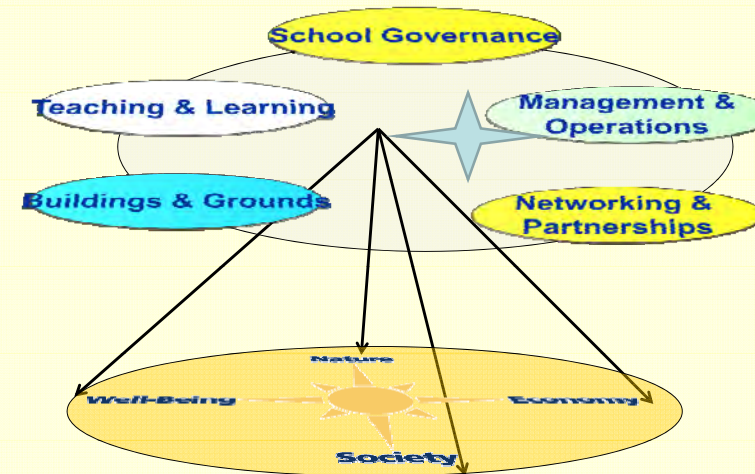
1. School Leadership & Governance (LG)
2. Teaching and Learning (including the curriculum) (TL)
3. Operations & Support Services (OSS)
4. Buildings and Grounds (BG)
5. Networking and Partnerships with external community and others (NP)

The Compass School Approach

- A Compass School puts the four dimensions and five portals into practice by involving the whole school community – students, teachers and other staff, members of the local community, parents, local authorities, local media and businesses.
- It encourages teamwork and helps to create a shared understanding of what it takes to manage and run a school in a way that contributes to sustainable development at every level – global, local, and personal.



Actions at Portals should link to Compass Issues & Indicators



Draft Compass School Indicators - Wellbeing

- Teacher development based on core passions inner resource development (TL)
- The curricular and/or co-curricular programs address the needs to develop **whole person** (TL)
- Students feel good about their school life (TL)
- A climate of collaboration, mutual respect and friendship prevails at the school in relationship with the local community (NP)
- The school encourage parents and students participation in the all sound educational process within school and local global community (NP)
- Ethical legally practices of employment are observed with respect to school staff (OSS)
- Food served at the school is nutritious, safe and appetizing, and locally sources (OSS)
- The school has effective protocols for emergencies that are clearly communicated for students, parents, and all staff (LG, OSS)
- Building and facilities used to provide instruction and services meet the health and safety codes of local government authorities and the accrediting association (OSS)
- The governing body is transformational, flat, transparent, accountable and empowering, inclusive (LG)
- Members of the School Community are Happy with their Life & Life at School (LG)
- Adopting sustainability mission/vision statements (LG)
- The school compass provides for an appropriate atmosphere for learning (BG)

Draft Compass School Indicators - Economy

- The school supports the local economy through purchasing decisions as measured by % of packages that were locally sourced (NP)
- The school has educational and financial plans for the short, medium and long term with specific budget allocated for developing sustainable partnerships in local community (NP)
- Budget plan for resources (OSS)
- Recruit like minded individuals who supports vision, mission, - sustainability (LG)
- The school has short, medium and long term plans that are economically visible (OSS)
- The leadership ensures that written curriculum materials include references to limits within and across disciplines (LG)
- The governing body is responsible for activity promoting sustainability through PR + marketing (LG)
- Purchasing sustainable products, ensuring viability (LG)
- Providing scholarships and financial support to lower income families (LG)
- Action plan for sustainability (LG, OSS)
- The school has educational and financial plans for the short, medium and long term (OSS)

Draft Compass School Indicators - Society

- Curriculum design and delivery cue consistent /with the school's philosophy / objectives and policies **(TL)**
- The atmosphere in the school encourages active parental and student participation in the all around education process **(TL)**
- The cultural diversity of the school and local community are used to enrich the curriculum, e.g. Inviting community members to contribute to student's learning **(NP)**
- The student activities program actively seals partnership with local individual group and organization **(NP)**
- All school operational policy documents refer to legal and ethical consideration **(OSS)**
- Resources locally and ethic sources **(OSS)**
- The atmosphere in the school encourages parental and student participation in the all-around educational process → T&L, governance **(OSS)**
- Setting up a sustainability committee all stakeholders – management plan **(LG)**
- Curriculum design and delivery are consistent w/ the schools philosophy, objectives + policies **(TL, LG)**
- Cultural diversity and sensitivity is respected in decision making + curriculum development **(LG, TL)**
- The school's governance avoids conflicts of influence, thereby setting an example for school community **(LG)**

Draft Compass School Indicators - Nature

- A certain % of grounds devoted to food growth **(BG)**
- % of green space for learning **(TL / BG)**
- Initial authorization **(BG)**
- Is 20% of electrical usage **(BG)**
- Up to 50% by 5 years **(BG)**
- Food served at the school is locally grown, produced + organic **(OSS)**
- Energy efficiency – double glazing, %'s (usage) **(BG)**
- Has the school been designed or re-designed to harness natural light +wind? **(BG)**
- School has educational, environmental, well-being and financial plans, for the short, medium and long term, with a view of developing a whole person **(OSS, TL)**
- The school's physical environment is included as part of the active curriculum **(TL)**
- The curricular and or co- curricular program addresses issues of respect for the environment **(TL)**
- The cultural diversity of the N, community and environment is not used to enrich the curricular **(TL)**
- The schools's networks and partnership promote and model the use of Sustainable practices **(NP)**
- The school campus provides for an appropriate atmosphere for learning → building and **(TL / OSS)**

Becoming a Compass School Workshop at Green School Bali, Indonesia 6-9 April 2012



Green School Bali, Indonesia

<http://www.greenschool.org/>



The Founders' Vision

- 'We are building Green School to create a new paradigm for learning. We want children to cultivate physical sensibilities that will enable them to adapt and be capable in the world. We want children to develop spiritual awareness and emotional intuition, and to encourage them to be in awe of life's possibilities.'
(John and Cynthia Hardy)



Green Curriculum



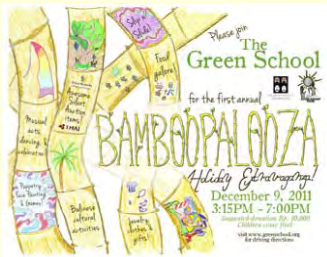
Green Campus



Green Classrooms



Green Arts and Culture



- To view school and offer a curriculum which is holistic - integrating all aspects of the child's nature, multiple intelligences, and curiosity for learning - through a hands-on practicum model which is part of an academically rigorous learning program; in a school where classrooms are integrated into the natural and permaculture environment (eco-literacy.)
- To understand sustainability as an entire web of relationships in community, interacting with other communities - human and non-human - in ways that enable them to live and develop according to their nature.
- To think in terms of relationships of inter-connecting patterns and contexts (systems thinking)
- To collaborate with members of both the school community (mentorship program) and with the wider local community (apprenticeship program.)
- To integrate subject matter such as science, mathematics and social studies, contextualizing academic disciplines in meaningful experiential learning and service projects.
- To foster in our students a love for learning about themselves, each other, and the wider world community in ways which are respectful, have depth of understanding, and compassionate coexistence.
- To instill pride, responsibility, and cooperation among students as life-long learners and future leaders in the world.

The aims of our Green Studies Curriculum are:

- To nurture respect for and understanding of the natural world
- To heighten students' environmental awareness and to promote stewardship
- To develop ecological values out of first hand experience
- To understand and practice permaculture (the harmonious integration of land and people to provide food, shelter, energy, and other materials and non-materials needs in a sustainable way.) This includes on-campus food gardens, aquatic systems, appropriate technologies, awareness of waste and water usage and employing management systems, rice agriculture, and animal care, learning from local community members, and designing with renewable natural resources such as bamboo.



FIRST PRIZE:

Handmade School in Bangladesh. Anna Heringer & Eike Roswag: Germany.

This school was hand built in Bangladesh with the community support of craftsmen, pupils and teachers guided by a European architect and students. The aim was to improve building techniques, while maintaining sustainability, strengthening regional identity.

3-day Compass University ISIS Accelerator Training Workshop

RCE-ESD Northern Mindanao Philippines, 24-
26 Feb 2012

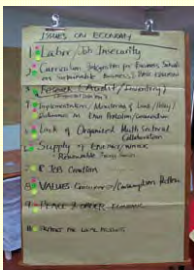


Envisioning a Sustainable Future for Northern Mindanao



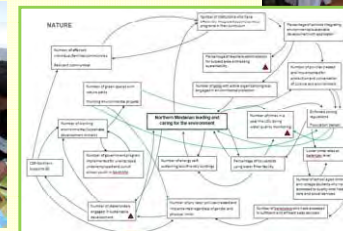
Goal of the Workshop: To build a 'draft framework for effective Coordination and Action on sustainable development for northern Mindanao between NorthMin RCE-ESD and its community and governmental stakeholder partners'.

RCE-ESD Northern Mindanao Philippines,



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RCE-ESD Northern Mindanao Philippines,



LEAD Indonesia
inspiring leadership for a sustainable world



UNEP

Advancing Initiatives of Education for Sustainable Consumption(ESC) in Indonesia

Presented by
Darwina Widjanti

Southeast Asia Reporting and Capacity Building Workshop on:
Move of Education for Sustainable Development
23 – 24 April, 2012
Bangkok, Thailand

Leadership for Environment and Development
Hosted by Yayasan Pembangunan Berkelanjutan

lead

Y P B

Definition

- **Sustainable Development**

Development that meets the needs of the present without comprising the ability of the future generations to meet their own needs (Burtland Commission, 1987)

Development which economically viable, socially equitable, and environmentally sustainable

- **Sustainable Production and Consumption**
Practical action of Sustainable Development



Sustainable Consumption and Production

- Agenda 21 Chapter IV

Changing consumption patterns focus on policies and strategies to change unsustainable consumption patterns and reorienting consumption pattern toward sustainability

Sustainable Production and Consumption (SCP)

SCP is needed to:

1. **Improve quality of life and provide basic needs for all includes food, shelter, health, and education.**
2. **Decouple economic growth from environmental degradation while maintaining the carrying capacity of the ecosystem**



Marrakesh Process



- A global and informal multistakeholders process that supports the policies and capacity building on SCP
- Elaboration of 10 FYP : ten years framework program launched 2003
- SCP – the use of services & related products which respond to basic needs and a better quality of life while minimizing the use of natural resources & toxic materials as well the emission of waste and pollutants over the life cycle so as not to jeopardize the needs of the future generations

10 YFP Asia Pacific – Green Growth



- Green public procurement
- Waste management
- Transportation
- Greening the business and market
- Sustainable energies
- Regional programme on resource efficient and cleaner production
- Fiscal Instruments
- Sustainable Agriculture

Sustainable Production and Consumption

- Sustainable at the Production side
Life Cycle – Eco Label – Safety Assurance
ISO standard, Environmental & Social Regulations
- Sustainable at the Consumer side
Behavior with least impacts to the environment, while respect human rights and solidarity

We are all consumers



End Consumers



Government



Retail sector



Industries



Education for Sustainable Consumption



Promote consumption that :

- Minimum use of natural resources
- Minimum negative impacts to the environment
- Respect social equity: labor rights, fair trade, marginal community, the poor (global solidarity)
- Localities: local products, local resources, and local knowledge and culture

Consumers can demand their position as pressure group to the producers

Consumers can create a new life style – sustainable life style

Learning Outcomes and Competencies



What we expect from ESC?

- The basic learning outcomes of ESC
 - ✓ Critical Awareness
 - ✓ Ecological Responsibility
 - ✓ Social Responsibility
 - ✓ Action and Involvement
 - ✓ Global solidarity

• Basic Competencies of ESC

- ✓ Appreciation of nature, human diversity, multi culturalism
- ✓ Concern of justice, peace and cooperation
- ✓ Self awareness
- ✓ Concern for quality
- ✓ Appreciation of interconnectedness of individuals and society
- ✓ Capacity of compassion/empathy, generating ideas, adapt to new situation
- ✓ Ability to make critical, reflected decisions
- ✓ Ability to cope with one's emotions
- ✓ Willingness and ability to be of service of others
- ✓ Ability to recognize global perspective

The Background of EE/ESD/ESC in journey Indonesia



Before 1998 – New Order Regime – Centralized

- EE started from NGO movement related to agriculture and, pollution, waste management issues
- Center of Environment Education established at the University and one Center for public education
- Early 1990 ESD started for mid career professionals
- Ministry of Environment established: policies & regulation to protect the environment
- Issues related to equity, freedom of expression, accountability were not in public discourse

After 1998 – Reform Era / Democracy – Decentralization

- More issues related to illegal logging, destructive business practices with impacts to the environment
- Started to address the issues of inequality, gender, human rights, pluralism demand for transparency and accountability
- CSO flourishing: take a role in legal reform, human rights, and anti corruption
- Mass Media has its freedom to express opinion and being critical
- Vibrant political party: opposition to the ruling party is possible

Mainstreaming ESD



In Practice

- EE is more popular, while ESD is still relatively new for policy makers, and public in general, the ESD training leading by NGO
- ESC has been in formal education curricula, non formal and informal education with limited understanding of the macro picture of it

In the Policy Arena

- Leading by Ministry of Environment (MoE) – policy for environmental protection and management and corporate sector governance, Strategy for Action Plan on SCP
- Ministry of National Education and Culture (MoNEC) – include EE, ESD, and Character Building (2010)
- Joint program MoE and MoNEC : Adiwiyata Program

Mainstreaming ESD

Mainstreaming Sustainable Development in the Short Term and Long Term National Development Plan (2005 – 2020) for all Ministries

Interconnection among Ministries:

- Ministry of Industry – encourage green industry (Award for Green Industry)
- Ministry of Trade – Promote Indonesia Products and Services
- Ministry of Environment – Proper (Evaluation for Corporate Social and Environmental performance)
- Ministry of Energy & Mineral Resources – shifting to renewable energy

Mainstreaming ESD



Corporate Sector Role

- Special Award in competition nurtures the tradition of research and innovations (Bayer, Astra International, L'oreal)
- Support action activities with community members, and NGOs (planting trees, clean the beach, recycled products)
- CSR becomes a vehicle to bring solutions of education, health, poverty

Mass Media (newspaper, radio, TV)

- Expose EE/ESD/ESC problems, attract youth to take action, encourage creativity
- Green Radio, DAAI TV, Kompas TV, Kompas Muda are leading institution in public education
- Urban Youth is the target for environmental issues awareness

Mainstreaming ESD



In the last three years - Emerging economy

- Economic growth of around 6% per year in the last 3 years
- Disparity of the rich and poor, beginning to increase
- Growing CSR Program, more on charity
- High educated and innovative youth emerges
- Urban Consumer : consume more, refer to international brand products, spend a lot for imported products, very mobile

Findings from Multistakeholders Discussion



- 1. ESC in formal education (Ministry of National Education and Culture):** Include ESC in the existing curricula – integration
 - Not add more hours and new subject
 - More on action while learning
 - Respect local context
 - Diverse geographical area, development stage, economic development, local knowledge, culture and tradition
 - Local problems, challenges, opportunities

Opportunity: Long Term Project funded by ADB on Environmental Education – strengthen the institution

Findings of Multistakeholders Discussion



Ministry of Environment

- **National Strategic Action Plan on SCP**
a room for pool of expertise and information for public related to SCP
- **National Forum of Stakeholders** enables sharing knowledge, best practices, progress
- **Adiwiyata Program** with target of 6000 schools adapting EE into action, can include ESC
- **Eco Pesantren** – designed EE and include ESC
- **Green Campus Program** – in plan

Informal and Non Formal Education



- **Ministry of Industry:** promote green industry, SCP, educate the business community
- **Ministry of Trade:** promote Indonesia products
- **Integrate ESC** into existing program of NGOs (a wide range)
- **Scale up and highlights** the program from Radio and TV with ESC
- **Kompas Muda**, a network of youth activities through media exposure may adapt ESC

ESC Dissemination

Strategic Target for ESC



- **Youth**, willing to learn, more energetic, innovative – a group that starts to consume and develop pattern of life style
- **Housewife**, key decision makers in buying daily products, from food to home appliances
- **Mother**, as an educator, agent of ESC
- **NGO** can work more flexible, willing to experiment, creative
- **Various Award** for socio eco ideas, impacts, innovations – encourage more responsible individual

By Momentum: ESP for responsible corporate



- Various competition for sustainable business, green business, and exposure companies' performance need more structured capacity building for business community about SCP and sustainability, a start with certification of Green Building to further disseminate

Taking the Lead: Government Role

- Government agencies to coordinate the initiatives, provide incentives policy, support capacity building, compile knowledge, interlink different party for more effective work on ESC and SCP – promote partnership

Relevant Priority Theme



- Safety and Healthy Food
- Saving water and energy
- Food security
- Public Transportation – eco friendly
- Biodiversity potential to preserve and groom
- Develop new renewable energy
- Waste management

Follow Up Actions



- Develop ESC Guidelines and Disseminate
- Pilot project
 - Adiwiyata Program – with MoE and MoNEC
 - Empowering Teachers – with Teachers Institute
 - Consumers Education – with YLKI
 - Climate Smart Leaders Program – with YPB
 - Youth Volunteers – Kompas Muda
- Monitoring and Evaluation – Documents Learning Process
- Recommendations for future ESC development

It is up to us as individual to do what we can, however little that maybe. Just because of switching off the light on leaving the room seems inconsequential, it does mean that we should not do it (Dalai Lama, the 14th, Religious Leaders)



- There are no passengers on spaceship earth. We are all crew (Marshall McLuhan, sociologist)

It is all up to us !



Thank You - Kapunka

Yayasan Pembangunan Berkelanjutan

Jl. Lebak Bulus I no 62, Lebak Bulus,

Cilandak, Jakarta 12440 – Indonesia

Email: darwina@ypb.or.id



SESSION FOUR: Capacity Building Activity – Addressing the Effectiveness of Learning Performance Day One: 15:00 – 17:00

Presentation:

Addressing the Effectiveness of Learning Performance

Paul Ofei-Manu, IGES

Group Activity – Capacity Building

The presenter, Dr. Paul Ofei-Manu emphasised the importance of capacity building, learning and competence development for the DESD implementation. He said that developing an assessment tool like indicators for M&E of ESD would require knowledge of how educational inputs and throughputs impact the content, contexts and processes of learning and also, how to achieve improvements in learning performance and ESD outputs. He pointed out some of the reasons why addressing learning performance using performance-based testing has been difficult. He continued that in trying to understand what constitute effective ESD learning performance (LP) through developing an actionable conceptual framework, the research team had attempted to identify what it called Elements of ESD LP by investigating the characteristics of effective ESD learning that are grounded in several educational theories and learning methods.

Regarding the ESD elements, four areas comprising two elements related to the process side of learning and education, i.e., Progressive Pedagogies (PP) and Cooperative Learning Relationships (LR) and also, two elements under educational contents namely Sustainability Competencies (SC) and Framework of Understanding and World-View (WV) were identified and their respective scopes defined. Dr. Ofei-Manu then proceeded to describe the characteristics of the respective elements. The absence of clearly-defined boundaries among the elemental components and hence the characteristics were pointed out and the overall goal of bringing together the elements into an actionable framework to effect/drive social change was also mentioned. He also pointed out that the research team is now trying to apply the elemental characteristics to the RCE cases in order to identify those aspects/processes that will improve learning performance. He further reflected on the presentation in relation to the entire research project: 1) To have a better understanding of the ESD practices in the RCEs in the context of effective LP; 2) That in some way the framework will serve as point of reference/guidance for future RCE initiatives, and 3) That somehow a way would be found to bridge the two aspects (quantitative and qualitative) of the research.

The activity began with a short presentation on the use of Adaptive Nominal Group Technique by Mr. Robert Steele. As a modification from the previous workshop in Yokohama, Japan where ESD was used as a general topic by all the groups for brainstorming and solution identification, four thematic ESD topics were used instead: Climate Change, Sustainable Consumption and Production, Disaster Risk Reduction and Food Security. The activity used the four elements of ESD learning performance as the basis, and Sustainability Competencies was further divided into knowledge, skills, and values. For each elemental category there were two questions for the participants to consider: 1) For the 'learning objective/goal', participants were to identify a key learning objective for the element of

ESD learning, and 2) For 'educational achievement', participants were asked to identify what would be a visible outcome that would demonstrate achievement of the objective. Participants were then divided into 4 groups representing the selected ESD themes, each with a facilitator and a rapporteur. Participants found the activity very interesting though a bit mentally demanding. The groups then presented their results: Climate Change by Robert Steele; Sustainable Consumption and Production by Maria Christina A. Francisco, Disaster Risk Reduction by Mario Tabucanon, and Food Security by Zainal Sanusi.

Findings and Recommendations from the group activity

Progressive Pedagogies:

1. Climate Change:
Objective/Goal: Ability to investigate the capability of learning method of the local environment situation in relation to CC
Education Achievement: Students' understanding of the difference between greenhouse effects and CC
2. Sustainable Production & Consumption:
Objective/Goal: Community immersion/field-based learning
Education Achievement: 1) Reducing waste; 2) Vegetable gardening
3. Disaster Risk Reduction:
Objective/Goal: 1) Creativity and innovation; 2) Accountability
Education Achievement: 1) Dialogical learning environment; 2) Analytical and effective decision making
4. Food Security:
Objective/Goal: Mapping the food chain
Education Achievement: Increased awareness of food sources through competencies of the learners

Cooperative Learning Relationships:

1. Climate Change:
Objective/Goal: Getting Integrative Management Approach (IMA) through consensus
Education Achievement: Ability to identify the different stakeholder groups and their position/perspective to CC
2. Sustainable Consumption & Production :
Objective/Goal: 1) Building strong group dynamics; 2) Inter-agency groups
Education Achievement:
3. Disaster Risk Reduction:
Objective/Goal: Understanding of the same concept
Education Achievement: Systematic unity in approaches for DRR
4. Food Security:
Objective/Goal: Identification and coordination of stakeholders
Education Achievement: Recognition of diverse interests

Sustainability Competencies (Skills):

1. Climate Change:
Objective/Goal: Skills to identify the problem and solutions caused by CC
Education Achievement: Effective construction of instruments used for CC
2. Sustainable Production & Consumption:
Objective/Goal: Consuming in a more responsible and sustainable manner
Education Achievement:
3. Disaster Risk Reduction:
Objective/Goal: Seeking alternative solutions
Education Achievement: React appropriately in disaster mitigation effects & during disaster
4. Food Security:
Objective/Goal: Collaboration of stakeholders for food production
Education Achievement: Capability of producing sustainable food

Framework of Understanding and World-View element:

1. Climate Change:
Objective/Goal:
Education Achievement:
2. Sustainable Production & Consumption:
Objective/Goal: Understanding the worst scenario of “business as usual”
Education Achievement:
3. Disaster Risk Reduction:
Objective/Goal: Accept disaster as a part of the reality of life and learning
Education Achievement: Holism and integration
4. Food Security:
Objective/Goal:
Education Achievement:

Please see the following pages for the entire findings from each thematic group’s activity.



