



United Nations  
Educational, Scientific and  
Cultural Organization



Japan  
Funds-in-Trust



# Education for Sustainable Development for Changing the Climate of Teacher Education to Address Sustainability

Atlet Century Park Hotel, Jakarta, Indonesia  
8-10 December 2010

Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste



**United Nations Educational, Scientific and Cultural Organization (UNESCO)**

UNESCO Office, Jakarta

Cluster Office to Brunei Darussalam, Indonesia, Malaysia, the Philippines and Timor-Leste

Regional Science Bureau for Asia and the Pacific

UNESCO House

Jl. Galuh (II) No.5, Kebayoran Baru

Jakarta 12110, Indonesia

Phone : + 62-21-7399818

Fax : + 62-21-72296489

Email : [ESDjakarta@unesco.org](mailto:ESDjakarta@unesco.org)

URL : [www.unesco.org/jakarta](http://www.unesco.org/jakarta)

**ISBN : 978-602-98372-5-4**

**All rights reserved**

**© Copyright UNESCO 2011**

**UNESCO Office, Jakarta**

Front Cover Photos by: UNESCO Office, Jakarta

**Disclaimer**

UNESCO maintains a position of neutrality at all times on issues concerning public policy. Hence conclusions that are reached in UNESCO publications should be understood to be those of the authors and not attributed to staff-members, officers, directors, trustees, funders, or to UNESCO itself. All papers in this Training Workshop Report are presented without any revisions to keep their authenticity.

Printed by PT. Kurnia Tata Media, Jakarta, Indonesia

This is the Training Workshop Report on “Capacity Development of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste in Reorienting Teacher Education to Address Sustainability”, held on 8-10 December 2010 at the Atlet Century Park Hotel, Jakarta, Indonesia.



Japan  
Funds-in-Trust

**With support from the Japanese Funds-in-Trust**

# TABLE of CONTENTS

Training Workshop Background .....	i
Agenda .....	ii
Abbreviations and Acronyms .....	v

## Welcoming and Opening Remarks

• Hubert Gijzen .....	ix
Director UNESCO Regional Science Bureau for Asia and the Pacific UNESCO Representative to Brunei Darussalam, Indonesia, Malaysia, the Philippines, and Timor-Leste, UNESCO Office, Jakarta	
• Supriadi Rustad.....	xi
Director of Human Resource Affairs, Directorate-General of Higher Education, Ministry of National Education of Republic of Indonesia	
• Mee Young Choi .....	xii
ESD Team Leader / Programme Specialist in Education, Education Unit, UNESCO Office, Jakarta	

## Session Summaries and Presentations

### SESSION 1: GLOBAL, REGIONAL AND NATIONAL STRATEGY ON EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

• <i>Session summary</i> .....	2
• <b><i>ESD and UNDESD: What is ESD and why we need it?</i></b> .....	3
Presentation, UNESCO Office, Jakarta, Dr. Mee Young Choi	
• <b><i>ESD strategy at global and regional levels: What are the ESD strategies at global, regional and national levels?</i></b> .....	21
Presentation, Korean National Commission for UNESCO, Republic of Korea, Mr. Sangkyoo Kang	
• <b><i>ESD national strategy development: What do we need to consider when an ESD national guideline is developed linked with the national sustainable development policy and strategy?</i></b> .....	41
Presentation, Ministry of National Education Indonesia, Research Centre for Policy and Educational Innovation, Ministry of National Education of the Republic of Indonesia, Dr. Hendarman	

### SESSION 2: ESD CURRICULUM DEVELOPMENT AND NATIONAL ESD ACTIVITIES

• <i>Session summary</i> .....	60
• <b><i>National ESD curriculum development linked with school activities and ESD network: What are the critical factors in good practices of national ESD school activities?</i></b> .....	61
Presentation, Ministry of Environment of the Republic of Indonesia, Mr. Ilyas Asaad	
• <b><i>National ESD curriculum development centered on contents reflecting national/indigenous education and environmental needs: What do we need to reflect on an ESD national guideline development in consideration of national/indigenous education/environmental needs?</i></b> .....	81
Presentation, Tokyo City University, Japan, Assoc. Prof. Masahisa Sato	

<b>SESSION 3: WRAP UP DAY 1 AND CLOSURE</b>	
• <i>Session summary</i> .....	112
UNESCO Office, Jakarta, Mee Young Choi	
<b>SESSION 4: ESD CURRICULUM DEVELOPMENT</b>	
• <i>Session summary</i> .....	114
UNESCO Office, Jakarta, Mee Young Choi	
• <b><i>Teaching pedagogy development in ESD: What do we need to reflect on an ESD national guidelines development in consideration of teaching pedagogy?</i></b> .....	115
Presentation, RMIT University, Australia, Prof. Annette Gough	
<b>SESSION 5: GROUP DISCUSSIONS ON ESD COUNTRY GUIDELINES &amp; HANDBOOK</b>	
• <i>Session summary</i> .....	140
• <b>Guidelines provided for group discussions</b>	
<b>Table 1:</b> Guidelines and actions towards reorienting teacher education to address sustainability .....	141
• Outcomes from group discussions .....	142
<b>Table 2:</b> Identification of the contractor .....	142
<b>Table 3:</b> Template of ESD National/Country Guidelines .....	144
<b>Table 4:</b> Template for the handbook .....	145
<b>Table 5:</b> Guidelines for the handbook “Changing the climate of teacher education to address sustainability putting transformative education into practice.” .....	146
<b>SESSION 6: GROUP REPORTS ON OUTLINES FOR ESD COUNTRY GUIDELINES</b>	
• <i>Session summary</i> .....	148
• <b>Group reports on the sub-regional national ESD country guideline</b>	
<b>Report 1:</b> Brunei Darussalam .....	149
<b>Report 2:</b> Indonesia .....	151
<b>Report 3:</b> Malaysia .....	152
<b>Report 4:</b> The Philippines .....	154
<b>Report 5:</b> Timor-Leste .....	156
<b>SESSION 7: CLOSING AND FOLLOW-UPS</b>	
• <i>Session summary</i> .....	158
UNESCO Office, Jakarta, Mee Young Choi	
<b>APPENDIX 1: LIST OF PARTICIPANTS AND RESOURCE PERSONS</b> .....	160

## Training Workshop Background

Teacher Education Programme is one of the UNESCO's priority fields which has been identified to answer the current global conditions related to environmental and economic upheaval which the world is currently facing. UNESCO Technical Paper No. 2, 2005 underlined the need to start developing guidelines and recommendations for reorienting teacher training to address sustainability.

As a follow-up, UNESCO launched a UNITWIN/UNESCO