Addressing the Effectiveness of [ESD] Learning Performance

Southeast Asia Workshop on Monitoring & Evaluation of Education for Sustainable Development,
Bangkok, Thailand April 23-24, 2012

Paul Ofei-Manu,
Robert J. Didham & Akira Ogihara

Institute of Global Environmental Strategies, Japan



- Current UNESCO and RCE Vision documents on the second phase of the DESD implementation emphasize capacity building, learning and competence development
- Evaluation of the progress made on ESD implementation is also emphasized as important objective
- To develop an assessment tool like indicators for M&E of ESD, it is important to know *for e.g.:*
 - how educational inputs and throughputs impact the context, the content and processes of learning
 - and, how to achieve improvements in learning performance (& ESD outputs)

Challenges of current method of assessment in education

Addressing learning performance using standardized methods of assessment (i.e., performance-based testing) has been difficult largely because:

- The pedagogical objectives inherent in the evaluation systems have a narrow focus; as they depend on a few performance indicators;
- Curriculum is compartmentalized & subjects/disciplines are dealt with separately;
- The individual is assessed on the assumption that learning occurs independent of motivation and one's environment;
- Teachers mainly concentrate on helping students pass the tests;
- Only the measurable aspects/"tangibles" of learning (e.g. knowledge) get measured; values-based testing (i.e., values, perception, etc.) overlooked;
- The traditional system limits the number of perspectives that are raised;
- The learning arena is also "political" with power, ideology, hierarchy etc., at play.

Challenge of assessment/learning performance

- The literature is clear that our present educational system needs a complete overhaul to provide learners with skills to meet (current and future real-world) challenges.
- Furthermore, UNESCO, the lead implementer of ESD is clear about the need for assessment that not only pays attention to knowledge competency but also values, skills, perception and behaviours.
 - "Traditionally, literacy, numeracy, and disciplinary knowledge are assessed using standardized tests..... however, these do not measure many aspects of quality education. **Missing are assessment and evaluation of life skills, perceptions, behaviours and values, which are part of quality education.....**"

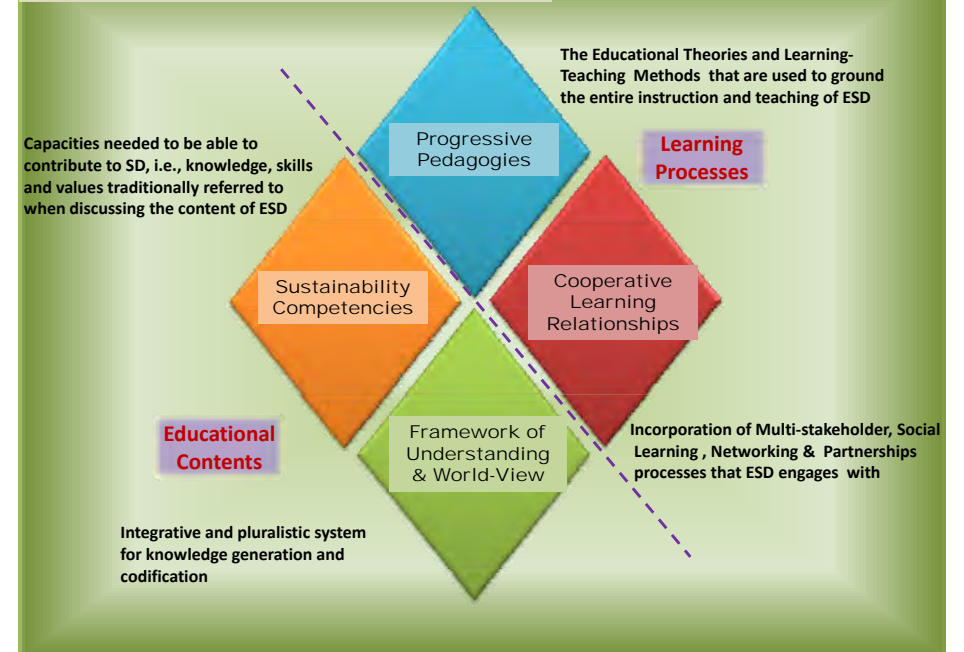
[(UNESCO 2005; <http://unesdoc.unesco.org/images/0014/001410/141019e.pdf>)].

LEARNING PERFORMANCE (LP) EVALUATION

In trying to understand what constitutes effective ESD LP, *we have attempted to:*

- ❑ Identify what we call Elements of ESD LP by investigating the *characteristics/aspects* of effective ESD learning that are
- ❑ Grounded in several educational theories & learning methods
- ❑ Use to develop a framework of reference for [future] implementation of RCE projects

4 ELEMENTS OF ESD LEARNING PERFORMANCE



Learning Processes 1: Elemental Aspects/Characteristics



- ❑ Student-centred, active learning
- ❑ Action/experience-oriented learning
- ❑ Critical reflection and problem solving
- ❑ Knowledge production through iterative interaction
- ❑ Life-long learning
- ❑ Cyclical process of collective inquiry

Learning Processes 2: Elemental Aspects/Characteristics



- ❑ Inclusion & network structure for interaction
- ❑ Participation and power sharing (shared ownership /commonality)
- ❑ Clear definition of roles and responsibilities
- ❑ Accountability of individual/groups
- ❑ Group processing: managing the different knowledge systems to make sense of the available information
- ❑ Opportunities for reflexivity and discourse
- ❑ Positive interdependence and building of trust

Learning Content 1 : Elemental Aspects/Characteristics

Knowledge,
Skills &
Values

Sustainability
Competencies

KNOWLEDGE

- Climate Change
- Disaster Risk Reduction
- Sustainable Consumption and Production/Education for Sustainable Consumption
- Indigenous Knowledge
- Well-being, Development & Environmental Quality
- Resilience and Socio-ecological Systems

SKILLS

- Critical thinking, systems thinking, complex thinking, real-world problem-solving,
- Seeking alternative solutions
- Adapting to change & advocating for change
- Future-mindedness
- Social action, collaboration and cooperation,
- Conflict resolution, negotiation
- Creativity, imagination

VALUES

- Respect
- Care-empathy, Charity
- Citizenship
- Stewardship
- Motivation
- Social and economic justice
- Empowerment
- Commitment, cooperation, compassion
- Self-determination, and self-reliance

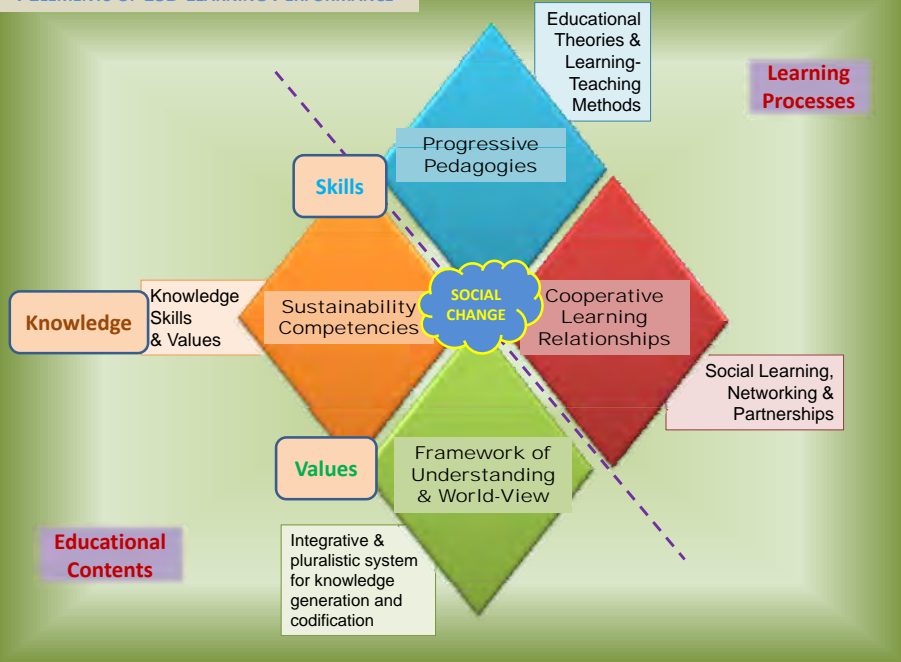
Learning Content 2: Elemental Aspects/Characteristics

Integrative &
pluralistic system
for knowledge
generation and
codification

Framework of
Understanding
& World-View

- Holism & Integration
- Systems thinking
- Interdisciplinarity and Cross-Boundary
- Cultural relativism and social constructivism
- Pattern recognition, system design from patterns to details (synergy)

4 ELEMENTS OF ESD LEARNING PERFORMANCE



- The overall goal is to bring together these elements into an actionable framework to drive social change, which means the educational/learning processes and content that seek to advance sustainability should exhibit these and other related characteristics

We are hoping

1. *To have a better understanding of the ESD practices in the RCEs in the context of effective LP*
2. *That in some way the framework will serve as point of reference/guidance for future RCE initiatives*
3. *That somehow, be able to bridge the two aspects the research*





THANK YOU

- *When you are standing on the edge of a cliff, a step forward is not progress --- Anonymous*
- *The world is coming to an end and you tell us to change our light bulbs?? --- A little girl in a sustainability class*

(ofei-manu@iges.or.jp)

Thematic Topics for LP Workshop Activity





- Sustainable Consumption:**
 Linking personal waste consumption practices to the achievement of a sustainable society and awareness of specific responsible consumption actions.
- Climate Change Mitigation:**
 Understanding how society's development patterns impact on ecological systems and how we can lessen those impacts.
- Disaster Risk Reduction:**
 The ability to identify natural and man-made threats, (i.e., potential disasters) and to plan how communities can build capacities for adaptive resilience responses.
- Food Security:**
 Understanding the systems of global food production and distribution (including aspects of unequal access, waste/inefficiencies, health and food safety) and how as individuals do we respond to our own food consumption patterns to strengthen the sustainability of global food systems.
- Resource Conservation and Energy Savings:**
 Building a school learning environment that provides practical examples for reducing energy and resource use and to engage the students in action oriented learning about the connections between socio-ecological systems.





Elements	Learning Objective/Goal	Educational Achievement
	Please identify a key learning objective for this element of ESD learning?	Please identify what would be a visible outcome that would demonstrate achievement of this goal or objective?
 Progressive Pedagogies Educational Theories & Learning Methods		
 Cooperative Learning Relationships Social Learning, Networking & Partnerships		
 Sustainability Competencies Linking Knowledge, Skills & Values to Action	Knowledge	
	Skills	
	Values	
 Framework of Understanding & World-View Integrative & Pluralistic system for Knowledge Generation and Codification		

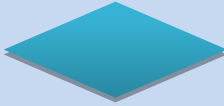



RESULTS





RCE Beijing

ACTIVITIES	CHARACTERISTICS found in LITERATURE
<ul style="list-style-type: none"> In-service teacher training on ESD to raise the awareness, motivation & understanding of the concepts and theories of ESD 	<ul style="list-style-type: none"> Sustainability competency: K= ESD content, Sk= creativity, V= motivation Critical reflection & problem solving & Life-long learning (PP)
<ul style="list-style-type: none"> Teaching ESD to students by applying knowledge & skills to work 	<ul style="list-style-type: none"> Student-centred, active L (PP), Action-experience-oriented L (PP), Knowledge, skills and values (SC)
<ul style="list-style-type: none"> Opportunity to visit schools with good ESD practices & interaction with peers 	<ul style="list-style-type: none"> Networking, Partnership & collaboration (CLR); experiential learning (PP)
<ul style="list-style-type: none"> Teacher training exchange programs with other countries ..lectures, workshops 	<ul style="list-style-type: none"> Thematic knowledge acquisition (SC), international networking, public participation (CLR), etc .
<ul style="list-style-type: none"> Explaining ESD to peers, parents, & the community and also self-reflection 	<ul style="list-style-type: none"> Real-world problem solving, strengthening social learning in the "community of practice"; advocacy for

<p>Elements</p>	<p>Learning Objective/Goal Please identify a key learning objective for this element of ESD learning?</p>	<p>Educational Achievement Please identify what would be a visible outcome that would demonstrate achievement of this goal or objective?</p>									
<p>Progressive Pedagogies</p>  <p>Educational Theories & Learning Methods</p>	<ul style="list-style-type: none"> • Experiential and practice-based learning/Training on practical activity • Community immersion/field-based learning • Learning manuals on sustainability competencies 	<ul style="list-style-type: none"> • Reducing waste • Vegetable gardening • Increasing motivation for responsible consumption • Walking/biking • Tree planting 									
<p>Cooperative Learning Relationships</p>  <p>Social Learning, Networking & Partnerships</p>	<ul style="list-style-type: none"> • Building strong group dynamics • Sharing • Multi-stakeholder learning and sharing • Inter-agency groups • Engage communities 	<ul style="list-style-type: none"> • 									
<p>Sustainability Competencies</p>  <p>Knowledge, Skills & Values</p>	<table border="1"> <tr> <td data-bbox="635 1098 848 1276"> <p>Knowledge</p> </td> <td data-bbox="848 1098 1659 1276"> <ul style="list-style-type: none"> • Understanding the finiteness of the resources and ecological carrying capacities • Know environmental impacts • Health impacts • poverty and ... human rights </td> </tr> <tr> <td data-bbox="635 1276 848 1434"> <p>Skills</p> </td> <td data-bbox="848 1276 1659 1434"> <ul style="list-style-type: none"> • Consuming in a more responsible and sustainable manner </td> </tr> <tr> <td data-bbox="635 1434 848 1602"> <p>Values</p> </td> <td data-bbox="848 1434 1659 1602"> <ul style="list-style-type: none"> • Ensuring the future and well-being of the future generation • Protection of natural resources • Fair share/equity </td> </tr> </table>	<p>Knowledge</p>	<ul style="list-style-type: none"> • Understanding the finiteness of the resources and ecological carrying capacities • Know environmental impacts • Health impacts • poverty and ... human rights 	<p>Skills</p>	<ul style="list-style-type: none"> • Consuming in a more responsible and sustainable manner 	<p>Values</p>	<ul style="list-style-type: none"> • Ensuring the future and well-being of the future generation • Protection of natural resources • Fair share/equity 	<table border="1"> <tr> <td data-bbox="1659 1098 2896 1276"> <ul style="list-style-type: none"> • </td> </tr> <tr> <td data-bbox="1659 1276 2896 1434"> <ul style="list-style-type: none"> • </td> </tr> <tr> <td data-bbox="1659 1434 2896 1602"> <ul style="list-style-type: none"> • </td> </tr> </table>	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
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<p>Framework of Understanding & World-View</p>  <p>Integrative & Pluralistic system for Knowledge Generation and Codification</p>	<ul style="list-style-type: none"> • Understanding the worst scenario of "business as usual" • Knowing sustainable practices and what they can do 	<ul style="list-style-type: none"> • 									

<p>Elements</p>	<p>Learning Objective/Goal Please identify a key learning objective for this element of ESD learning?</p>	<p>Educational Achievement Please identify what would be a visible outcome that would demonstrate achievement of this goal or objective?</p>									
<p>Progressive Pedagogies</p>  <p>Educational Theories & Learning Methods</p>	<ul style="list-style-type: none"> Investigate learning method of local environment situation for CC. 	<ul style="list-style-type: none"> Students can understand the difference between greenhouse effects and CC Students know reasons for regular flooding and ways to adapt Ability to make a choice Measure GHG using different procedures Can use scientific knowledge daily Can disseminate knowledge to others effectively Can choose the right method to monitor change Can measure environmental change holistically Develop genuine/real understanding of the CC context Students feel empowered to make the situation better 									
<p>Cooperative Learning Relationships</p>  <p>Social Learning, Networking & Partnerships</p>	<ul style="list-style-type: none"> To get Integrative Management Approach through consensus 	<ul style="list-style-type: none"> Ability to identify the different stakeholder groups and their position/perspective to CC Ability to access and analyse data information on integrative management approach (IMA) Ability to build consensus KPI to evaluate performance Ability to see / build sustainable vision for the future Ability to make policy related sustainable use among stakeholders Build consensus on distribution of responsibility of different stakeholders To act in the same way as towards CC (social norm). 									
<p>Sustainability Competencies</p>  <p>Knowledge, Skills & Values</p>	<table border="1"> <tr> <td data-bbox="635 1110 848 1283">Knowledge</td> <td data-bbox="848 1110 1656 1283"> <ul style="list-style-type: none"> Ability to analyse present information to predict future situation. </td> </tr> <tr> <td data-bbox="635 1283 848 1455">Skills</td> <td data-bbox="848 1283 1656 1455"> <ul style="list-style-type: none"> Skills to identify the problem and solutions caused by CC </td> </tr> <tr> <td data-bbox="635 1455 848 1610">Values</td> <td data-bbox="848 1455 1656 1610"> <ul style="list-style-type: none"> Students can understand that humans are contributing to the problem of CC </td> </tr> </table>	Knowledge	<ul style="list-style-type: none"> Ability to analyse present information to predict future situation. 	Skills	<ul style="list-style-type: none"> Skills to identify the problem and solutions caused by CC 	Values	<ul style="list-style-type: none"> Students can understand that humans are contributing to the problem of CC 	<table border="1"> <tr> <td data-bbox="1656 1110 2896 1283"> <ul style="list-style-type: none"> Integrate content of CC in local development policy/student project Effective mitigation plan/policy/scientific model Data presentation and conclusion relating to the CC issue. Involvement of diverse organizational parties on CC in the local community </td> </tr> <tr> <td data-bbox="1656 1283 2896 1455"> <ul style="list-style-type: none"> To promote solutions for CC Effective construction of instruments used for CC. </td> </tr> <tr> <td data-bbox="1656 1455 2896 1610"> <ul style="list-style-type: none"> Ability to list activities that contribute to CC All people have the responsibility to save the natural resource Community activities such as cleaning and dredging canals </td> </tr> </table>	<ul style="list-style-type: none"> Integrate content of CC in local development policy/student project Effective mitigation plan/policy/scientific model Data presentation and conclusion relating to the CC issue. Involvement of diverse organizational parties on CC in the local community 	<ul style="list-style-type: none"> To promote solutions for CC Effective construction of instruments used for CC. 	<ul style="list-style-type: none"> Ability to list activities that contribute to CC All people have the responsibility to save the natural resource Community activities such as cleaning and dredging canals
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<p>Progressive Pedagogies</p>  <p>Educational Theories & Learning Methods</p>	<ul style="list-style-type: none"> • Critical thinking • Creativity and innovation • Open mindedness • Accountability • Understanding • Recognizing uncertainty 	<ul style="list-style-type: none"> • Dialogical learning environment • Collective decision making • Change in student behaviour • Analytical and effective decision making 									
<p>Cooperative Learning Relationships</p>  <p>Social Learning, Networking & Partnerships</p>	<ul style="list-style-type: none"> • Accountability • Resource sharing • Understanding of the same concept • Win-win towards common goal • Volunteerism • Mutual help 	<ul style="list-style-type: none"> • Dialogical learning environment • Effective disaster learning • Systematic unity in approaches for DRR • Increase in the spirit of volunteerism and mutual help • Local contextualization 									
<p>Sustainability Competencies</p>  <p>Knowledge, Skills & Values</p>	<table border="1"> <tr> <td data-bbox="635 1098 848 1272">Knowledge</td> <td data-bbox="848 1098 1659 1272"> <ul style="list-style-type: none"> • Climate change • Disaster risk reduction • SCP/ESC • Well-being, development and environmental quality </td> </tr> <tr> <td data-bbox="635 1272 848 1446">Skills</td> <td data-bbox="848 1272 1659 1446"> <ul style="list-style-type: none"> • Critical thinking, systems thinking, complex thinking, real-world problem solving • Seeking alternative solutions • Social action, collaboration and cooperation </td> </tr> <tr> <td data-bbox="635 1446 848 1602">Values</td> <td data-bbox="848 1446 1659 1602"> <ul style="list-style-type: none"> • Commitment, cooperation and compassion • Humanity • Self-determination and self-reliance • Care , empathy & charity </td> </tr> </table>	Knowledge	<ul style="list-style-type: none"> • Climate change • Disaster risk reduction • SCP/ESC • Well-being, development and environmental quality 	Skills	<ul style="list-style-type: none"> • Critical thinking, systems thinking, complex thinking, real-world problem solving • Seeking alternative solutions • Social action, collaboration and cooperation 	Values	<ul style="list-style-type: none"> • Commitment, cooperation and compassion • Humanity • Self-determination and self-reliance • Care , empathy & charity 	<table border="1"> <tr> <td data-bbox="1659 1098 2896 1272"> <ul style="list-style-type: none"> • Uncertainty as pre-condition • Understanding of the concept of DRR • Effective procedure/practices of DRR • </td> </tr> <tr> <td data-bbox="1659 1272 2896 1446"> <ul style="list-style-type: none"> • Share common goal • React appropriately in disaster mitigation effects & during disaster • Effective procedure/practices in DRR </td> </tr> <tr> <td data-bbox="1659 1446 2896 1602"> <ul style="list-style-type: none"> • Effective procedure/practices in DRR </td> </tr> </table>	<ul style="list-style-type: none"> • Uncertainty as pre-condition • Understanding of the concept of DRR • Effective procedure/practices of DRR • 	<ul style="list-style-type: none"> • Share common goal • React appropriately in disaster mitigation effects & during disaster • Effective procedure/practices in DRR 	<ul style="list-style-type: none"> • Effective procedure/practices in DRR
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<p>Framework of Understanding & World-View</p>  <p>Integrative & Pluralistic system for Knowledge Generation and Codification</p>	<ul style="list-style-type: none"> • Social responsibility • Humanity • Accept disaster as part of the reality of life and learning 	<ul style="list-style-type: none"> • Holism and integration 									

<p>Elements</p>	<p>Learning Objective/Goal Please identify a key learning objective for this element of ESD learning?</p>	<p>Educational Achievement Please identify what would be a visible outcome that would demonstrate achievement of this goal or objective?</p>									
<p>Progressive Pedagogies</p>  <p>Educational Theories & Learning Methods</p>	<ul style="list-style-type: none"> • Mapping the food chain • Food production based on local needs • Utilizing the food available in the locality • Integrated curriculum on eco-friendly food production • Lesson about agricultural production and biodiversity • 	<ul style="list-style-type: none"> • Increased awareness of food sources through competencies of the learners • Condition of population density and food availability • 									
<p>Cooperative Learning Relationships</p>  <p>Social Learning, Networking & Partnerships</p>	<ul style="list-style-type: none"> • Identification and coordination of stakeholders (farmers, producers and manufacturers, etc.) • Make task force and survey to connect education and food science and government departments 	<ul style="list-style-type: none"> • Better management of production and distribution towards equal and better access to food • Recognition of diverse interest • Multi-stakeholder platform for food production, distribution and consumption 									
<p>Sustainability Competencies</p>  <p>Knowledge, Skills & Values</p>	<table border="1"> <tr> <td data-bbox="635 1098 848 1276"> <p>Knowledge</p> </td> <td data-bbox="848 1098 1659 1276"> <ul style="list-style-type: none"> • Making curriculum, lecture and assessment for sustainable food production and practical experience in the field • Linking food with other SD issues such as traditional knowledge </td> </tr> <tr> <td data-bbox="635 1276 848 1434"> <p>Skills</p> </td> <td data-bbox="848 1276 1659 1434"> <ul style="list-style-type: none"> • Collaboration of stakeholders for food production </td> </tr> <tr> <td data-bbox="635 1434 848 1602"> <p>Values</p> </td> <td data-bbox="848 1434 1659 1602"> <ul style="list-style-type: none"> • Inter-generational concern </td> </tr> </table>	<p>Knowledge</p>	<ul style="list-style-type: none"> • Making curriculum, lecture and assessment for sustainable food production and practical experience in the field • Linking food with other SD issues such as traditional knowledge 	<p>Skills</p>	<ul style="list-style-type: none"> • Collaboration of stakeholders for food production 	<p>Values</p>	<ul style="list-style-type: none"> • Inter-generational concern 	<table border="1"> <tr> <td data-bbox="1659 1098 2896 1276"> <ul style="list-style-type: none"> • Interdisciplinarity </td> </tr> <tr> <td data-bbox="1659 1276 2896 1434"> <ul style="list-style-type: none"> • Capability of producing sustainable food </td> </tr> <tr> <td data-bbox="1659 1434 2896 1602"> <ul style="list-style-type: none"> • Building more knowledgeable community on food sustainability </td> </tr> </table>	<ul style="list-style-type: none"> • Interdisciplinarity 	<ul style="list-style-type: none"> • Capability of producing sustainable food 	<ul style="list-style-type: none"> • Building more knowledgeable community on food sustainability
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SESSION FIVE:
Country ESD Status Presentations
Day Two: 10:00 – 11:00

Session Chair: Justin Alick, UNESCO

Presentations:

- 1) *Malaysia – National ESD Implementation*
Rona Chandran, Ministry of Education
- 2) *Philippines – National ESD Implementation*
Maria Christina A. Francisco, Department of Environment and Natural Resources
- 3) *Thailand – National ESD Implementation*
Benjalug Namfa, Office of the Basic Education Commission, Ministry of Education
- 4) *Cambodia – National ESD Implementation*
Meakh Seary (*in absentee*), Royal Academy of Cambodia (*presented by Robert J. Didham*)
- 5) *Indonesia – Key Points of National ESD Implementation*
Darwinia Sri Widjajanti, Yayasan Pembangunan Berkelanjutan (The Indonesian Foundation for Sustainable Development)

Malaysia – National ESD Implementation

Ms. Rona Chandran began her presentation by contrasting the simple, environmentally friendly lifestyle of the Malaysian aborigine with that of the modern day individual even though they are rather considered un-civilised. She pointed out the mandated national policy mandates as comprising the National Policy on the Environment (NPE, 2002) by Ministry of Natural Resources and Environment and also the Ministry of Education Environmental Education Policy (EEP) which has been prepared as a draft but is yet to be implemented. She added there were some EE guidebooks for teachers that were published in 1998. According to Ms. Chandran, the NPE is currently the country's foremost education policy document but includes no time line or action plan. She outlined the goal(s) of the NPE and also that of EEP draft. She said the authority on ESD implementation is the Division of Curriculum Development of the Ministry of Education and the Department of Environment.

Ms. Chandran said that currently, there is no national mandate for ESD in the curriculum and that ESD in Malaysian schools is program-based, infused and integrated with other subjects and not as a stand-alone subject. Consequently, there is no special budget allocated to schools on ESD. She said there is inter-ministerial cooperation between the Ministry of Environment and Ministry of National Resources and Environment. On formal education, because ESD is integrated within the subjects it is taught the same way as those subjects. She added that several schools have adopted the "whole-school management approach" where awards are given to schools that put in the most effort regarding ESD. Sustainable Development thematic topics covered are: 1) Climate Change; 2) Disaster Risk Reduction; 3) Sustainable Consumption & Production; 4) Indigenous Knowledge, and 5) Cultural Values and Ethics Underpinning Sustainable Lifestyles. Schools are provided with guide books on

integrated ESD teaching. Enthusiastic teachers might therefore take the initiative to teach their students programs/topics related to ESD.

Ms. Chandran said to date, there is no empirical data to support the ESD learning outcomes in Malaysia. Some of the ESD-related initiatives taken at schools include: Recycling campaigns and No PET bottles and polystyrene lunch boxes. With respect to teacher training and ESD, trainee teachers are exposed to the innovative learning methodologies. For DPLI (Teaching Diploma for Graduates), ESD teaching is compulsory while PISMP (Teaching Degree Programme) for students taking science and social subjects already have ESD incorporated into the programme and hence is not compulsory. As a result, students in all 27 institutes receive training on ESD. She said the Department of Environment often promotes non-formal ESD through advertisements and community messages via the electronic and print media and also, awareness campaigns are often held from time to time.

Regarding civil societies and NGOs, urban dwellers often show more support towards ESD in comparison to people in rural settlements and in her personal opinion, it is because the urban dwellers are constant witnesses to activities that are contributing to the deterioration of the environment. She said the government is in cooperation with ESD-linked networks such as WWF, UNESCO and JICA and also the media is often used to promote ESD. She also mentioned several companies in the private sector *including Digi, Sime Darby, Shell Malaysia, Panasonic Malaysia, YTL Group, MAS, Canon Malaysia, Aeon Co, HP Malaysia and Green Selipar* and their involvement in greening efforts. She concluded that generally, ESD awareness exists in Malaysia but is yet to be translated into actual action and eventually change in lifestyles. She added that schools could do more towards this effort as the youth have the potential to respond better to ESD.

Philippines – National EE Action Plan

The presenter, Ms. Maria Francisco said the National Environmental Education Action Plan (NEEAP) is the Filipino initiative towards the UN Decade of Education for Sustainable Development (2005-2014) and aims to pursue education to foster the transition to a sustainable society. The vision of the Plan includes developing an environmentally literate and proactive citizenry imbued with a sense of responsibility to care, protect and enhance environmental quality. The mission of the Plan is to “establish a critical mass of committed environmental educators and practitioners who will spearhead the environmental education movement; promote environmental ethics which will instill the right values and attitudes as a way of life among the Filipinos,” She declared there was already an EE law in the Philippines passed in 2008 called “Promoting Environmental Awareness Through EE”. The law states that “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.” This law (RA 9512) mandates EE implementation with a strong emphasis on practice in both formal and non-formal sectors. The law has also resulted in the creation of an inter-agency committee formed among relevant agencies/offices that oversee different types of education as well as in consultation with experts on the environment and the academe.

Ms. Francisco elaborated a bit on the law as having several component programs/activities by virtue of EE with inbuilt theoretical and practicum modules. EE is considered as more integrated into the curriculum at the tertiary educational level with more environmental content for sustainability than

ESD at the moment. She also said that EE has been made part of the national service training program. Furthermore, an award scheme has been set up at all levels of education and the search mechanisms involve the use of established criteria for determining the level of sustainability and eco-friendliness of a school. She said several programs/activities have been put in place at the community/municipality (Adopt-an Estero/ Water body Program) and the national (National Greening Programme) levels. Government offices have also been involved and a couple of hundreds of memoranda of agreements on the environment have been signed between the private sector and various communities. Ms. Francisco also outlined the primary challenge as: Strengthening the integration of environmental education towards sustainable development in the Philippines for all levels and sectors using the 1) Curriculum; 2) Educational Materials; 3) Training and Capacity Building for Educators/Trainers; and 4) Institutionalization.

Thailand – National ESD Implementation

Dr. Benjalug Namfa outlined the national policies of Thailand towards ESD. She said the 10th Economic and Social Development Plan (2007-2016) has set a goal to achieve a “Green and Happy Society”. She pointed out the existence of the Education Act that has to be followed by all. She also said that the Ministries of Education and Natural Resources Management are in the process of inculcating ESD into their practices. The presentation was primarily on basic education. Regarding the national curriculum and ESD, Dr. Namfa said this has been decentralised from content-based to standard-based curriculum. The local school curriculum was then to be developed based on their needs with the national curriculum at the core.

The National curriculum further stresses key competencies, namely 1) Critical thinking; 2) Life skills; 3) IT skills; 4) Problem solving; and 5) Communication and also desired characteristics consisting of 1) Patriotism; 2) Honesty; 3) Self-discipline; 4) Active learning; 5) Sufficiency lifestyle; 6) Diligence; 7) Thainess; and 8) Public mindedness. Under areas of learning regarding standards, she showed examples of the various subject areas and the corresponding content and how they relate to EE/ESD. She shifted her presentation from policy to implementation of ESD in schools by showing several ESD- related school activities: 1) EE/ESD projects; 2) Integrated curriculum projects; 3) Students development activities; and 4) International collaborative projects. Dr. Namfa explained that to talk about SD in terms of education in Thailand, it is imperative to talk not only about how students learn but also what capacity to give to students for them to become life-long learners and what kind of teaching and learning in link with the community will help solve the local problems.

Dr. Namfa presented in more detail a case study of learning reform in Bansunkong using a whole-school approach in the community based on 7 steps: 1) Community studies; 2) Problem studies; 3) Presentation of finding; 4) Alternative solutions; 5) Project planning; 6) Project implementation; and 7) Evaluation. Here, the students study the local problem, present the finding to the community, study the alternative solutions and come up with several alternatives, evaluate the available alternatives regarding which ones will help sustain the resources in the community, take action after the project planning level, then implement it and finally evaluate, reflect and improve it. The rest of the presentation focussed on the knowledge and skill acquisition and attitudes of teachers and said changing the current way teachers teach was very important and that teachers’ pedagogical approach should be project/research-based, active learning, not rote learning/memorization which is not sustainable. To make ESD relevant to the student, she added the teacher must be a learner,

willing to promote child-centred teaching-learning methods by using the local community as a resource for learning and engage in teamwork with students and the community. She concluded by saying all stakeholders need to take ownership of the project.

Cambodia – National ESD Implementation

This presentation was made on behalf of Professor Meakh Seary who could not attend the workshop by Dr. Robert Didham of IGES. He said calls for implementing ESD in Cambodia are contained in the countries implementation plans for Sustainable Development and Green Growth. Although ESD does not have its own specific mandate within its development plans, its implementation is called for across most sectors and its role is addressed by the National Committee for Climate Change and the National Committee for Green Growth. However, there is no specific budget allocation for the implementation of ESD. He said that ESD implementation in Cambodia is not a stand-alone one but integrative within the existing subjects. Referring to the national curriculum, he said paths for decentralising ESD from the curriculum to the classroom do exist, however, there is a shortage of schools that actually have available ESD teaching material. Furthermore, efforts are also being made to appropriately communicate ESD to those who have responsibility for implementing it.

The presentation continued that currently, there are no demonstrated effects of ESD leading to wider educational reform and also, no M & E systems or feedback mechanisms for improvements of ESD currently exist. The main ESD topics being addressed in the formal education sector are: Climate Change, Sustainable Consumption and Production, Indigenous Knowledge, Cultural Values and Ethics Underpinning Sustainable Lifestyles, National Visions and Plans for Sustainable Development. He said that currently, there are no clear linkages to specific ESD theories/pedagogies/teaching strategies or linkage to progressive learning objectives. Neither is the availability of information on the types of learning outcomes in terms of impact and effect.

A clear mandate for including ESD in teacher training does exist and that some TEIs are currently implementing ESD training, though not all. Teachers are gaining training on the main ESD thematic topics as well as on important learning methodologies and pedagogies linked to ESD. Regarding non-formal education, he said the national government, particularly through the Ministry of Education, Ministry of Environment, and Royal Academy of Cambodia is taking action by regularly engaging with citizens to raise awareness on SD issues. Referring to the community and civil society, he said in spite of the existence of multi-stakeholder networks and partnerships on SD and ESD that are actively supported by the government, however there is no overall strategy or objectives for what non-formal ESD is trying to accomplish. He said NGOs are actively promoting ESD, raising SD awareness and addressing a full coverage of the major themes and topics using media technologies, especially TV and radio with support of government. Finally, the private sector is active in certain areas of ESD, specifically promoting in-service training and professional development on environmental management, supply chain greening, and sustainable consumption and production, promoting consumer awareness of greener/sustainable consumption, eco-products, and efficient products. Dr. Didham then thanked Prof. Sary for preparing the report.

Indonesia – Key Points of National ESD Implementation

Ms. Darwina Widjajanti gave a review of the policy findings related to ESD but couched it in the context of the opportunities of ESC initiatives within existing development strategies in Indonesia. She reminded participants of her previous mention of the Ministry of Environment Strategic Action Plan of SCP and a 3-Step Roadmap of SCP in Action. She then showed the framework of the national resource pool for National SCP Action Plan which comprised: 1) Expertise network for sustainable consumption; 2) Tools for implementation; 3) Tools for Funding and Guidance; and 4) Information provision and integration from various ministries to support the Action Plan.

Ms. Widjajanti also mentioned the existence of programs at the national level to develop 1) Environmental Education with the support from EU and AUSAID and funding from ADB; 2) Character building throughout the curricula; 3) Review and subsequent recommendation of ESD that has been an on and off program; and 4) Decentralization at the local level so that room would be made for more relevant local subject(s). She mentioned the Adiwiyata Programme, a joint programme between the Ministries of Environment and Education whose goal is to create a community of schools that are responsible for the management and protection of the environment through proper school education system to achieve SD and also, to enhance student's knowledge and awareness to maintain as well as to improve the quality of environment. The programme which offers the Adiwiyata Award to the best program/activities involves students, teachers, management and the community and is expected to involve 6000 schools by 2014. She

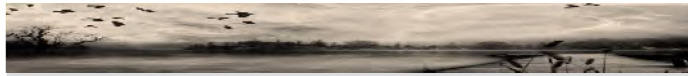
Ms. Widjajanti further explained about the Macro-strategy Plan that involves mainstreaming the SD concept in the long term into environmental, social and economic aspects using the existing initiatives, namely 1) Strategic Environmental Assessment; 2) Strategy on Poverty Reduction; 3) Sustainable Forest Management; 4) Sustainable Agriculture; 5) Responsible and Sustainable Fisheries as a cross-sectoral strategic policy. She added that climate change is at the centre of environmental policy of the Government of Indonesia. She mentioned several Green Policies in Indonesia and the ministries/agencies responsible for them. They include: 1) Green Industry (Low Carbon, Cleaner Production, 3R) by Ministry of Industry; Greening the Economy by Ministry of Environment; 3) Green Building by Ministry of Environment; 4) Sustainable Transportation (Public Transportation System, Eco Airport) by Ministry of Transportation; 5) Carbon Efficient Farming, Adaptive Techno to CC by Ministry of Agriculture, and Sustainable Forest Management by Ministry of Forestry. She concluded that Indonesia has good policy but a weak enforcement authority and there is a need for improvement.

Question and Answers

Ms. Sachiko Yasuda asked about the state of inter-agency collaboration on ESD in the countries whose participants presented. Ms. Maria Francisco of the Philippines said there was some form of inter-agency collaboration though not very specific on ESD, but rather on eco-savers program. Ms. Rona Chandran of Malaysia answered inter-agency collaboration exists but is project-based, short-lived and hence currently not sustainable. There was also a question on how community development participation could be fostered. Dr. Benjalug Namfa of Thailand answered that with the aim to enhance community development participation and with a focus on focus on environmental issues, students go to the community and ask questions about the history of the environment in the area, study the pace and situation, evaluate the cause of the problem and involving the community who in turn appreciate the sense of participation and importance, and as a consequence, foster the relationships among the stakeholders regarding future participation.



THE MALAYSIAN SCENARIO



I Told You So.....

Introduction

Policy Mandates

- MoE – EE draft have been prepared but it is yet to be implemented (collaboration with WWF)
- EE guide books for teachers were published - 1998
- Ministry of Natural Resources & Environment - National Policy on the Environment (2002)

Goal

To achieve a deeper and better understanding of the concepts of environmentally sound and sustainable development, and a caring attitude towards nature, environmental education and awareness will be promoted across the board, incorporating information dissemination and training.

(National Policy on the Environment)

GOAL

To develop :-

- citizens who are aware about the environment, and has the knowledge, skills, attitude, motivation and commitment to work individually and collectively
- pupils knowledge and understanding of the environment
- Positive attitudes towards the environment and its conversation
- Pupils personal and social education skills through environmental education

- Qualities such as co-operation, trust, respect, independence, confidence, perseverance, responsibility and kindness
- To explore equal opportunity issues
- To enable pupils to learn from first hand and real experiences and by enquiry through and from the environment

(EEP Draft)

Authority

- Division of Curriculum Development, MoE
- Department of Environment
- ESD in Malaysian schools is program based – a stand alone subject does not exist – it is infused and integrated with other subjects
- No special budget is allocated to schools
- Support is shown in terms of programs and competitions organized

National Curriculums

- There is no empirical data to show the achievement of desired objectives
- On that note there is no National Curriculum as it is not a stand alone subject.
- Inter-ministerial cooperation exists between the MoE and The Ministry of National Resources & Environment

Formal Education

- ESD is program based in Malaysia – hence teaching methods and theories used for other subjects are used for the teaching of ESD as well.
- The course content is not based on progressive learning objectives.
- There are several schools that have adopted the “whole-school management approach” – *Anugerah Sekolah Lestari*

- Sustainable Development Thematic topics covered are :-
 - Climate Change
 - Disaster Risk Reduction
 - Sustainable Consumption & Production
 - Indigenous Knowledge
 - Cultural Values and Ethics Underpinning Sustainable Lifestyles

- Schools are provided with guide books on integrated ESD teaching
- Some teachers might take the initiative to show their students programs related to ESD.
- To date – there is no empirical data to support the ESD learning outcomes in Malaysia.

Initiatives Taken at Schools

- Recycling Campaigns in Schools
- No Pet bottles and polystyrene lunch boxes in schools



Green School Contest



Teacher Training

- Teacher Training Institutes
 - DPLI (Teaching Diploma for Graduates)– compulsory
 - PISMP (Teaching Degree Program)– science & social studies
 - All 27 institutes provide training on ESD
 - Teacher trainees are exposed to the innovative learning methodologies.

Non-Formal Education

- The Department of Environment often promote non-formal ESD through advertisements and community messages via the electronic and printed media.
- Awareness Campaigns are often held from time to time.





Civil Society & NGO's

- The urban dwellers often show more support towards ESD in comparison to people in rural settlements .
- The government has cooperation with ESD linked networks such as WWF, UNESCO & JICA.
- The media is often used to promote ESD (various languages)

Many using recyclable bags at hypermarts

By LIM CHIA YING chiaying@thestar.com.my Photos by RAYMOND OOI



9 January, 2011

It has been slightly over a year now since the Selangor government started its 'No Plastic Bag Day' campaign on Saturdays.

Shopping made easy: Shoppers at Tesco Mutiara Damansara filling their bags with items. Selangor Tourism, Consumer Affairs and Environment committee chairman Elizabeth Wong said the response had been good, with calls by several retailers to increase the number of days for the campaign

Private Sector

- Digi, Sime Darby, Shell Malaysia, Panasonic Malaysia, YTL Group, MAS, Canon Malaysia, Aeon Co, HP Malaysia and Green Selipar - greening efforts.
- Are Green Companies = Sustainable Companies?

Panasonic – “Eco-Ideas”

- ❑ Washing machine – saving 110 liters or using 70% less water in every wash due to the front-load technology as well as 20% less electricity with the Intelligent Inverter Technology;
- ❑ Refrigerator – uses 40% less electricity through the Intelligent Inverter Technology that uses only the exact amount of power needed;

- ❑ The government has also shown its support towards initiatives taken by such electronic companies by offering rebates to consumers who buy electrical appliances with energy saving technology.
- ❑ Saturdays – no plastic bag day.
- ❑ Earth Hour

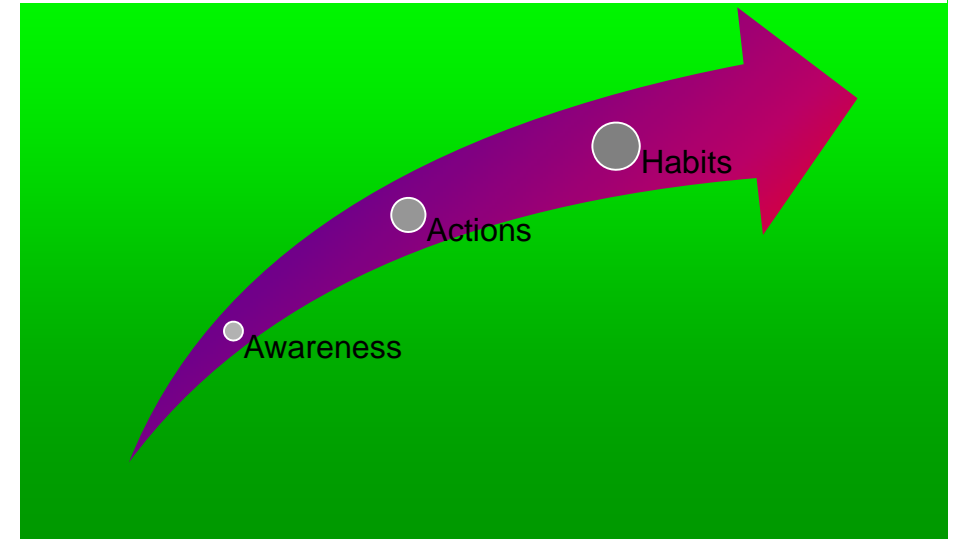


Conclusion

- ❑ There are many organizations, companies and departments that are putting in a lot of effort into promoting Sustainable Development.
- ❑ But if we are talking about education in the classrooms – perhaps there is room for improvement.

Aspiration

- Given the importance of ESD – perhaps the government should seriously consider
 - approving the Environment Education Policy (EEP)
 - introducing ESD as a individual subject in schools to create citizens who are not only aware but also who are able to act accordingly.



□ THANK YOU FOR YOUR TIME &
ATTENTION



Philippine Initiatives to Education for Sustainable Development



Environmental Management Bureau
Department of Environment and Natural Resources

National Environmental Education Action Plan (NEEAP)



• Philippine initiative to the United Nations Decade of Education for Sustainable Development (2005-2014). The aim is to pursue education to foster the transition to a sustainable society.

Photo Credit: DepEd Div Office - Marikina

Vision

An environmentally literate & proactive citizenry imbued with a sense of responsibility to care, protect & enhance environmental quality that is conducive to their well being and supportive of the nation's economic development & unified in its pursuit of peace, social justice & equity in the use of natural resources.

NEEAP for SD (2005-2014)

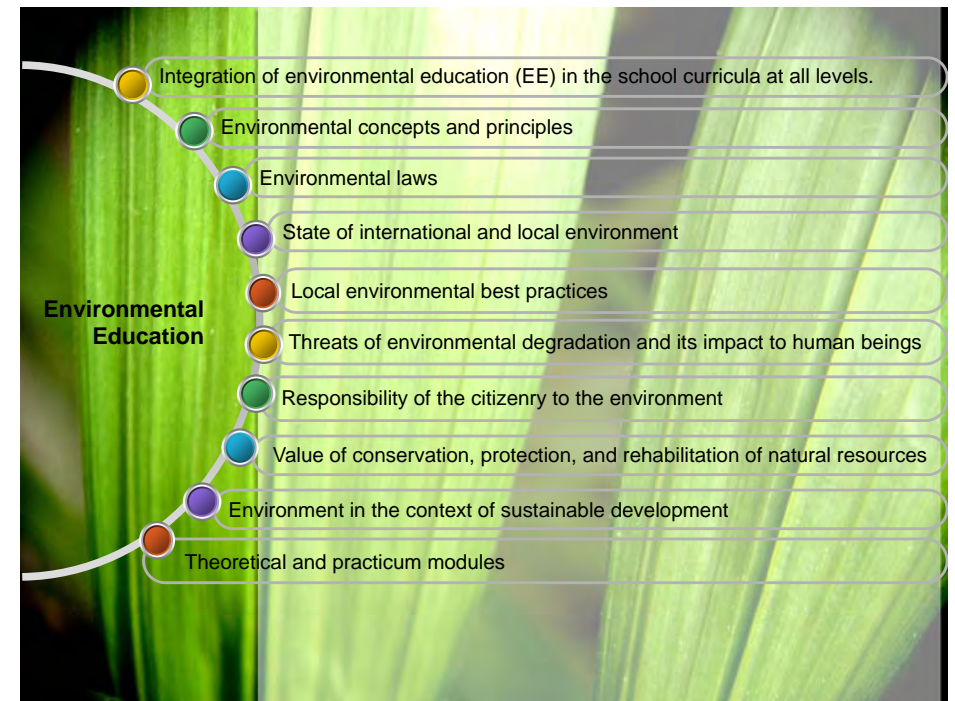


Mission

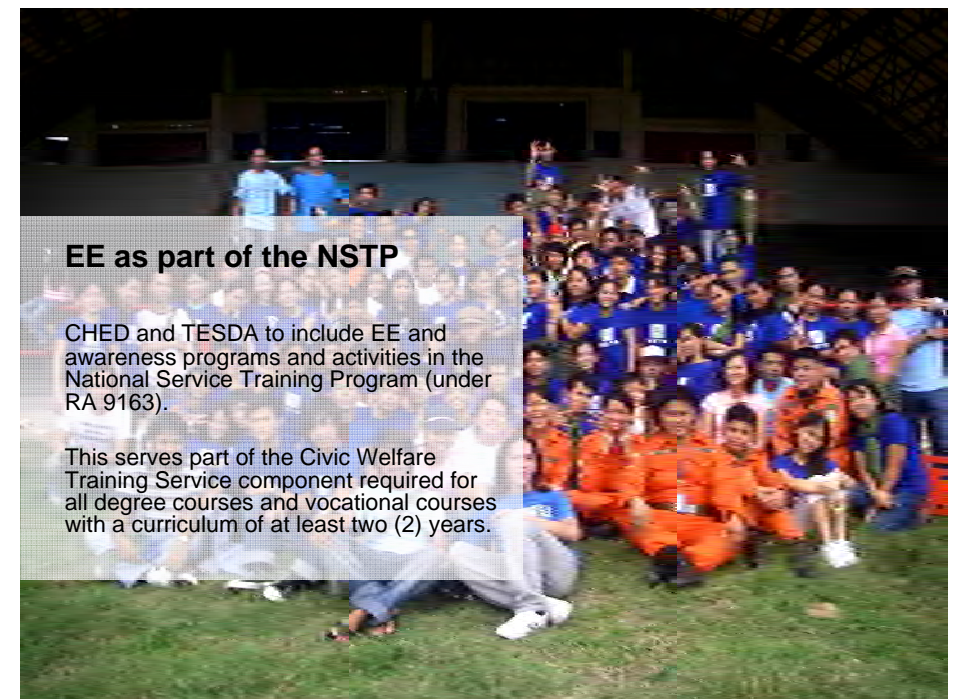
- establish a critical mass of committed environmental educators & practitioners who will spearhead the environmental education movement.;
- promote environmental ethics which will instill the right values & attitudes as a way of life among the Filipinos;
- improve the institutional systems, making them more relevant towards delivery of environmental education to all segments of society; and
- mobilize resources and encourage more private/public investments & partnerships in supporting programs for environmental education.



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.

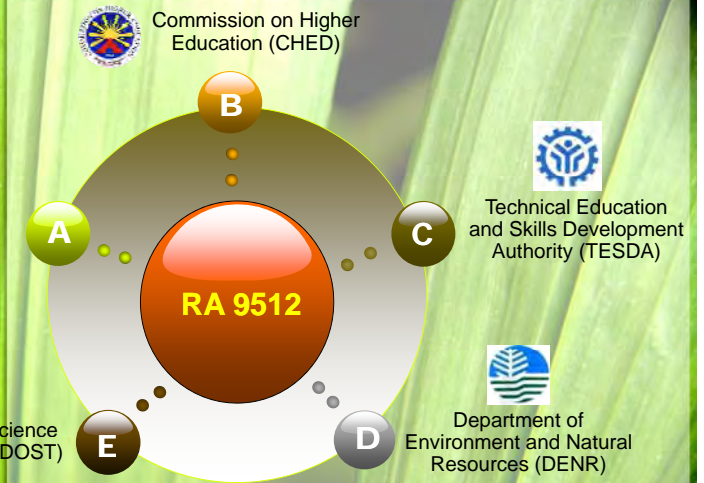


Theoretical and practicum modules



November: Environmental Awareness Month

- The month of November of every year shall be known as the "Environmental Awareness Month" throughout the Philippines.
- * November is also the Philippine Clean Air Month.



With relevant agencies and in consultation with experts on the environment and the academe.

National Search for Sustainable and Eco-Friendly Schools

in cooperation with

Environmental Management Bureau-DENR

Search Mechanics

CRITERIA FOR DETERMINING THE LEVEL OF SUSTAINABILITY AND ECO-FRIENDLINESS OF THE SCHOOLS. Entries for all categories shall be rated based on:

- Environment-related Aspects of the School's Policy (20 pts)
- Environment-friendly School Operations and Presence of Environmental Programs (30 pts)
- Environment-related Features of the School Curriculum (30 pts)
- Presence of Vibrant Eco Organizations in Campus (10 pts)
- Presence of Partners and Linkages in Environment Programs/Projects (10 pts)

2009 AWARDING/EXHIBIT



2011 AWARDING/EXHIBIT



2011 National Winners

ELEMENTARY SCHOOL CATEGORY

- First Place: ILIRANAN ELEMENTARY SCHOOL (San Carlos City, Negros Occidental)
- Second Place: KIBAWA CENTRAL SCHOOL (Kibawe, Bukidnon)
- Third Place: SAN MARIANO ELEMENTARY SCHOOL (Roxas, Oriental Mindoro)

HIGH SCHOOL CATEGORY

- First Place: CAMARINES SUR NATIONAL HIGH SCHOOL (Naga City, Camarines Sur)
- Second Place: UNIVERSITY OF SAN JOSE RECOLETOS-HIGH SCHOOL (Basak, Pardo, Cebu City)
- Third Place: DANIEL R. AGUINALDO NATIONAL HIGH SCHOOL (Matina, Davao City)

COLLEGE CATEGORY

- First Place: DE LA SALLE UNIVERSITY-DASMARIÑAS (Dasmariñas City, Cavite)
- Second Place: PALAWAN STATE UNIVERSITY (Puerto Princesa City, Palawan)
- Third Place: ATENEO DE MANILA UNIVERSITY (Loyola Heights, Quezon City)



Peñablanca East Central School

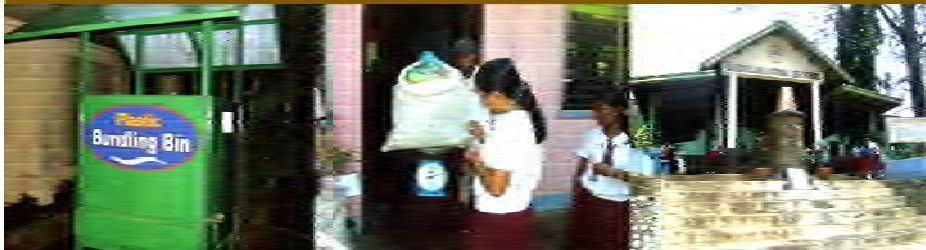
Agguagaddan-Malibabag, Peñablanca, Cagayan Region 2 – Cagayan Valley
 First Place, 2009 National Search for Sustainable and Eco-friendly Schools
 National Level, Elementary School Level





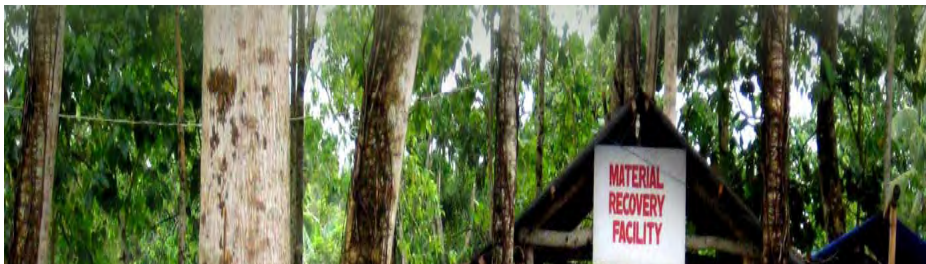
La Castellana National High School

La Castellana, Negros Occidental Region 6 – Western Visayas
 First Place, 2009 National Search for Sustainable and Eco-friendly Schools
 National Level, High School Level



Palawan State University

Puerto Princesa City, Palawan Region 4B - MIMAROPA
 First Place, 2009 National Search for Sustainable and Eco-friendly Schools
 National Level, Tertiary Level



Environmental Education leads to the greening and sustainable development of our cities and municipalities.



The National Greening Program

Realizing its time to bring together various efforts to “walk the talk” along the path of “*Tuwid na Daan*,” President Benigno S Aquino III signed Executive Order No. 26 on February 24, 2011, which is by far “the widest and most sustained reforestation venture ever embarked on a national scale combining the resources and manpower of almost all national agencies, in the Philippines



This is the State of our Water Bodies

Neglected... Ignored...

They are the causes of floodings and sources of major illnesses: Dengue, Diarrhea, Cholera, Dysentery, etc.

Would you allow your children to live and grow in this environment?

ADOPT A WATER BODY

Be part of the solution. Let us clean our water bodies! Makibahagi sa Pagbabago!

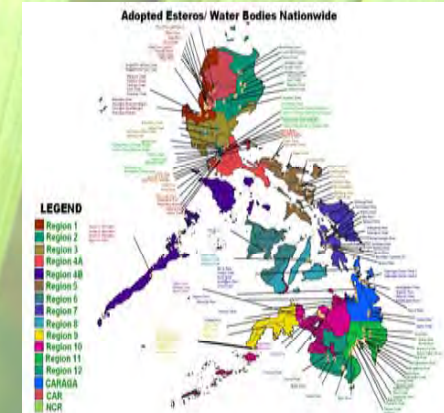
To adopt a water body, please contact the

ENVIRONMENTAL MANAGEMENT BUREAU
Department of Environment and Natural Resources
Tel. No. (02) 9284674, Fax No. (02) 9282246
E-mail: emb@emb.gov.ph
www.emb.gov.ph



Adopt-an Estero/ Water body Program

A collaborative undertaking between and among the Estero Community, Donor-Partner, LGUs, other government agencies & the DENR to promote and achieve a cleaner, safer & healthier environment



Success Indicators

Presence of sustained community mobilization program:

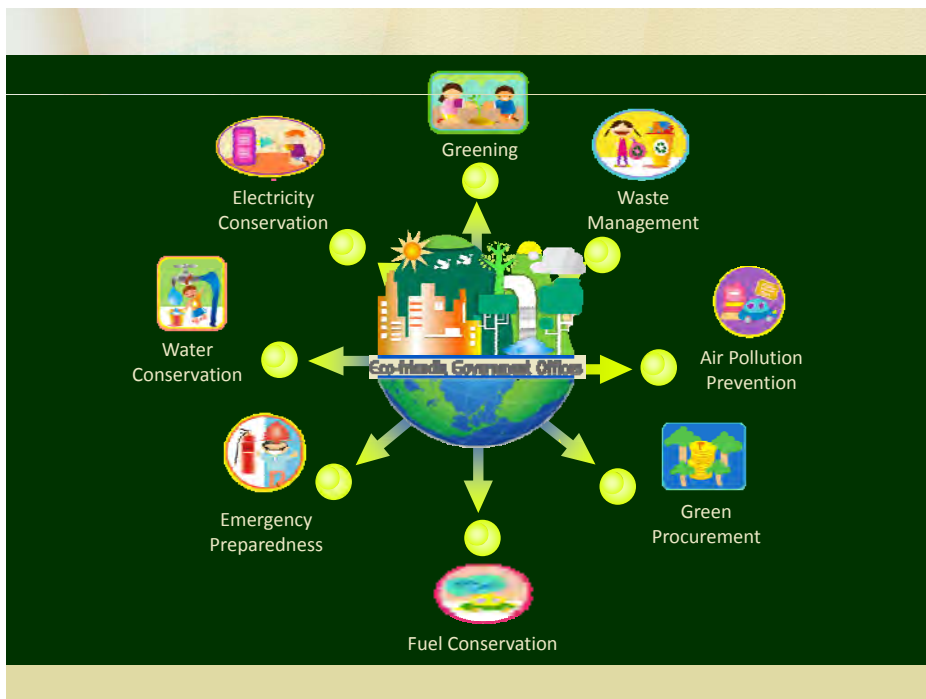
1. regular clean-up activity and increased participation rate of residents in the community;
2. increased number of information materials about the program;
3. continuing IEC campaigns and community training programs;
4. community livelihood program relating to wastes (e.g. vermicomposting, recycling, crafts from recycled items, seedling production, etc.)



The 2011 Recognition Awards for Eco-friendly Government Offices

Environmental Education leads to the greening and sustainable development of all government offices.





- **The continuing challenges...**
- **Strengthen the integration** of environmental education towards sustainable development in the Philippines (for all levels and sectors) thru :
 - - Curriculum
 - - Educational Materials
 - - Training and Capacity Building for Educators/Trainers
 - - Institutionalization

Thank you very much.

 **Department of Environment and Natural Resources**
 Visayas Ave. Diliman, Quezon City
www.denr.gov.ph

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Education for Sustainable Development

BENJALUG NAMFA, PH.D.

Ministry of Education
Thailand



Preview



What are national policies towards ESD?



What ESD requirements must Thai learners fulfill?



What are some examples of activities on ESD in Thailand?

National Policies



1 What are national policies towards ESD?

National Policies



The 10th Economic and Social Development Plan (2007-2016)
– sets goal to achieve “Green and Happy Society”





National

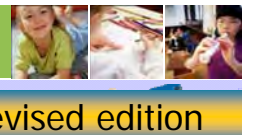


National Education Plan (2002 – 2016)

King's Philosophy of Sufficiency Economy
Stresses the middle path
Sustainable development and proper well-being for Thai people
Balanced development



National Policies



1999 National Education Act and 2002 revised edition

Chapter

Section 6

Education shall aim at the *full development* of the Thai people in all aspects: physical and mental health; intellect; knowledge; morality; integrity; and desirable way of life so as to be able to live in harmony with other people"

Section 7

The learning process shall aim at ability to protect and promote their rights.; inculcating ability to preserve natural resources and the environment."

National Policies



1999 National Education Act and 2002 revised edition

Chapter 4 : National Education Guidelines

Section 23

Scientific and technological knowledge and skills, as well as knowledge, understanding and experience in management, conservation, and utilization of natural resources and the environment in a balanced and sustainable manner"



Authority

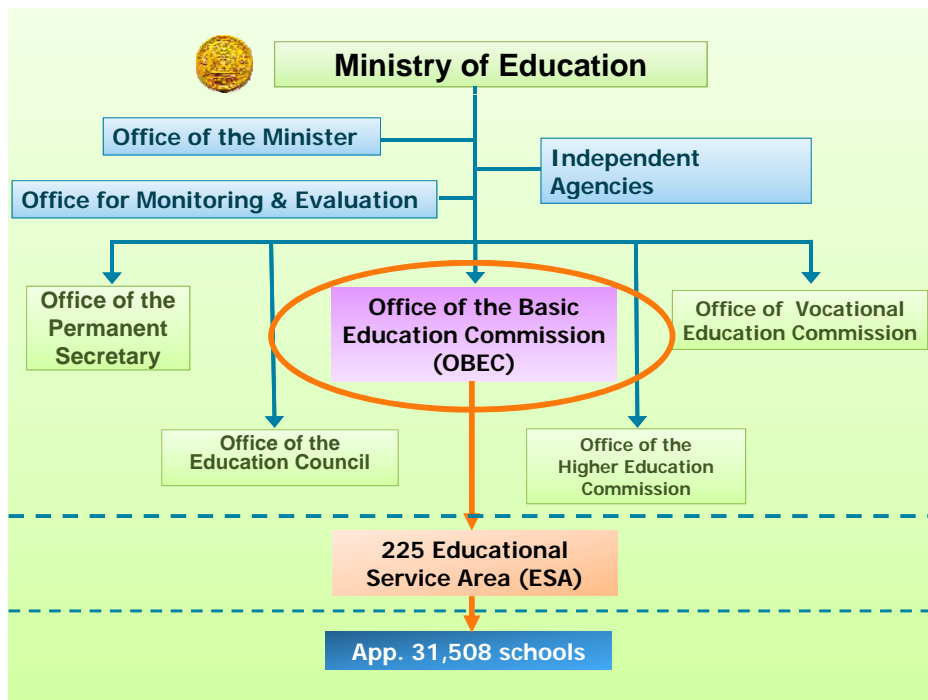


❖ Ministry of Education

- ➔ Office of the Education Council
- ➔ Office of the Permanent Secretary
- ➔ Office of the Basic Education Commission
- ➔ Office of the Vocational Education Commission
- ➔ Office of Higher Education Commission

❖ Ministry of Environment and Natural Resources

❖ Ministry of Interior



National Curriculum



2 What ESD requirements must Thai learners fulfill?

National Curriculum



Basic Education Curriculum 2008

National Curriculum



Decentralization with flexibility for local/ school inputs of national core curriculum

National Curriculum



Basic Education Standards

Centrally developed

Core curriculum

Ministry officials
Experts

Locally developed

School curriculum

Teachers
School administrators

Parents
Community

National Curriculum



National core curriculum

Local / school needs

School curriculum



National Curriculum



Standards

Key Competencies

Desired characteristics



National Curriculum



Desired characteristics

1. Patriotism
2. Honesty
3. Self-discipline
4. Active learning
5. Sufficiency lifestyle
6. Diligence
7. Thainess
8. Public mindedness



National Curriculum



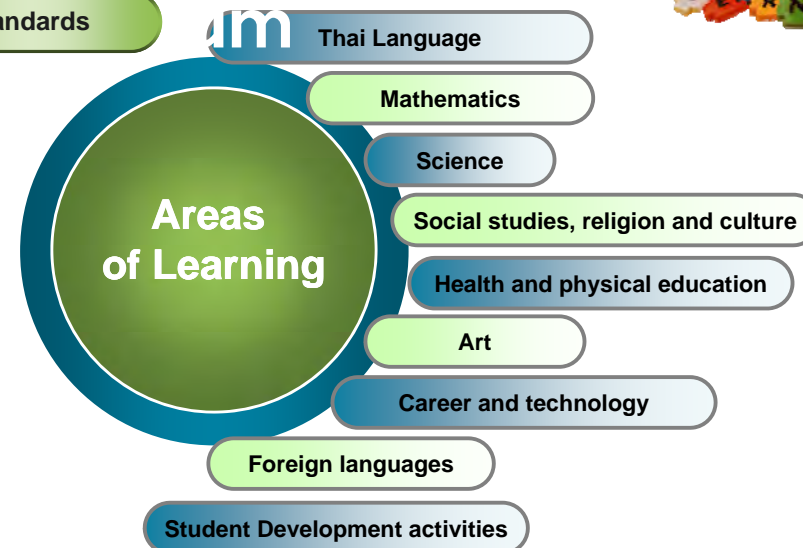
Key Competencies



National



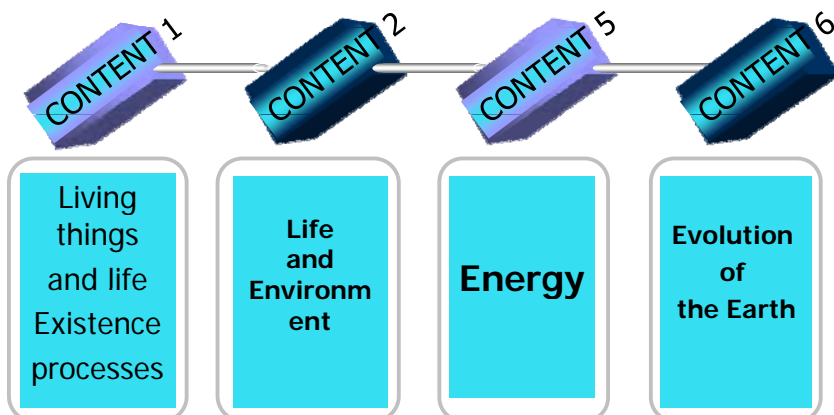
Standards



National Curriculum



Subject Area: Science



National Curriculum



Subject Area: Social studies, Religion, and Culture

Content 3: Economics

Standard So 3.1 Understand and be able to administer and manage resource production and consumption, utilization of limited resources available, as well as practice the King's sufficiency economy

Content 5: Geography

Standard So 5.2 Understanding inter-relationship between human beings and their physical environment for consciousness of resource and environmental preservation for sustainable development

National Curriculum



Subject Area: Career and Technology

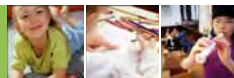
Content 1 : Living and family life

Standard C 1.1 Understand, creatively think, acquire skills and consciousness concerning utilization of natural resources and environment involving household chores, agriculture, crafts, creative work and business



Focus of Learner Quality Development Second Decade of Thailand Education Reform: Roadmap to Success			
"Towards High Quality Thai learners, Equipped with Abilities in Thinking, Doing, and Solving Problems, Ready for Being Good/Active Thai Citizens and International Community Citizens"			
Levels	Abilities and Skills	Characteristics	
		Focus according to ages	Focus according to core curriculum
Grade 10-12	Seek out knowledge for problem solving; ability in using ICT for learning; ability in foreign languages; high-level thinking, life skills, creative communication skills according to learners' age	Committed to education and ready for future work. Have maturity.	- love of nation, religion, and monarchy - honesty and integrity - self-discipline - enthusiastic learners
Grade 7-9	Self-learning; ICT for learning; high-level thinking; life skills; creative communication skills according to learners' age	Sufficiency lifestyle	- applying sufficiency economy principles to one's way of life - dedication and commitment to work
Grade 4-6	Ability in fluent reading and writing; mathematical literacy; basic thinking skills, life skills, creative communication skills according to learners' age	Enthusiastic learners	- cherishing Thai nationalism - public mindedness
Grade 1-3	Ability to read and write and do basic mathematics; basic thinking skills, life skills, creative communication skills according to learners' age	Basic morality and ethics. Ability to distinguish right from wrong.	

School Activities



③ What are some examples of activities on ESD in Thailand?

School Activities



EE & ESD project

- ✓ Sufficiency Economy School
- ✓ Eco-School
- ✓ Environmental Edu. School

Integrated Curriculum

- ✓ Community Studies
- ✓ Bio-Agricultural
- ✓ Drugs / Waste /Water/
- ✓ Disaster /Climate Change
- ✓ Etc.

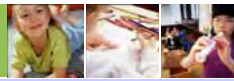
Student Development Activities

- ✓ EE Club
- ✓ ESD Camp/outdoor activities
- ✓ Social Service Club
- ✓ Boy scout / Girl scout
- ✓ Guidance & counseling

International Collaborative Project

- ✓ UNESCO: ASPnet
- ✓ ACCU
- ✓ Rice Project
- ✓ Etc.

School Activities

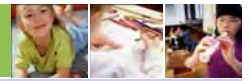


Sufficiency Economy School Project

- Ministry of Education formulates strategies to integrate the Philosophy in classroom instruction, activities for learner development, and administration at all levels (2007-2011)
- In 2009, the Ministry plans to apply the Philosophy to school management and classroom instruction in 800 schools
- By 2011, every Thai school is expected to apply the King's Philosophy
- By 2012, School Evaluation for National Awards



School Activities



Participatory Learning Leading to Integrated Community Development:

A Case Study of Bansunkong School

Supported by
ACCU-UNESCO Innovation Programme for ESD

Community contexts



- Akha Hill tribe community in nearby City
- Border community between Thai, Laos PDR and Myanmar: Golden Triangle
- Agricultural and daily labor
- Poverty /drug issues /HIV/AIDS/ Low hygiene
- Ethnic language, traditions and customs
- Big family/ thatched roof house



School contexts

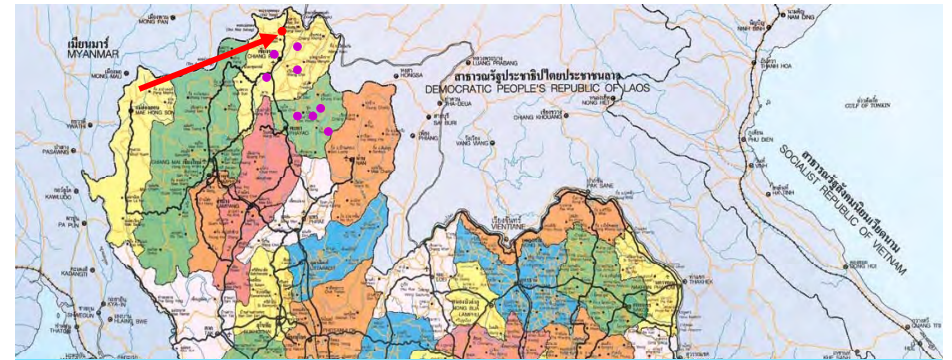
- Bangsunkong School, Chiangrai province**
(25 teachers, 650 students from 5 villages,
2,000 Communities Members : 2008)
Elementary school (Kindergarten- grade 6)



- 90 % of children from hill tribes (mainly Akha) and migrated from Myanmar, most not possessing Thai national identity cards
- 10% of children from poor family
- Thai Language is not mother tongue
- Risk of dropout and disappearance
- Poverty / Malnutrition / Low hygiene
- Mixed-age classroom



Mr. Uthai MoolmeungKum, Principal



This is a pilot project of learning reform within a whole-school approach. Teacher guidelines will be developed specifically for Bansunkong school and will be used in developing an integrated curriculum, as well as to promote child-centred teaching-learning methods by using the local community as a resource for learning



7 Steps of A Case Study approach

Project strategy

Thai MOE & Michigan State University, USA
EE project 1997

1. Community studies

2. Problem studies

3. Present the finding

4. Alternative solutions

5. Project planning

6. Project Implementation

7. Evaluation



Step 1 Community Studies

Collect data in the community to identify environmental/social problems; Kindergarten- grade 3 focus on classroom or school context; Grade 4-6 focus on community context

Local Curriculum: Social studies

Unit Plan: Integrated unit plan

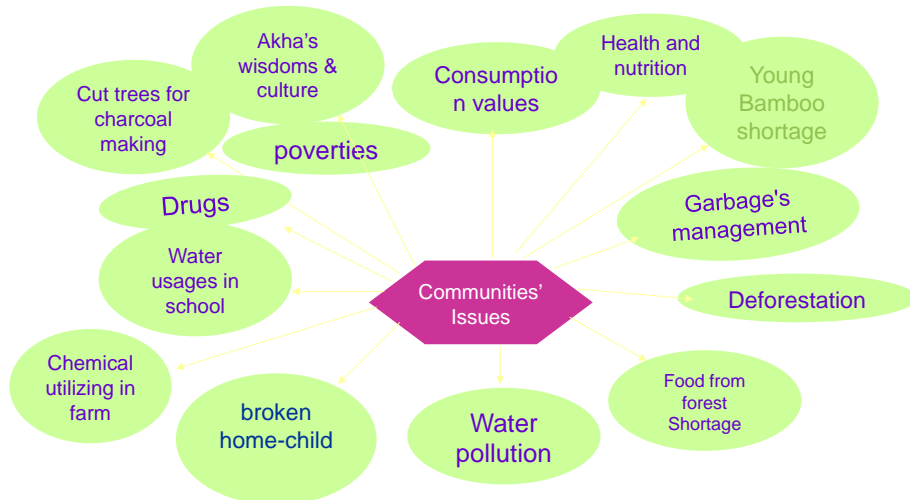
Lesson plan: emphasis on Learning process/ use communities as learning resources

Learning process: Learning by doing, participatory learning, project based-learning and thinking and problem solving skills development

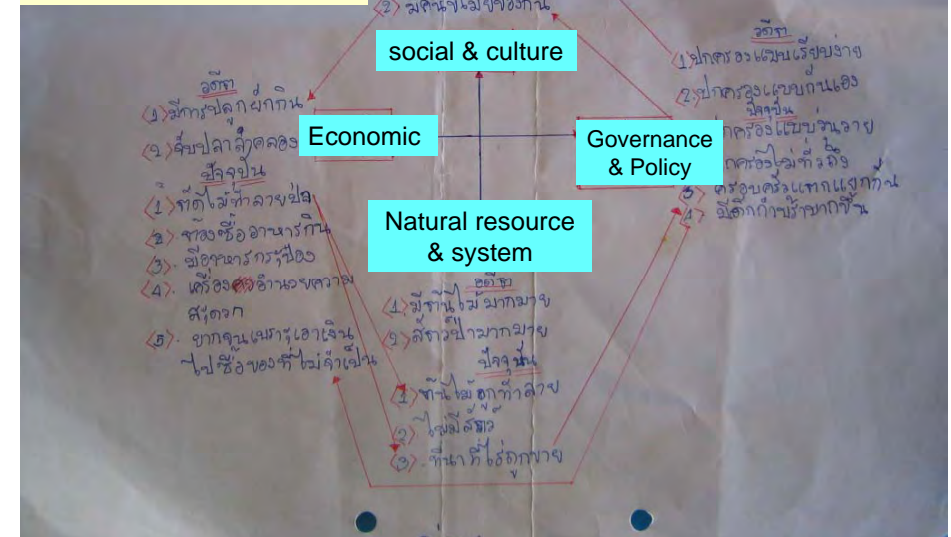


Step 2 Problem studies

Students choose a problem to study in depth to clarify the causes and effects



Kite model for understanding the context of community which related to issues



Step 3 Present the finding

Students present finding to communities and others



- Display
- Exhibition
- Drama
- Music
- Documents/ books
- Role play
- Flow Chart



Step 4 Alternative solutions

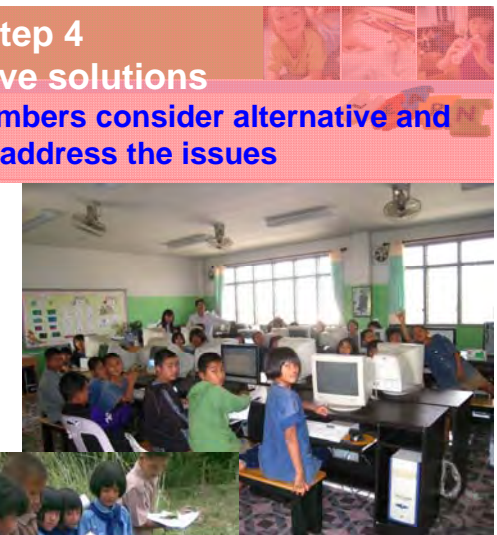
Students & Community members consider alternative and choose one to address the issues

Field trip study

Library

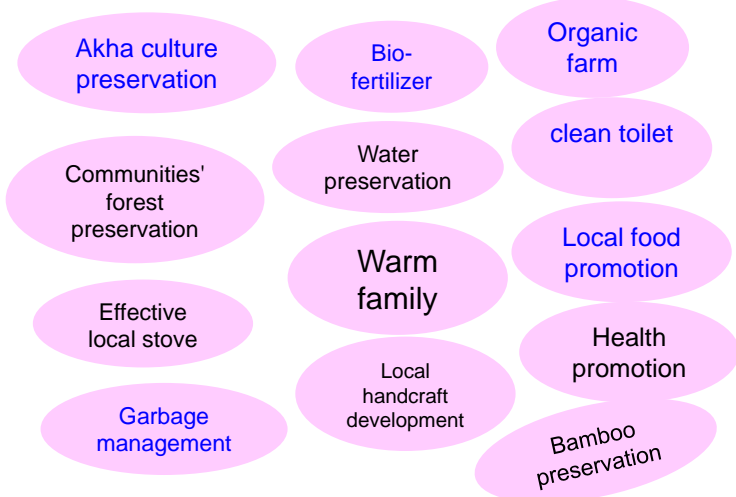
Internet

Interview/
questionnaires/
other resources



Picture: Soratda Phumwipach

Step 5 Project planning Communities, teachers and students plan a small-scale project(s).



Step 6 Project Implementation Villagers, teachers and students implement the participatory project (s)

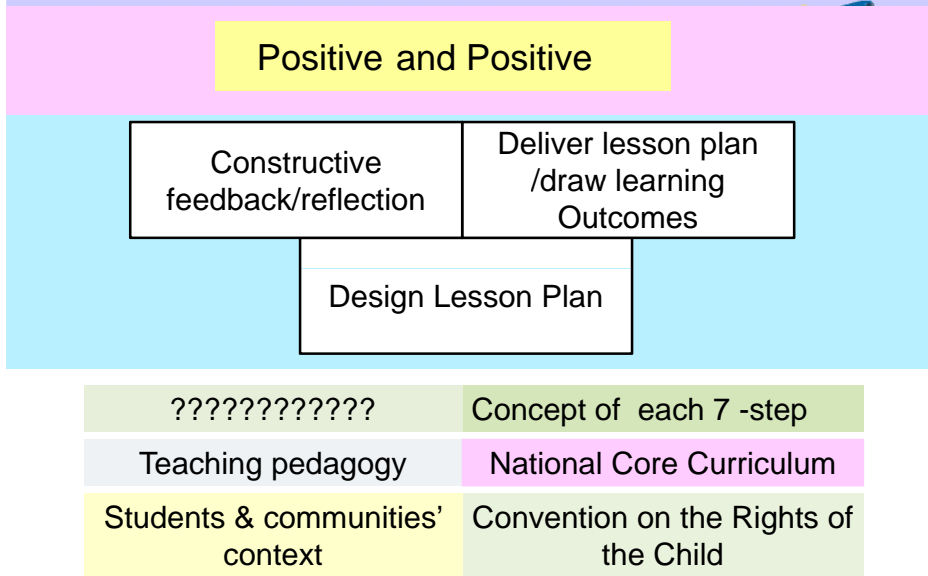


Step 7 Evaluation & Cerebration / Reflection & Improvement Students, teachers and villagers evaluate the outcomes and report to stakeholders



Community & school Learning Together Festival

Knowledge/Skills/attitudes for teacher



Project Activities



1. **Teacher Guideline Development: A Case Study Approach in Seven Steps (CSA)**
2. **Several Teacher training workshop/group working / Study visits**
3. **School activities: follow on 7-step**
4. **Self-Reflection Programme**
5. **Follow up and monitoring**



Picture: Soratda Phumwipach

Outcomes



Student

- ❖ School attendance increased
- ❖ Students empowered, increased skills in team working, fieldwork, collective decision making, critical thinking, and presentations etc,
- ❖ Self-esteem and confidence
- ❖ Aware of local issues
- ❖ Earning income during school
- ❖ Academic achievement increased



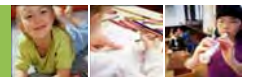
Outcomes



Teacher

- ❖ Voluntary cooperation among teachers increased
- ❖ Change role from direct teaching to “learning facilitation”
- ❖ Create better learning conditions
- ❖ Trust in students and believe in their potential/ability
- ❖ In depth understanding of students’ context and provide appropriate educational approaches
- ❖ **Professional development**

Outcomes



Parent/communities

- ❖ Value education and their children / commit in supporting education
- ❖ **Support their children in continuous education**
- ❖ Value local wisdom
- ❖ Proud and confident in sharing the experiences as resource persons for their generation

Outcomes



School

- ❖ Seven-Step Approach of CSA introduced to every classroom
- ❖ Provide meaningful learning related to local context and essential skills for globalization
- ❖ Relationship between teacher-students-community people strengthened
- ❖ Model of school as “community learning organization”
- ❖ Resource learning for community and other schools
- ❖ Holistic Child Development
- ❖ Self – directing

School Activities: 2009-2011



- ❖ Small business club in herbal and tea products / organic farm : Earning income during school
- ❖ School Excellence of Sufficient Economy : National Model School award from MOE
 - School Excellence of Environmental Management
 - School Excellence of Reading Promote and Students' Reading Competency
- ❖ School Excellence of work oriented for Agriculture 1st national award from Ministry of Agriculture
 - Teacher Excellence in work oriented/occupations for Agriculture : 1st national award

School Activities: 2009-2011



Young Agriculture club :

- 3rd national award
- 1st award of northern region

Student award :

- 1st national student performance
- Golden Award (Student Science Project the North of Thailand) - Solar Cell Project (OBEC)
- Four Golden Awards (Student Project in Drama, Movie, Science Show, Science Project) Chiangrai Primary Education Service Area Office 3
- Silver Award on robot competition (North region)

Achievement



กลุ่มเยาวชนกรดีเด่นแห่งชาติ สาขาอาชีพ ปี 2553
กลุ่มเยาวชน อันดับ 3 ระดับประเทศ

Achievement



The Prototype School of Sufficiency Economy 2010
โรงเรียนต้นแบบปรัชญาเศรษฐกิจพอเพียง ปี 2553

Teacher training



Changing Teacher Practice!

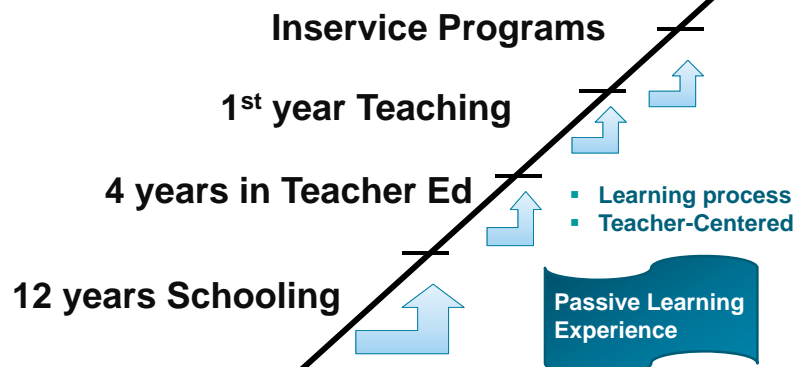
The most difficult...
but the most important



Teacher training



Teacher 's learning Experiences



Teacher training



Apprenticeship of Observation



The need to change teacher's Practice

from

Passive Learning Experience



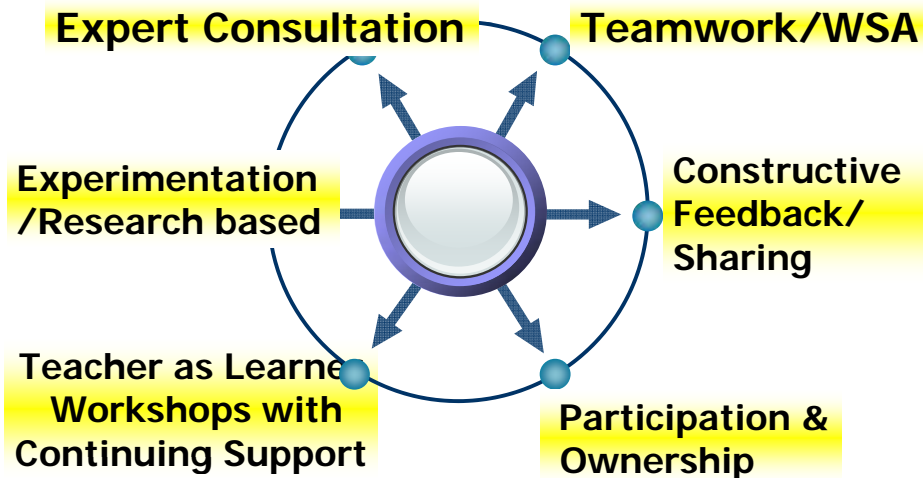
Active Learning Experience

How?



Effective Teacher Development Program

- Teacher as a Learner Workshop
 - One on One Supervision/ Coaching
 - Teacher Collaboration



Green Office

EFA-ESD Synergy

Capacity Building

Monitoring & Evaluation





Thank You !



EDUCATION FOR SUSTAINABLE DEVELOPMENT IN CAMBODIA: An implementation status report

Presented on behalf on Prof. Meakh Sary
Institute of Humanities and Social Sciences of
The Royal Academy of Cambodia

MANDATES FOR ESD IN CAMBODIA

- The calls for implementing ESD in Cambodia are contained in the countries implementation plans for sustainable development and green growth
 - Which recognize the importance of education in supporting the achievement of these development objectives and goals
- ESD does not have its own specific mandate
- The role of education (and ESD) is also addressed by the National Committee for Climate Change and the National Committee for Green Growth
- The implementation of ESD is called for across most sectors (i.e. National Curriculum, Primary Education, Secondary Education, Higher Education, Non-Formal Education, Teacher Training (both pre-service and in-service) , Community Participation, and Private Sector)
- There however is no specific budget allocation for the implementation of ESD

ESD IN THE NATIONAL CURRICULUM

- Main approach is an integrative one: addressing issues of sustainable development within traditional subjects
 - For example, discussing SD principles in relation to education on economics and on the environment
- Though Cambodia has mechanisms to cooperate internationally on ESD, there are no formal structures for inter-ministerial cooperation on ESD within the country
- Support from the research community in Cambodia could be better applied to help develop ESD curriculum.

NATIONAL CURRICULUM, CTD.

- The paths for decentralizing ESD from the curriculum to the classroom do exist, however there is still a shortage of those schools that actually have available ESD teaching material.
- Efforts are also being made to appropriately communicate ESD to those who have responsibility for implementing it.
- Currently, there are no demonstrated effects of ESD leading to wider educational reform.
- No available monitoring and evaluation systems or feedback mechanisms currently exist.

ESD IN FORMAL EDUCATION

- Main Topics of ESD being addressed:
 - Climate Change
 - Sustainable Consumption and Production
 - Indigenous Knowledge
 - Cultural Values and Ethics underpinning Sustainable Lifestyles
 - National Visions and Plans for Sustainable Development
- No clear linkage to specific ESD theories/pedagogies/teaching strategies or linkage to progressive learning objectives.
- In terms of impact and effect, no information is available on the types of learning outcomes that are happening

TEACHER TRAINING

- Clear Mandate for including ESD in teacher training
- Some TEIs are currently implementing ESD training, but not all.
- Teachers are gaining training on important learning methodologies and pedagogies linked to ESD.
- Training is also cover the majority of main themes of ESD (*as specified in the survey*).
- Efforts could be made to establish better mechanisms for sharing ESD good practices.

ESD IN NON-FORMAL EDUCATION

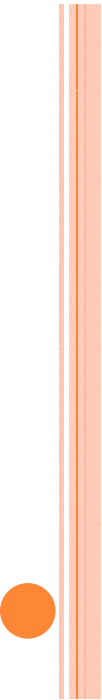
- The national government (especially Ministry of Education, Ministry of Environment, and Royal Academy of Cambodia) are taking action on Non-Formal ESD.
- They are regularly engaging with citizens for awareness raising on SD issues.
- However, there is no overall strategy or objectives for what non-formal ESD is trying to accomplish.

COMMUNITY AND CIVIL SOCIETY

- There are existing multi-stakeholder networks and partnerships on SD and ESD in Cambodia.
- The government actively supports and cooperates with these networks.
- NGOs working in Cambodia are actively promoting ESD and addressing a full coverage of the major themes and topics.
- Media technologies, especially TV and Radio, are being used to promote ESD and awareness raising for SD
 - And this is being supported/promoted by the government



PRIVATE SECTOR

- The private sector is active in certain areas of ESD
 - Promoting in-service training and professional development on environmental management, supply chain greening, and sustainable consumption and production.
 - Promoting consumer awareness of greener/sustainable consumption, eco-products, efficient products.
- 

LEAD Indonesia
inspiring leadership for a sustainable world

lead

Opportunities of Education for Sustainable Consumption Initiatives (ESC) within existing Development Strategies

Presented by
Darwina Widjajanti

Southeast Asia Reporting and Capacity Building Workshop on:
Move of Education for Sustainable Development
23 – 24 April, 2012
Bangkok, Thailand

Leadership for Environment and Development
Hosted by Yayasan Pembangunan Berkelanjutan

Ministry of Environment



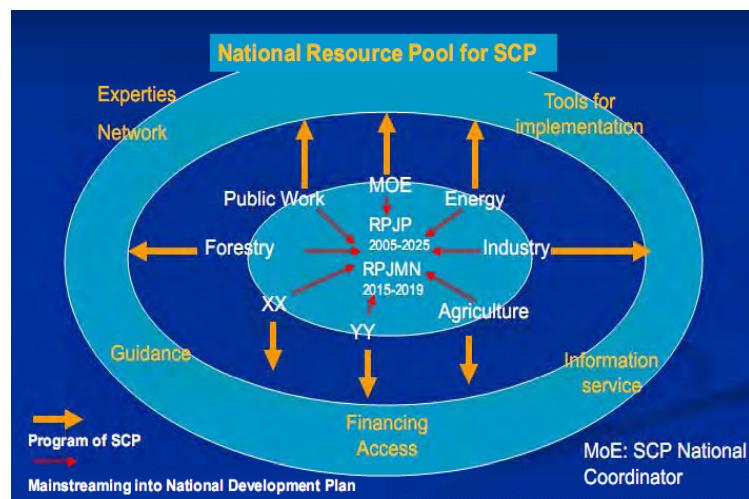
- **Strategic Action Plan of SCP**

- Resource Pool
- Green Procurement
- Green Building

- **Road Map of SCP in Action**

- Product Certification
- Center of Sustainable Production
- Education on Sustainable Consumption

National SCP Action Plan



Ministry of National Education and Culture

- **Analysis of Capacity Development Partnership (ACDP) :2010 -2014**
To develop Environmental Education (formal)
Support: EU and AUSAID, financial management by ADB
- **Character Building throughout the curricula**
- **ESD: to review and to be recommended**
- **Decentralization: a room for local subject**

Joint Program
Ministry of Environment &
Ministry of National Education & Culture



Adiwiyata Program

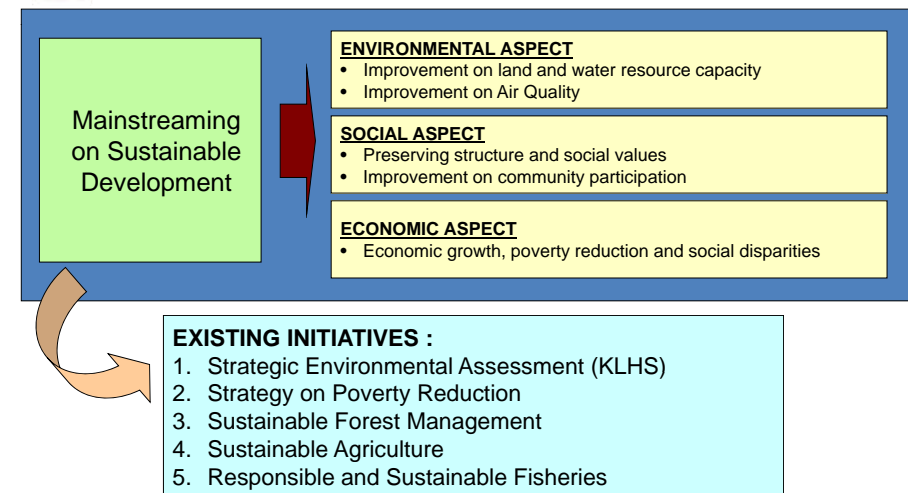
Initiated by Ministry of Environment implemented by formal education under the management of Ministry of Education – encourage school to be innovative in taking actions for environmental preservation, involve students, teachers, management, community.

ESC – inspire schools to develop ESC

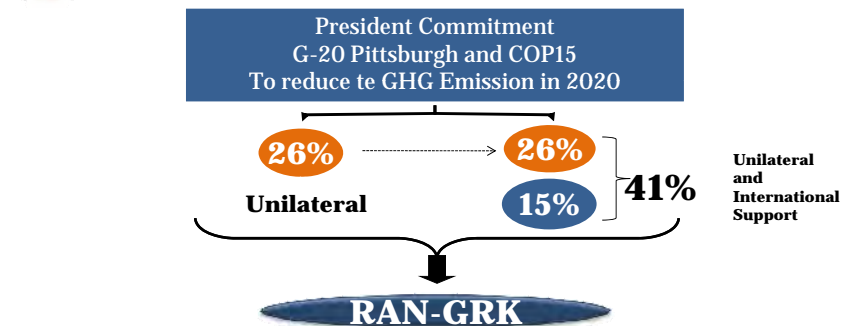
Adiwiyata Goal

- To create school community who responsible to manage and protect environment through proper school education system to achieve sustainable development
- To enhance student's knowledge and awareness to maintain as well as to improve the quality of environment
- **Adiwiyata Award for the best program/activities**

MAINSTREAMING SUSTAINABLE DEVELOPMENT CONCEPT IN RPJMN



SCENARIO of 2020 GHG Emission Reduction



The Action Plan is focused on :

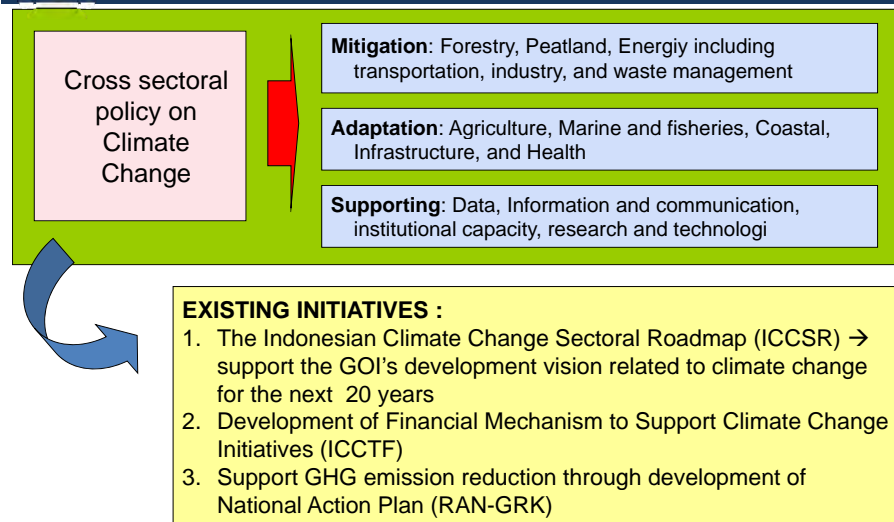
1. GHG Emission Reduction
2. Increase of GHG Absorbtion Capacity (carbon sequestration)

The Action Plan - principles:

1. should not hinder economic growth, and prioritizing people's welfare
2. supports protection of the poor and vulnerable communities, including environment conservation in the framework of sustainable development
3. Consists of core activities to reduce the emission and supporting activities to strengthen the policy framework



CROSS SECTORAL POLICY ON CLIMATE CHANGE IN RPJMN



Green Policy In Indonesia

- **Green Industry (Low Carbon, Cleaner Production, 3R)– Ministry of Industry**
- **Greening the Economy – Ministry of Environment**
- **Green Building – Ministry of Environment (Ministry Regulation no. 08/2010)**
- **Sustainable Transportation (Public Transportation System, Eco Airport)– Ministry of Transportation**
- **Carbon Efficient Farming, Adaptive Techno to CC – Ministry of Agriculture**
- **Sustainable Forest Management – Ministry of Forestry**
- **Sustainable Development-based Spatial Planning – Ministry of Public Work**
- **Green Banking/Sustainable bank – National bank of Indonesia/BNI, Bank Mandiri**
- **Green Investment (Socially Responsible Investment/SRI): Indonesia Stock Exchange**

The Journey of Sustainable Development

With Policy comes the challenges of

- **Implementation – how far it can go, how well it is?**
- **Law Enforcement – how effective it is?**
- **The target group involvement? How strong it is? (ESCP)**
- **Coordination among government agencies and Partnership among parties need to take place for higher impacts**

There is no shortcuts to life's greatest achievement

Thank You - Kapunka

Yayasan Pembangunan Berkelanjutan
 Jl. Lebak Bulus I no 62, Lebak Bulus,
 Cilandak, Jakarta 12440 – Indonesia
 Email: darwina@ypb.or.id



SESSION SIX:
Capacity Building Activity – Capacity Assessment on M&E of ESD Status
Day Two: 14:00 – 15:45

Presentation:

Evaluation Framework for Monitoring and Evaluation of Education for Sustainable Development
Robert J. Didham, IGES

Group Activity – Capacity Assessment

Identifying System Leverage Points for ESD Implementation

Dr. Robert Didham began this session by explaining the main purpose to focus on the quantitative investigation of ESD implementation and to conduct an assessment of system capacities to identify the important leverage points that generally lead to good ESD implementation.

Dr. Didham provided a presentation on the evaluation framework that was established to structure the quantitative investigation in the current research project. He presented the two major divisions used to create the evaluation framework: a sectorial approach and a division based on aggregated types of system levers. Under the sectorial approach, a total of six distinct sectors supporting ESD were identified for investigation during the initial ESD Expert Consultation meeting that took place at the beginning of this research process. These sectors are: national curriculum, formal education, teacher training, non-formal education, community & civil society, and private sector. The three divisions based on system capacities or levers helps to frame different types of indicators and can be linked to inputs, throughputs, and outputs of the system. These indicators are: status indicators (inputs – baseline information), facilitative indicators (throughputs – knowledge and leadership), and effect indicators (outputs – learning performance). It was then explained how these two divisions were used to create an overall framework under which potential leverage points, barriers and indicators were drafted for each category. Finally, it was from this framework that the questions for the Country ESD Survey used by National Focal Points were developed.

An explanation was then provided on the group capacity activity. This activity used a simplified version of the evaluation framework that considered all six sectors but only the status and facilitative indicators (inputs and throughputs respectively). Using this simplified framework, the groups were asked to consider what was one significant leverage point or capacity necessary for achieving successful ESD implementation at each of the twelve entry points. Mr. Robert Steele then provided a presentation on the process for the group activity which would use the World Café meeting methodology. He reiterated that the focus would be on addressing/identifying the important leverage points connected to input and throughput capacities for five sectors: national curriculum, formal education, teacher training, non-formal education, and community & civil society. The five sectors would be represented by five different tables which would be overseen by one facilitator. Participants would spend ten minutes at one table discussing important issues related to that sector before moving on to the next table.

Following the productive group discussions, each table then presented their findings and recommendations back to the workshop participants and these were compiled together for presentation. In regards to national curriculum, the findings focused on how well ESD is integrated into the existing curriculum, inter-ministerial coordination on ESD activities, linkages to national development plans and locally relevant interpretations of ESD. The recommendations for formal

education were in regards to good conceptualization and contextualization of ESD, clearly policy guidelines for ESD teaching, clear evaluation and assessment processes for ESD, and the linkages to overall educational reform. Teacher training points addressed the importance of pedagogy improvement for ESD teaching, set criteria and assessment of teachers' ESD competencies, and development of good teaching materials. The groups highlighted compilation of good practices, knowledge sharing platforms, and opportunities for public discussion/debate in regards to non-formal ESD, along with clear mandates for ESD in non-formal education, funding and the provision of training centres. For civil society, findings looked at the number of partnerships and networks for ESD, the quality of communication among these networks, and pervasiveness of community service opportunities linked with sustainable development; and there were suggestions for better relationships between schools-communities-local governments and the importance of focusing on sustainable livelihoods.

Please see the following pages for the entire findings from each thematic group's activity.

Monitoring and Evaluation of Education for Sustainable Development
Evaluation Framework & Identifying System Leverage Points

Capacity Assessment Activity

Southeast Asia Workshop on Monitoring & Evaluation of Education for Sustainable Development

23-24 April 2012

Dr. Robert J. Didham

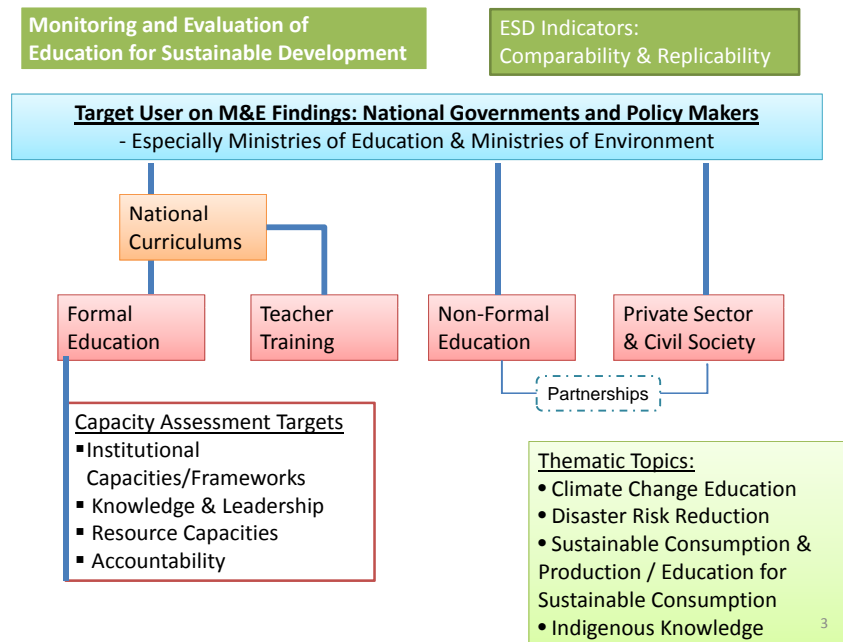
Institute for Global Environmental Strategies



Applying a Capacity Assessment Approach to M&E of ESD

- Goal: To identify the system capacities that support successful implementation of ESD.
- These capacities provide important levers for improving the overall performance, and thus can support M&E based on educational inputs.
- **2 Types of Divisions:**
 - **Sectorial Approach** → 6 selected sectors
 - **System Levers** → 3 levels of reporting

FIGURE 1: Systems Map of M&E of ESD Focal Areas



Sectorial Approach

- **National Curriculum**
main agent: national government
 - **Formal Education**
main agent: school boards, school administration & teachers
 - **Teacher Training**
main agent: teacher education institutes
 - **Non-Formal Education**
main agent: national and local governments, continuing education systems
 - **Community & Civil Society**
main agent: NGOs and civic participation, also role of media
 - **Private Sectors**
main agent: businesses and corporations, professional organisations
- * **The first three sectors are the primary focus, and the last three sectors are the secondary focus**

FIGURE 2: Common Division of Measuring Approaches for Educational Evaluation

	Examples	(General) Source of Information	Ease of Collecting	Quality of Information
INPUTS	<ul style="list-style-type: none"> Funding amount Disciplines integrating ESD curriculum Available teaching materials Number of ESD Trained Teachers 	National Government; available from Ministries of Educations' statistics	Easiest	Least Beneficial; limited ability to evaluate quality of ESD
THROUGH PUTS	<ul style="list-style-type: none"> Number of students receiving ESD Variety of ESD programs Hours of ESD teaching 	School-Level or local/school board-level; likely reported by principals and teachers	Medium	Medium; still mainly quantity assessment of ESD, but some quality factors can be implied
OUTPUTS & Outcomes	<ul style="list-style-type: none"> ESD Knowledge Gain Student Learning Behaviour Change 	Performance testing of students	Hardest	Most Beneficial for quality assessment of ESD

FIGURE 3: Types of Indicators and relevant information/topics

Status Indicators <i>Inputs – Baseline Information: Institutional Frameworks & Resources</i>	Facilitative Indicators <i>Throughputs – Information on Knowledge & Leadership</i>	Effect Indicators <i>Outputs – Information on Learning Performance</i>
Input Indicators looking at if appropriate policy and curriculum mandates exist. Is ESD linked with other mandates for SD and SCP? Are appropriate resources directed towards ESD implementation?	Throughput Indicators looking at the knowledge framing and structuring ESD implementation. Does the appropriate knowledge, expertise and leadership go into the system? Is the use of this knowledge done in a holistic and systemic manner?	Output Indicators looking at the learning achievements from ESD and its quality. What is the overall quality and performance of the ESD being implemented? What impact is ESD having on the learners?
Do mandates for ESD clearly exist?	Is education based on good knowledge & training?	Are learning outcomes being achieved?
Are the necessary resources made available?	How well are teachers trained in ESD?	Are learners gaining new learning methodologies?
Are SD principles applied to whole school management?	Are good teaching materials available?	Achieving Five Pillars of Learning?
Is the education system sustainable and resilient?	Are core ESD subjects addressed; ie. climate change, indigenous knowledge, DRR & SCP?	Are learners shifting behaviours to be contributors in achieving sustainable societies?



System Capacities/Levers

Breakdown of Indicator Levels

Input Capacities (for Status Indicators):

- Institutional Arrangements (including Streamlined Process, Clear definition of Roles/Responsibilities, Merit-based Appraisal mechanism, Coordination mechanism)
- Policy Mandates
- Resource Capacities (include financial, material, infrastructure and human resources)

Throughput Capacities (for Facilitative Indicators):

- Leadership (including Vision, Communication Standards, Management Tools, Outreach Mechanisms)
- Knowledge (including Research Supply & Demand, Brain Gain and Retention, Knowledge Sharing)
- Pedagogies and Methodologies

Output Capacities (for Effect Indicators):

- Accountability (include audit systems and practice standards, participatory planning mechanism, stakeholder feedback mechanism, monitoring & evaluation process, and systems learning cycles)
- Learning Outcomes/Performance
- Value and Behaviour Change

Evaluation Framework – base format

SECTORS	Sub-Sectors	Status Indicators (Input Capacities) - Institutional Arrangements - Policy Mandates - Resource Capacities	Facilitative Indicators (Throughput Capacities) - Leadership - Knowledge - Educational Pedagogies and Methodologies	Effect Indicators (Output Capacities) - Accountability - Learning Performance/Impact - Value and Behaviour Change	Sectorial Assessment
					Score/Rank?
National Curriculum (agent: National Government)	Leverage Points				Score/Rank?
	Barriers				
Formal Education (agent: school boards, schools, classrooms)	Leverage Points				Score/Rank?
	Barriers				
Teacher Training (agent: teacher training institutes)	Leverage Points				Score/Rank?
	Barriers				
Non-Formal Education	Leverage Points				Score/Rank?
	Barriers				
Community & Civil Society	Leverage Points				Score/Rank?
	Barriers				
Private Sectors	Leverage Points				Score/Rank?
	Barriers				
Indicator Assessment	Leverage Points	Inputs Score/Rank?	Throughputs Score/Rank?	Outputs Score/Rank?	Score/Rank?
	Barriers				

National Survey on M&E of ESD

- A survey for national reporting on ESD implementation was developed.
- The survey contains 57 questions in total.
- National Focal Points were identified to report on ESD implementation status in their country.
- The completed surveys help to identify what information is reportable and what is significant for good ESD implementation in each country.
- The survey was utilised with the 3 NE Asia countries. Following this, the survey is to be refined, and then used with SE Asian countries.
- A second round of revision should narrow us down to a potential core indicator set.

*** See attached survey form for following discussion**

Review Criteria for Refining Indicator Set

- 1) Is it clearly defined, reportable and replicable?
- 2) Can the data be easily obtained without professional/scientific measurements?
- 3) Is the indicator measurable and will the data actually express a value of some type?
- 4) Does it measure something useful and relevant and will people (i.e. government officers and educators) care about this?
- 5) Will it lead for comparability between countries?
- 6) Does a change in this indicator suggest a course of action?

*Thank you for your
kind attention!*

For Further Information & Contact

Robert J. Didham

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240-0115 Japan

E-mail: didham@iges.or.jp

URL: <http://www.iges.or.jp/>

Institute for Global Environmental Strategies

Strategic Policy Research to Support a Sustainable Asia-Pacific

SECTORS	Status Indicators (Input Capacities)	Facilitative Indicators (Throughput Capacities)
	- Institutional Arrangements - Policy Mandates - Resource Capacities	- Leadership - Knowledge - Educational Pedagogies and Methodologies
National Curriculum (agent: National Government)		
Formal Education (agent: school boards, schools, classrooms)		
Teacher Training (agent: teacher training institutes)		
Non-Formal Education (agent: National and Local Governments, Continuing Education systems)		
Community & Civil Society (agent: NGOs and Civic Participation, also role of Media)		
Private Sectors (agent: Businesses and Corporations, Professional Organisations)		

EVALUATION FRAMEWORK AND TARGET AREAS FOR M&E OF ESD RESEARCH AND DEVELOPING ESD INDICATORS

SECTORS	Sub-Sectors	Status Indicators (Input Capacities) - Institutional Arrangements - Policy Mandates - Resource Capacities	Facilitative Indicators (Throughput Capacities) - Leadership - Knowledge - Educational Pedagogies and Methodologies	Effect Indicators (Output Capacities) - Accountability - Learning Performance/Impact - Value and Behaviour Change	Sectorial Assessment
National Curriculum (agent: National Government)	Leverage Points	A) Political Mandate for ESD; B) Clear Authorities for ESD implementation; C) Resource provision for ESD	A) ESD mainstreaming and implementation as systemic approach; B) Inter-ministerial Coordination; C) Knowledge Sharing; D) Regional Cooperation on ESD;	A) Holistic & Interdisciplinary Approaches to education; B) Encouraging Reflective & Responsible Behaviour and Critical Thinking; C) Accountability to Promote Institutional Learning	
	Barriers	Lack of continuous political support for ESD; Lack of clear authorities for ESD implementation	Coordination btw countries/sharing good practice; Inter-ministerial cooperation; & Connection w/ educational objectives	Difficulty in evaluating ESD implementation; Lack of awareness on promoting behaviour change	
	Target Areas	1) Clear Policy Mandate for ESD 2) Funding/Budget for ESD (total amount or as percentage of educational expenditure) 3) How is Integration into Curriculum structured? 4) Is process Streamlined? (with smooth integration and connection to previous policies) 5) Authority, Roles, Responsibilities; are they clearly defined?	1) Inter-governmental Coordination and Intra-governmental Cooperation (good communication and management) 2) Curriculum Development (expertise supply & demand) 3) Clear Objectives and Achievement Targets for ESD (i.e. Vision for ESD) 4) Knowledge Sharing and Dissemination (decentralisation of curriculum to classrooms – from policy to implementation)	1) ESD as a stimulus of wider educational or curriculum reform, i.e. systemic change. (Such as incorporation of interdisciplinary teaching approaches, team building activities, more action-experiential learning, etc.) 2) Feedback Mechanisms & M+E Systems	
Formal Education (agent: School Boards, Schools, Classrooms)	Leverage Points	A) Cohesive curriculum strategies on ESD; B) Clear definitions of ESD	A) Good learning materials, B) Good learning methodologies on ESD	A) Promoting a view of synthesis, rather than just analysis;	
	Barriers	Continual provision of ESD as progressive educational strategy; Lack of quality criteria/guidelines for teaching tools/materials	Lack of teaching materials and course curriculums on ESD; Weak or no linkage btw. ESD, EFA and MDGs	Difficulty in assessing student learning on ESD; Teachers difficulty in developing ESD courses and materials	
	Target Areas	1) Mandate 2) Budget for ESD (managed by school boards & schools) 3) Teaching Strategies & Course Content (how is ESD framed and entering teaching materials) 4) Progressive Learning Objectives (educational strategy) 5) Whole School Management Approach to ESD promotion 6) Merit-based Appraisal (i.e. positive reinforcement by School Boards for school implementation of ESD) 7) Roles/Responsibilities for implementing ESD teaching (Who coordinates, manages, teaches, assesses, etc.?)	1) Content/Thematic Topics of ESD (<i>are these topic covered</i>): a. Climate Change Education b. Disaster Risk Reduction c. Sustainable Consumption & Production / Education for Sustainable Consumption d. Indigenous Knowledge 2) Teaching Materials for ESD (availability & diversity) 3) Innovative Learning Methodologies (i.e. critical reflection, problem solving, experiential learning, etc) 4) Innovative Teaching Approach (ex. Inter-disciplinary vs. Disciplinary; integrated teaching vs. separate subject)	1) Practice Standards & Auditing 2) Learning Outcomes –Process & Skill set development (i.e. collaboration and dialogues, engagement of the whole system, innovation and participatory learning, etc.) 3) ESD achieving change in consciousness (link between ESD and behaviour/practices, such as in-school recycling programmes and also school disciplinary issues)	
Teacher Training (agent: Teacher Educational Institutes)	Leverage Points	A) Mandate for ESD in Teacher Education Institutes B) Teachers need to be inspired about ESD!	A) Innovative Educational Pedagogies and Theories B) Strong Professional Competency (based on progressive educational theories including holistic and systemic approach)	A) Linking highly competent ESD staff with individual schools; B) Strong ESD Teaching awareness and skill-sets	
	Barriers	Disciplinary boundaries for training in ESD	Lack of trained ESD Teachers; Lack of cross disciplinary teaching ability.	Teachers receiving ESD in teacher training institutes, Teachers receiving in-service ESD training	
	Target Areas	1) Mandate for all student teachers to receive ESD 2) Budget (for ESD in Teacher Education Institutes) 3) How are TEIs engaging with and implementing ESD? 4) Experience with SD experts/professionals and practical SD examples/experiences (i.e. Are future teachers being inspired about ESD?)	1) Thematic SD topics (<i>as above</i>) 2) Innovative Learning Methodologies & Progressive Educational Theories 3) In-service Training & Continuing Education on ESD	1) Mainstreamed process for teachers to share good practice on ESD 2) Assessment of teachers qualifications on ESD	

Non-Formal Education (agent: National and Local Governments, Continuing Education systems)	Leverage Points	A) Experience Based and Field Based Learning B) Practical Learning Centres	A) Outreach and Knowledge Sharing B) Learning by Doing – Good Action & Communication Process		
	Barriers	Availability of institutions specialising in ESD; Ability to provide on the ground advice for ESD implementation	Lack of Strong Coordination to Vision: often due to learning model based on good practice replication		
	Target Areas	1) Mandate 2) Budget for non-formal ESD initiatives 3) Quantity and diversity of EE and ESD Learning Centres 4) Authority & Roles/Responsibilities for promoting ESD in non-formal education (both in the national and local governments)	1) Vision or Strategy outlining objectives/achievement targets for ESD in non-formal education sector 2) Public Outreach and Awareness Raising Activities/Events 3) Application of good Learning Methodologies • <i>This section is trying to address the general theme of: How to achieve an impact in non-formal ESD?</i>		
Community & Civil Society (agent: NGOs and Civic Participation, also role of Media)	Leverage Points	A) Networking & Partnerships on ESD B) Usage of Media Resources	A) Specialised Knowledge and Expertise; B) International Networking; C) Citizen Voice and Empowerment; D) Fostering role of media in consumer awareness raising		
	Barriers	Availability of institutions specialising in ESD; Ability to provide on the ground advice for ESD implementation; Involvement of Civil Society participation in ESD policy formation	* really depends on country context		
	Target Areas	1) Mandate 2) Budget 3) NGO and Multi-Stakeholder networks/partnerships for ESD 4) Quantity and quality of government support and cooperation with these networks/partnership (and what kind of legitimacy does government bring to them) 5) Citizen Involvement in SD Planning (Is there a mandate? To what extent does it occur?) 6) Civil Society Engagement/Autonomy Rating (use Democracy Index) *not is survey	1) Diversity of Knowledge on Sustainable Development among civil society (i.e. How many SD themes are currently covered by NGOs?) 2) Involvement in international ESD activities. (could be government, academia, civil society, etc) 3) Good usage of Media technologies in promoting ESD (or government support for media promotion of ESD)		
Private Sectors (agent: Businesses and Corporations, Professional Organisations)	Leverage Points	A) Business engagement with government on promoting ESD; B) CSR C) Green product promotion	A) Advancing employee skill development on SCP B) Education Role to Consumer (businesses promoting consumer awareness raising on SCP activities)		
	Barriers	Lack of government cooperation with Private Sector on ESD	Lack of awareness by Business Leaders on SD/ESD		
	Target Areas	1) Mandate 2) Budget 3) Existing networks/partnerships 4) Government led training for business leaders on SD/ESD 5) Mandate on (aspects of) CSR – especially environmental areas (*no survey question) <i>This area focuses on activities led by government or in cooperation with them</i>	1) In-service Training and Continuing Professional Development (CPD) on supply chain greening and SCP approaches 2) Consumer Awareness Raising Programs/Initiatives <i>This area focuses on activities led by businesses and corporations.</i>		
Indicator Assessment		<u>Inputs</u>	<u>Throughputs</u>	<u>Outputs</u>	

Capacity Assessment on M&E of ESD Status

World Café Capacity Assessment Leverage Points Identification

- ◆ There are 5 questions that we will pose for open discussions
- ◆ There are 5 tables/flip chart stand, each table has one question to answer
- ◆ We need 5 persons to be table hosts for each table
- ◆ The rest of you will divide into 5 groups
- ◆ You will have 8 minutes to discuss the question at each table, and 2 minutes to sum up your conversation, then you will move to another group.



Please record your conversation on the paper provided!

What do the table host do?

- ◆ Remain at the table when the others leave and welcome travellers from other tables
- ◆ Explain the question to the travellers to make sure they understand the question
- ◆ Briefly share key insights from the prior conversation so others can link and build the ideas from their respective tables
- ◆ Remind people at your table to jot down key connections, insights, discoveries and deeper questions as they emerge.

World Café Conversation Questions

What are key/ important Input Capacities and Throughput Capacities that are required to support successful implementation of ESD in ...

Table 1: [National Curriculum](#)

Table 2: [Formal Education](#)

Table 3: [Teacher Training](#)

Table 4: [Non-Formal Education](#)

Table 5: [Community and Civil Society](#)

System Capacities / Levers

Separate the challenges you have into the two capacity system areas for ESD implementation

- ◆ **Input Capacities (for status indicators):**

- ◆ Institutional Arrangements (including streamlined process, clear definition of roles/ responsibilities, Merit-based Appraisal mechanism, coordination Mechanism)
- ◆ Policy Mandates
- ◆ Resource Capacities (include financial, material, infrastructure and human resources)

- ◆ **Throughput Capacities (for Facilitative Indicators):**

- ◆ Leadership (including vision, communication standards, management tools, outreach mechanism)
- ◆ Knowledge (including research supply & demand, brain gain and retention, knowledge sharing)
- ◆ Pedagogies and Methodologies

Get Ready!

Open for any Ideas



One Conversation at a Time



Listen to Understand

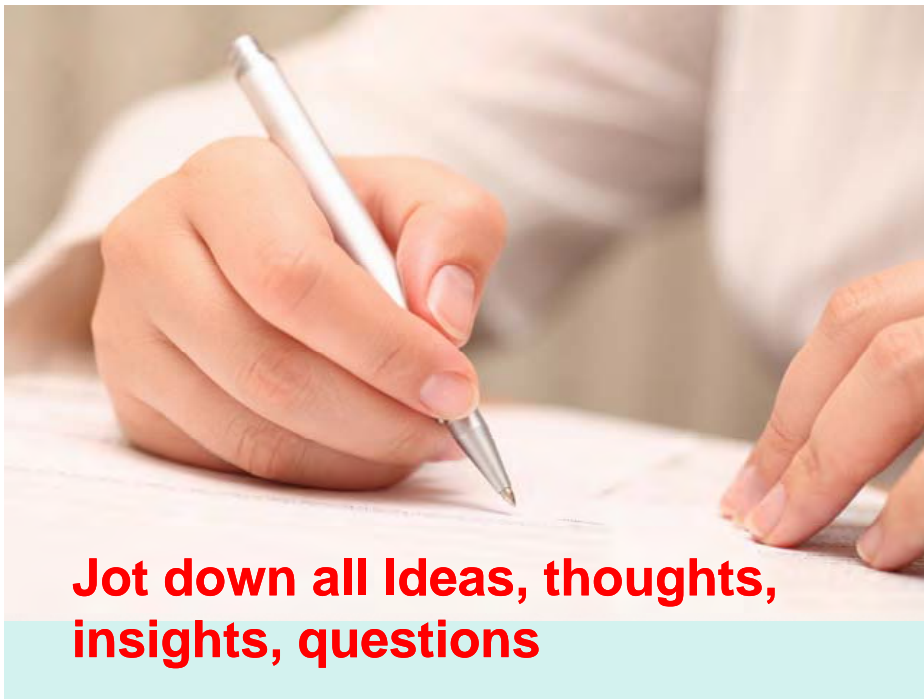


Build on the Ideas of Others



Stay Focused on the Topic





Jot down all Ideas, thoughts, insights, questions



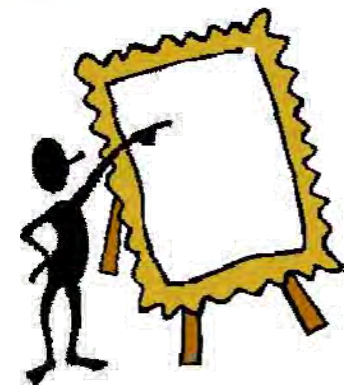
Play.....Doodle.....Draw



Let's Go!



Report on your Café Group's answers to the question posed at your table.



National Curriculum

Input Capacities (for status indicators)

- Secure funding arrangement specially for ESD
- Legal basis for ESD
- Structured competencies
- Structured & coordinated arrangement for ESD governance
- Clear Action Plan (short/medium/long-term)
- System to support in-service/pre-service training
- Intergrade ESD into the national development plan (not only educational plan or environmental plan)
- self-evaluation scheme
- National taskforce on ESD for curriculum development including government, public/private sectors

National Curriculum

Throughput Capacities (for facilitative indicators)

- Continuous leadership (as institutional memory)
- Develop the guideline/curriculum/materials on ESD
 - locally & culturally contextualized and relevant
- Dialogue platform
- International platform for information-sharing and learning
- Consistency in planning, but need to be flexible, adaptable and evolvable through time and needs

Something in between – Linkage within different SD pillars and in institutional levels (e.g. between ministries, and among multi-stakeholders)

What are key/important input capacities and throughput capacities that are required to support successful implementation of ESD in Formal Education

Input Capacities	Throughput Capacities
<p>+ Understanding of the concept of ESD (what does it mean with a view to implementation in formal education; specific courses, cross-cutting interdisciplinary approach; specific curriculum room for local knowledge/contextual learning; values/attitudes; assessment).</p> <p>+ Formulate National Policy for ESD in line with the National Agenda (informed by PPP → informed by voters/individuals/family → community → consumers → business → government: the crux is infiltrating this knowledge into Education Sectors (often runs contrary to marketing messages/business ethics/modalities).</p> <p>+ Embed in criteria for school evaluation and assessment</p> <p>+ Linkages to Education Reform Processes, informed by research (practice and theoretical); which inform guideline development (curriculum, teaching pedagogy, education planning, financing as well as content specific integration)</p> <p>+ Model cases with ESD implications (contextualized)</p> <p>+ National ESD indicators (potentially tied to national agenda or testing measures)</p> <p>+ Compulsory community /sustainable service</p> <p>+ Systems evaluation</p> <p>+ Contextualized learning (i.e. Thailand flooding, informs subject area work)</p>	<p>+ Thematic group/locals as resource persons to advise policy/consultations with experts and practitioners</p> <p>+ ESD topics based lessons, unit plans, school reform, in-service training, co-curricular activities</p> <p>+ Curriculum review of how ESD can be integrated (where it exists, what are the gaps, etc.) → what levels indicate mainstreaming? (it is not creating, but incorporating)</p> <p>+ Holistic approach (whole school, child-friendly)</p> <p>+ Integration into formal evaluation</p> <p>+ synthesis of case studies/lessons learned</p> <p>+ policy guidelines and raising awareness</p> <p>+ contrast based learning (experiential education)</p>

NON – FORMAL SECTOR

INPUT CAPACITIES

1. Clear concept & context of ESD in the NF sector is needed
2. Need analyses to identify the needs of the target group
3. Compilation of good (ESD) practices NF sector
4. Provision of training centres
5. Funding in priority areas
6. Need for public and private partnership(s)
7. Legality (mandate) for ESD in NF education
8. Need for access to the environment/green spaces for people to be confronted with the contrast
9. Need for some form of certification to 'protect' quality in the sector and also, to inform those (individuals/NGOs, etc.) who want to come in
10. Mechanisms to scale up the process & content to a larger audience and also strengthen linkages of the local groups with the regional/global NF educational institutions

NON – FORMAL SECTOR

• THROUGHPUT CAPACITIES

1. Experienced trainers of ESD
2. Appropriate knowledge transfer to the specific target group(s)
3. Reward incentives (as a management tool)
4. Need to localize & contextualise ESD to the people
5. Creation of platform/forum for sharing to encourage democratic debate of the issues
 - Including use of effective strategies for conflict resolution within the group(s)

BARRIER

Need for a clear distinction between the NF sector and Community and Civil Sector

World Café Conversation

Linking ESD to Community & Civil Society

Main Question

- What are the key / important Input Capacities and Throughput Capacities that are required to support successful implementation of ESD in Community and Civil Society

Community & Civil Society Conversation 1

Input Capacities

- Schools need to have a vision and policy for ESD
- School/institution policy on should link to Quality of Life for students
- Priority must be assigned to education by the community
- Relationship between school and local community (with local government & community leaders and with parent)
- Meetings between school and local local government / community leaders

Throughput capacities

- Network Continuity among existing community and education networks
- Need to gauge / understand the attitudes of the different players
- Decentralized communication process (2-way communication)
- Cooperation among stakeholders

Community & Civil Society Conversation 2

Input Capacities

Throughput capacities

- Contextualization of the process – ESD must be connected to local issues and be locally relevant supporting intergenerational communication
- Reciprocal Learning (cross learning) between schools/ universities and community
- Transfer of Knowledge & Technology through active participation
- Importance of establishing a ‘safe and trusting’ space for dialog and cross learning

Community & Civil Society Conversation 3

Input Capacities

- Identification and promote the 'uniqueness of the community (i.e. food, language, arts, etc.)
- Needs / gap analysis of all community and school/university stakeholders (i.e. what are the needs and gaps that exist)

Throughput capacities

- Knowledge Management – i.e. documentation of knowledge, tools, methods and processes.
- Need for Sustainable Funding (a revolving fund) to support ESD initiatives b/w schools, universities and community – school and community cooperatives

Community & Civil Society Conversation 4

Input Capacities

- Focus should be on community Livelihoods (i.e. sustainable livelihoods)
- Identification of strengths ('strengths model') of each stakeholder group
- Need Agreements between schools and institutions and the community
- Meetings must be regularly scheduled (discipline to meet continuously and periodically)
- Capacity building programs based on community and school / institution needs

Throughput capacities

- Process for 'match-making', linking strengths of different stakeholders to the needs of other stakeholders
- Communication guidelines developed (e.g. for students)

Community & Civil Society Conversation 5

Input Capacities

Throughput capacities

- Material support based on identifying stakeholder needs, strengths and using agreements to provide 'in-kind' support. E.g. Tool library

Findings and Recommendations from Group Activity – Capacity Assessment on M&E of ESD Status

SECTORS	<p align="center">Status Indicators (Input Capacities)</p> <ul style="list-style-type: none"> - Institutional Arrangements - Policy Mandates - Resource Capacities 	<p align="center">Facilitative Indicators (Throughput Capacities)</p> <ul style="list-style-type: none"> - Leadership - Knowledge - Educational Pedagogies and Methodologies
<p>National Curriculum (agent: National Government)</p>	<ul style="list-style-type: none"> • Secure funding arrangement specially for ESD • Legal basis for ESD • Structured competencies • Structured & coordinated arrangement for ESD governance • Clear Action Plan (short/medium/long-term) • System to support in-service/pre-service training • Integrate ESD into the national development plan (not only educational plan or environmental plan) • self-evaluation scheme • National taskforce on ESD for curriculum development including government, public/private sectors 	<ul style="list-style-type: none"> • Continuous leadership (as institutional memory) • Develop the guideline/curriculum/materials on ESD • locally & culturally contextualized and relevant • Dialogue platform • International platform for information-sharing and learning • Consistency in planning, but need to be flexible, adaptable and evolvable through time and needs <p>Something in between – Linkage within different SD pillars and in institutional levels (e.g. between ministries, and among multi-stakeholders)</p>
<p>Formal Education (agent: school boards, schools, classrooms)</p>	<ul style="list-style-type: none"> • Understanding of the concept of ESD (what does it mean with a view to implementation in formal education; specific courses, cross-cutting interdisciplinary approach; specific curriculum room for local knowledge/contextual learning; values/attitudes; assessment). • Formulate National Policy for ESD in line with the National Agenda (informed by PPP → informed by voters/individuals/family → community → consumers → business → government: the crux is infiltrating this knowledge into Education Sectors (often runs contrary to marketing messages/business ethics/modalities). • Embed in criteria for school evaluation and assessment • Linkages to Education Reform Processes, informed by research (practice and theoretical); which inform guideline development (curriculum, teaching pedagogy, education planning, financing as well as content specific integration) • Model cases with ESD implications (contextualized) • National ESD indicators (potentially tied to national agenda or testing measures) • Compulsory community /sustainable service • Systems evaluation • Contextualized learning (i.e. Thailand flooding, informs subject area work) 	<ul style="list-style-type: none"> • Thematic group/locals as resource persons to advise policy/consultations with experts and practitioners • ESD topics based lessons, unit plans, school reform, in-service training, co-curricular activities • Curriculum review of how ESD can be integrated (where it exists, what are the gaps, etc.) → what levels indicate mainstreaming? (it is not creating, but incorporating) • Holistic approach (whole school, child-friendly) • Integration into formal evaluation • synthesis of case studies/lessons learned • policy guidelines and raising awareness • contrast based learning (experiential education)

<p>Teacher Training (agent: teacher training institutes)</p>	<ul style="list-style-type: none"> • Baseline Survey of ESD Knowledge capacities • Clear criteria for teacher’s ESD competencies • Criteria for Teacher Assessment on ESD (as Performance Indicators) • ESD performance assessment should be linked to international assessments such as PISA and TIMAS • Integrate ESD in pre-service teacher training curriculum • Provision of clear ESD teacher training budget • ESD Knowledge platform for sharing between teachers/educators and academe (and focusing on sharing good practices and learning methods) • Identify teachers’ roles in ESD at: 1) individual level, 2) institutional level, and 3) community level • Link to research community for ESD development and utilize Action Research • Support and Use Information Technologies for ESD promotion 	<ul style="list-style-type: none"> • Award scheme for innovation in ESD • ESD teaching guidelines • ESD teaching materials (inc. concept, exercises, games, cases, etc) • Pedagogy improvement for ESD teacher training • Synergy among interested parties (linking complimentary resources) • Mentoring/Coaching for ESD teaching as a system for teacher development • Teachers also taking role as learner – to strengthen idea of mutual learning process for ESD and to develop progressive contextualization • Genuine Passion for ESD • Teachers’ Role Play
<p>Non-Formal Education (agent: National and Local Governments, Continuing Education systems)</p>	<ul style="list-style-type: none"> • Clear concept & context of ESD in the NF sector is needed • Need analyses to identify the needs of the target group • Compilation of good (ESD) practices NF sector • Provision of training centres • Funding in priority areas • Need for public and private partnership(s) • Legality (mandate) for ESD in NF education • Need for access to the environment/green spaces for people to be confronted with the contrast • Need for some form of certification to ‘protect’ quality in the sector and also, to inform those (individuals/NGOs, etc.) who want to come in • Mechanisms to scale up the process & content to a larger audience and also strengthen linkages of the local groups with the regional/global NF educational institutions 	<ul style="list-style-type: none"> • Experienced trainers of ESD • Appropriate knowledge transfer to the specific target group(s) • Reward incentives (as a management tool) • Need to localize & contextualise ESD to the people • Creation of platform/forum for sharing to encourage democratic debate of the issues <ul style="list-style-type: none"> ○ Including use of effective strategies for conflict resolution within the group(s) <p>BARRIER Need for a clear distinction between the NF sector and Community and Civil Sector</p>

<p>Community & Civil Society (agent: NGOs and Civic Participation, also role of Media)</p>	<ul style="list-style-type: none"> • Schools need to have a vision and policy for ESD • School/institution policy on should link to Quality of Life for students • Priority must be assigned to education by the community • Relationship between school and local community (with local government & community leaders and with parent) • Meetings between school and local government/community leaders • Identification and promote the ‘uniqueness of the community’ (i.e. food, language, arts, etc.) • Needs / gap analysis of all community and school/university stakeholders (i.e. what are the needs and gaps that exist) • Focus should be on community Livelihoods (i.e. sustainable livelihoods) • Identification of strengths (‘strengths model’) of each stakeholder group • Need Agreements between schools and institutions and the community • Meetings must be regularly scheduled (discipline to meet continuously and periodically) • Capacity building programs based on community and school / institution needs 	<ul style="list-style-type: none"> • Network Continuity among existing community and education networks • Need to gauge / understand the attitudes of the different players • Decentralized communication process (2-way communication) • Cooperation among stakeholders • Contextualization of the process – ESD must be connected to local issues and be locally relevant supporting intergenerational communication • Reciprocal Learning (cross learning) between schools/ universities and community • Transfer of Knowledge & Technology through active participation • Importance of establishing a ‘safe and trusting’ space for dialog and cross learning • Knowledge Management – i.e. documentation of knowledge, tools, methods and processes. • Need for Sustainable Funding (a revolving fund) to support ESD initiatives b/w schools, universities and community – school and community cooperatives • Process for ‘match-making’, linking strengths of different stakeholders to the needs of other stakeholders • Communication guidelines developed (e.g. for students) • Material support based on identifying stakeholder needs, strengths and using agreements to provide ‘in-kind’ support. E.g. Tool library
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SESSION SEVEN: Panel Discussion – Strengthening Effective ESD Interventions Day Two: 14:00 – 15:45

Panel Chair: Mario Tabucanon, UNU-IAS

Panellists:

- 1) Mahesh Pradhan, UNEP (via Skype)
- 2) Masahisa Sato, Tokyo City University
- 3) Tinsiri Siribhodi, SEAMEO
- 4) Athapol Anunthavorasakul, Chulalongkorn University
- 5) Katie Vanhala, UNESCO

Question and Topics:

- ✓ What knowledge would support governments in strengthening ESD implementation?
- ✓ What should M&E of ESD identify to support effective government interventions?

The discussion began with a brief introduction by the chair, **Prof. Mario Tabucanon**, who outlined the questions for discussion. This was followed by a presentation by **Mr. Mahesh Pradhan** of UNEP who joined us from the Stockholm+40 Conference via Skype. He pointed to the importance of the inclusion of education in future sustainability initiatives and emerging trends by stating that the draft text of “The Future We Want”, the document for consideration at the upcoming Rio+20 conference, includes four paragraphs (98-101) on education and acknowledges the importance education plays in providing essential conditions for sustainable development. Mr. Pradhan also mentioned that further discussions on education would continue as the deliberations on MDGs, post-MDGs and SDGs move forward. He acknowledged the challenge in monitoring ESD because as a long term process, to see tangible results on ESD whether it is behavioural change/responsible thinking takes a long time and hence difficult to measure the results. Therefore, the division of ESD into formal, non-formal and informal sectors and their integration is one important way to identify these long-term changes. There is also the need for setting clear development goals/education goals to be able to track them.

Looking at the ASEAN Environmental Education Action Plan (AEEAP), Mr. Pradhan referred to Dr. Ampai’s presentation and said that UNEP is supporting the environmental pillar. Help in the form of cooperation was therefore necessary from within government systems where a lot of challenges exist, one being inter-agency linkage of the Ministries of Education and Environment across countries. He elaborated a bit on the six priority areas of UNEP and on how UNEP is coordinating with other UN agencies. He said UNEP has especially taken up climate change, ecosystem management and green economy – which is the theme of the upcoming Rio+20 and is also considered as crucial for future job creation – as its flagship issues going to the Rio+20 summit.

Lastly, Mr. Pradhan also revealed the launching of the Global University Partnership for Environment and Sustainability (GUPES) in June 2012 in Shanghai, China which will then be taken to Rio where a side event on higher education and sustainability initiative will be held. During the questions and answer time after his presentation, Dr. Sanusi asked if the new university network (GUPES) was going to be different from the existing ones. Mr. Pradhan answered that GUPES will complement the other networks even as it concentrates on the environment. GUNI, he said focuses on innovation and cuts across the board with sustainability as one aspect but GUPES will have three major components: 1) Education – focusing on the environmental education curriculum which he felt has been watered down in its present form in ESD; 2) Training of policy makers of environmental management (ex. University of Dresden, Germany) and also, greening of university campuses (i.e., students walking the talk by lowering their carbon footprints, a pilot project that it is currently being conducted by the University of New South Wales in Australia); and 3) Networking by promoting South-South linkages and cooperation, particularly through Africa’s MESA network with similar groups in Latin America and Asia-Pacific. Prof. Tabucanon asked that since the MDGs are criticised for being only for developing countries, whether he could explain how the SDGs will not only be for the “benefit” of poor countries. He answered that MDGs were primarily for developing countries as aspirational goals and since it is expiring in 2015 with some goals still unmet, the question then is how to move the process forward. Consequently, since the SDGs component issues, namely food security, energy, etc. involve all countries with education being considered such a cross-cutting issue and at the backdrop of discussion of well-being, then fusing these two processes as one is an appropriate thing to do.

Dr. Masahisa Sato initially introduced the meeting he attended in Bonn, Germany with 42 countries in attendance in February 2012 regarding the future of ESD after 2014. He said that the published Bonn recommendations for ESD, based on the discussions at the conference, were made available just a day before the workshop and that he was happy to be able to share these with the participants. Referring to the first question, Dr. Sato said that the 2009 mid-term Report on Context and Processes of ESD talked about ESD and the importance of governance and added that the document explains that governance strongly reflects national governments ESD implementation. For example if a country is knowledge-based and wants to deal with problem solving they can design their ideas and proceed with their problem solving approaches under expert-based policy systems. Alternatively, other countries active in inviting different stakeholders to promote dialogues in a participatory way using problem-solving approach of governance could also go ahead with that. In brief, the use of either governance approach whether pedagogical/use of expert or dialogical is important.

Dr. Sato mentioned the importance of ESD legislative framework, budget and policies and added that from now on many Ministries of Education are going to lead in ESD implementation. He also noted that the importance of ESD has resulted in being mainstreamed in tertiary education and backed with a legislative mandate in some countries (e.g. Sweden). The quality of the coordination functions i.e., since ESD activities lead to strong national governance, coordination methodologies like ESD roundtables, inter-ministerial coordination; culture, faith-based and business sectors are all important. International cooperation and partnership involvement of the corporate bodies - not only the individual capabilities but also civil/institutional capacities, resultant approaches and also different levers for capacity development for ESD - are all important. Opportunity sharing and linkages with past activities, identifying links with older programmes/processes etc. to learn from

the past experience and identify some opportunities are also important. Inter- and intra- learning processes, particularly on the regional basis are important as well. He distinguished between MDGs and SDGs: MDGs are for the developing countries while SDGs should be more about learning processes and development approaches between developed and developing countries. Consequently, he noted that the Asia-Pacific region due to its vast component variability and multiple development approaches is in a unique position and has great potential to make maximum use of the SDGs.

Dr. Tinsiri Siribodhi first gave background information on her organisation, SEAMEO an inter-governmental regional organisation established in 1965 to promote cooperation in education, science, and culture among Southeast Asian countries. She talked about its similarities and differences with UNESCO, named its membership and affiliates as well as networking partners. To the first question, she gave three answers as follows: First, there is the need to have a better understanding of ESD by going beyond EE, link it to culture, behaviour, value, ethics and attitude. She said that it is the use of education that will promote that balance needed for the sustainability pillars. Second, use of the top-down versus bottom-up approaches, i.e., for inter-ministerial cooperation and for putting policies into practice versus using the lessons learned at the local level (school to community, community to school) for policy development. Third, providing solutions in the form of guidelines and strategies/steps for action that can be applied by policy makers strengthening ESD, for example synthesis of case studies with good examples that can be replicated by policy makers.

Dr. Siribodhi again provided three answers to the second question: First, there should be a database of ESD activities through innovative data collection methods. Second, the use of indicators, be they mandatory or optional, should reflect on a country's national ESD goals and they should for example be consolidated from country (case studies) ESD practices. Third, communities should be asked what to measure or be allowed to determine what is important for them to monitor, an engagement which she said will lead to holistic indicators. Dr. Siribodhi further suggested the provision of guidelines for M&E at two levels: regional/global level – ex. using UNESCO guidelines, and at the national level – ex. The Office of National Education Standards and Quality Assessment. Adding her own input in the form of additional strategies, Dr. Siribodhi talked about the need to include ESD in the Mechanism of Ministerial Forum (SEAMEO Council Conference: Policy Forum) where pertinent policy issues are discussed. Also, she felt it was time to develop communications and social marketing to bring more people into the ESD program. She ended her speech by talking about the establishment of an award scheme – SEAMEO-ESD Award whose objectives are: 1) To raise awareness of ESD in schools and communities in Southeast Asia; 2) To promote ESD best practices; 3) To share and exchange knowledge and practices on ESD among schools; and 4) To encourage networking among schools and communities which implement ESD practices.

Prof. Athapol Anunthavorasakul shared many observations regarding his experience gathered from many projects on ESD. For the first question, he raised the following points: 1) Government needs to know about ESD. For example in Thailand, the problem is that many sectors still equate EE with ESD; 2) How to translate EE/ESD from project-based ESD programme to programme-based ESD programme to ensure continuity; 3) How to make linkage between the national core curriculum to the ESD outcomes; 4) ESD is like a big umbrella encompassing many issues/topic and is very dynamic. He referred to a conference on the promotion of DRR in Miyagi, Japan one year after which there

was a big earthquake and tsunami there and several months after that major flooding hit Thailand. Prior to that, Prof. Anunthavorasakul e tried to advertise the concept of DRR to his colleagues, but they were not interested; 5) The importance to link the global approach to the local need regarding ESD; 6) Use of “inside out and outside in” approach i.e., how to link the schools and communities which operate in different contexts to deliberate on a common platform; 7) ESD is practical, not theory, and hence how to collect the lessons learnt across scales and in different settings, scaling them up or down depending on the situation and also how to make a linkage between formal, non-formal and informal, school-based and area-based/community-based settings to promote ESD.

He referred to Dr Tinsiri’s presentation on the framework, manual, criteria and indicators of ESD and noted that recently there has been a focus on M&E by several organisations and it was time to bring about global concern to the national level for the ability to make a linkage between the formal education, non-formal education and informal learning. Prof. Anunthavorasakul said in some countries there are national committees, although not yet in Thailand, he hoped there would be a downscaling of this into local working groups using the community-based, school-based and organisation-based approach to development. Prof. Anunthavorasakul mentioned the need for a platform for EE/ESD to help school teachers through consulting and capacity building and through using the community with an external mechanism to do the M&E. He also suggested reorienting teacher education institutes to do the training as the curriculum will help the school teacher and teacher educator. It should be output-outcome based M&E. He mentioned the evaluation system at the national level (e.g. national testing) should involve the various actors to work together to develop the evaluation tools for the various approaches to ESD. The big problem is how to sustain that programme in the school, community or organisational levels. Prof. Anunthavorasakul summarized the M&E system as consisting of scale, quality, and engagement

Talking about the theoretical aspects of the questions being tackled, **Ms. Katie Vanhala** began by saying that after 8 years of DESD, there is still a struggle with the concept and definition of ESD and its parameters at all levels of policy, practice and implementation. At the same time, there are several ESD initiatives being implemented. These initiatives are happening at two levels – national and school-based, thus the current challenge therefore is how to make a connection in the middle because coordination is usually the difficult part. Referring to an earlier mention of one presenter that policy makers are looking for “tailor made” policy solutions regarding ESD, she pointed out that sometimes policy makers also do have their agenda. As a result, factoring in the top-down approach regarding who is involved in national mandate to effect local level change brings about power relations which could influence what and how policy ought to be implemented. It then comes to who is pushing the agenda and this is why education is pivotal in that context. Ms. Vanhala said that at the international level, the mandates tends to be aligned to international processes they are key for testing at the institutional level. In other words, countries focusing on education currently emphasise rankings and hence if ESD is not integrated into this, it will not be formalised into national policy.

According to Ms. Vanhala, regionally, from UNESCO’s perspective Asia-Pacific is leading in ESD integration and if that region was facing such fundamental problems regarding ESD, she wondered what would be going on in the other regions. Ms. Vanhala added that nationally, no country has really adopted a full ESD strategy nor has integrated ESD into the national curriculum. Also at the local level, there has generally not been strong engagement in regards to integration. Finally, she

asked what the individual's personal conviction in the pursuance of ESD was, as all that she had mentioned earlier was policy talk. The big question overall is who will inform the process and how are we going to do it. She ended her presentation with the question: "What kind of indicators can an education platform or agenda have that incorporates sustainability but also manages enough to present to the Minister of Education and say this is feasible can you do it?"

Discussion, Question and Answers

After the panellists had finished with their statements, the chairman opened the floor for contributions and comments. A couple of comments were made on the intervention of governments with respect to ESD and the involvement of business. Points were raised that at the national level there was still a lack of political will and inertia regarding ESD. Mr. Robert Steele mentioned that generally the private sector has not been used effectively when it comes to ESD and even when some private companies have shown interest. He pointed to the failure of ASEAN governments to make use of the EE Plan that he was involved in drafting. Further referring to the database, he said less than 5% of the concerned agencies even knew that such a database existed. Countering that argument, Dr. Sriwattananon referred to a successful national programme on greening of cities some years back led by the Suharto administration in Indonesia. She also mentioned a regional programme currently going on in the cities of Magalan and Yogyakarta. Another speaker from Thailand talked about the success of such programme initiated by the mayor at the city level. Although Ms. Vanhala praised the existence of such programmes and activities at the municipal level, she said these responses exist because of lack of political will at the national level regarding formal implementation of ESD. She added that very little if any at all of ESD has been integrated at the national level. Consequently, in the formal education sector there are very few examples of ESD mainstreamed in the general curricula.

Concerning business and youth, Ms. Vanhala noted that it is often said that they are the answer to the future and yet are not being given the necessary tools and opportunities. Regarding the use of the RCEs as a mechanism to promote ESD [for M&E] by partnering with business and other sectors, Prof. Tabucanon pointed out one RCE with a good relationship with government and business and asked the representative of RCE Cha-am in Thailand to share their success. There was further contribution by Dr. Siribodhi regarding the use of SEAMEO's Biotrop Centre [an RCE] in Bogor, Indonesia that serves as a platform for curriculum development in schools, trains teachers to integrate ESD in their teaching and also, as an industrial park working with the community in the areas of health, economic and social aspects of the people.

Dr. Didham asked a question on the relationship between ESD and SDGs in reference to Mr. Padhan's point, where ESD is going and how to bring ESD into SDGs in the future. He wanted to know whether Mr. Pradhan meant ESD should respond to what the SDGs will be or ESD should be one of the SDGs. Taking on Mr. Padhan's second idea that the SDGs should focus on ESD, Dr. Didham wondered how that would be actualised, especially considering ESD has to be one of the goals for the next decade be it formal or non-formal and if so, what should be the desired learning/educational outcomes of ESD as we move beyond the current decade. His point was made against the backdrop of Mr. Steele's definition of ESD as moving towards "education *as sustainability*" even though in reality it is currently "education *for sustainability*" in spite of the availability of a lot

of good practices. Prof. Sato responded by saying that when talking about ESD, currently we are still dealing with the thematic issues related to the environmental aspects of sustainability. He said that the issues at the global level could be divided into global environmental problems like climate change, biodiversity loss and consumption and also social exclusion problems like poverty, human rights, and equity. He advised that it would be appropriate to think about social relations as well as people and nature relations. He expressed his understanding of the link between ESD and SDG regarding voluntary commitment for both developing and developed countries and also, change of the term “common and differentiating capabilities” to a more recent term “respective capabilities”. Prof. Sato further mentioned the need to think much more about mutual learning and inter-learning and referred to the RCEs as an example for such learning space which should translate into inter-regional learning space.

Prof. Anunthavorasakul wondered what will happen 2-3 years after the DESD, because for implementers/practitioners not in education, the emphasis has mainly been about governmental policy but not changes in lifestyle. Consequently, for the educator in the ESD field, a realistic look at ESC which is more related to practice of lifestyle change than policy from hence would be appropriate. Ms. Vanhala responded that what will come out the SDGs is the same as in Rio+20. Her view was there may be SDGs components like energy, water etc. with education cutting across them not just ESD, because it will be difficult to know what area/issue to put on the list and which one to leave out. She pointed out the critique of EFA by ESD but also the fact that recently there is an effort to bridge the two. Ms. Vanhala mentioned the difficulty in finding common ESD priorities in concerned countries to be tackled by UNESCO. She also said ESD as a goal will be great but it will still need a definition of what its goal is. Dr. Siribodhi added to the discussion that 2015 will be the end of 3 campaigns EFA, ESD and the fact that ASEAN Community will become one. A free-trade zone with free mobility will result and will bring into focus ESC and the consequent environmental and social impacts. She reiterated the need to focus on the regional environment, ESD and social responsibility and citizenship. Prof. Mario mentioned the coming of the end of AEEAP in 2012 and that the next plan should consider making ASEAN ESD Action Plan the successor, something that should involve the input of participants representing the various ministries to push the authorities in their respective areas to help make that happen and furthermore, use the RCE as the local agents. Prof. Sato added that the Marrakesh Process and Kyoto Framework are also ending in 2015 and hence the need to think of a different agenda. He said since the SDGs are going to be action-based critically linked to human behavior, everything under it should be evaluated in that context. The issue therefore is to focus on the individual, human behavior/lifestyles and reflect our individual responsibility towards sustainable living. Finally, Dr. Rahim mentioned how Malaysia is strategically trying to integrate ESD into the curriculum through the training of young lecturers in ESD.

SUMMARY OF WORKSHOP

The opening remarks was given by Sachiko Yasuda on behalf of Mr Kazuhiko Takemoto, Director of ESD, UNU-IAS. The Keynote speech was given by Ms Katie Vanhala of UNESCO, Bangkok.

Dr Robert Didham, the lead organizer of the workshop gave the background to the workshop and also explained the agenda.



This was followed by a brief self-introduction by the participants

Followed by a group photo



SESSION 1: RCE PRESENTATIONS

- ❖ Great presentations were given by the RCEs yesterday
- **RCE Bohol-** Trying to address issues related to poverty, health, the environment, CC education, and NRM.
- **RCE Cha-am:** Promoting the conservation of energy and also conservation and rehabilitation of natural resources and environment using the "Sufficiency Economy Philosophy" which leads to SD.
- **RCE Greater Phnom Penh:**

SESSION 2: RCE PRESENTATIONS

- **RCE Penang**
 - AIM: To extend what have been promoted in the campus of USM to the neighboring communities
 - Among its **objectives** included:
 - ✓ Promotion and diffusion of the sustainable lifestyle within USM campus to the surrounding neighborhoods
- **RCE Southern Vietnam**
 - RCE Southern Vietnam gave a brief but very interesting introduction of RCE Southern Vietnam
 - The second part was on ESD activities relevant to SD in the International University
- **RCE Yogyakarta**
 - Talked about Zero Waste Agriculture
 - ❖ To sustain the environment, create and an economic incentive through that and do what is right for humanity
 - ✓ **Using the Six M** [man, money, materials, method, machine and market], and
 - ✓ **Seven Rs** [reduce, reuse, recycle, replant, replace, repair and report]

SESSION 3: On Effective ESD Policies and Initiatives Chaired by Dr. Zainal Sanusi

- **Savitree Srisuk – ASEAN EE Action Plan**
 - EE Action plan 2008-2012 : 4 Target Areas and with strategic action and priorities
 - Working Group on EE and each country has National EE Focal Point
 - Thailand Response by both MNRE and Ministry of Education; focal points in DEQP-MNRE
 - Annual Working Group meeting – 2012 meeting will report on achievements under plan
 - For benefits of this regional work, you really need a full EE-ESD working group in each country, not just a focal point.
- **Dr. Ampai - UNEP presenting on behalf of Mahesh**
 - She presented UNEP's mission and the six priority areas
 - Promoting resource efficiency in ESD context, ESC is important
 - Most important indicators is budget and the institutions and mandates, then once they are given authority to implement they have to go through their own auditing process.

• **Robert Steele – Whole-school and Green school approaches to integrating ESD**

- Remember the following !!:
 - The "ICEBERG" and its constituent slices!
 - Green School in Bali
 - Sustainability as Transformative Education... 1st education "about" sustainability -> moving towards -> education for sustainability and finally to education AS sustainability
 - Dimension of whole school must start with values and a vision, then move to principles and guidelines, and then must become real in practices and behaviours
- **Darwina – Strengthening Institutional Frameworks on ESC**
 - Importance of SCP and the Marrakech Process – ESC and many practices covered under framework of Green Growth
 - ESC should be more realistic and relate to our daily life activities and then can we link to larger ideas of sustainable development

- To gain more insight and contributions from participants to further develop and refine the "LP framework"
- It was an intense moment of brainwork but was exciting as well as we saw everyone deeply involved in the activity

The LP Activity



- The activity somehow got a better part of us and also due to lack of time, it was postponed to the next day



"The Cruise" on Chao Phraya River



Day 2

- The second day began with the continuation of the LP activity by asking groups to present their work on their chosen topic
- Representatives masterfully presented their results and a fruitful discussion ensued
- Thank you very much, everyone for the hard brainwork
- And big thanks Robert Steele for your great input!

Country ESD Status Presentations: Malaysia, the Philippines, Thailand, Cambodia and Indonesia Chaired by Mr Justin Alick of UNESCO

- **Malaysia:**
 - Generally ESD awareness exists among Malaysians but there is more room for translation into action.
 - An integrated approach to ESD is rather vague at the moment; ESD is not in the mainstream yet
- **Thailand:**
 - Use of sufficiency economy as a cultural entry point for people into ESD
 - Which has led to the Sufficiency Economy School Project that recognises the linkages between ESD in the communities
- **Phillipines:**
 - Strong policy foundation for ESD through the passage of RA 9572 or "Act to promote Environmental Awareness Through Education" that was passed in 2008
 - That ESD has been integrated into the National Service Program
 - The requirement to grow 18 trees before graduation was interesting
 - The challenge is the strengthening of the curriculum to include ESD, training and capacity building and institutionalization of ESD in the country

- **Cambodia:**
- Even though the representative for Cambodian National ESD Implementation was absent, Dr Didham made a great presentation on his behalf
- ✓ ESD strategy comes from the national development strategy
- ✓ No established ESD, topic being treated
- ✓ No clear mandate for teacher training
- ✓ No linkage of ESD

- **Indonesia:**
- ✓ A number of SD Action Plans with indirect linkages to ESD
- ✓ Development of EE supported by donors
- ✓ There is an inter-ministerial relationship between the Environment and Education ministries

Challenge :
Accountability

- **Capacity Assessment on M&E of ESD Status**

Activity

Final report of the activity was just given

Thoughts

- The Earth hours good, the light bulb
- Schools are very exam oriented also came up in our

Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development

Organised by UNU-IAS, IGES, and UNESCO

CLOSING ADDRESS

By Prof. Hironori Hamanaka

Chairman of the Board, IGES

Dear Honoured Participants and Guests,

It is a great pleasure to have so many ESD experts willing to participate in the “Southeast Asia Reporting and Capacity Building Workshop on Monitoring & Evaluation of Education for Sustainable Development”. I am very eager to support this important research project and apologize that my other commitments have made me unavailable to join you. This workshop and the corresponding research project have an important opportunity to fulfill the goal of the UN Decade of Education for Sustainable Development to provide a system of monitoring and evaluation of the implementation of ESD through the establishment of relevant ESD indicators.

Reviewing the workshop agenda, it is clear that there has been a wealth of valuable presentations and exchanges, and I am very happy to see so much expertise developing around this important topic. Education for Sustainable Development remains an pressing issue, not only in the present but also in the future beyond the end of the Decade of ESD, if we want to educate the leaders of future to be equipped to properly respond to the arising challenges that humanity faces in both a constructive and creative way. Monitoring and Evaluation of ESD and the development of effective Indicators of ESD remain a pressing challenge for this field if we are to be able to truly reflect on the achievements of the Decade of ESD and to consider what improvements should be made during the next ten years of work on this topic. Already we see many great achievements, but without a systematic approach to monitoring and evaluation, it is difficult to plan truly effective interventions and to develop a progressive vision for ESD. This workshop serves as a major step in the right direction for achieving this goal.

I would like to express my sincerest gratitude to all of the participants for the valuable insights and expertise they have brought to this workshop. Without your cooperation, this research process would not be a success.

I would like to specifically thank UNU-IAS and UNESCO for their continued collaboration and support on this project. IGES is very happy and honoured to collaborate with these leading organizations in ESD implementation on this research project, and I am certain that the findings and recommendations generated during this workshop will be a substantial input to the success of this project. I would finally like to wish you all a safe journey home, and I hope that we will be able to continue to work with you in the future on the piloting of the upcoming indicators that will be the main outcome of this year’s research activities.

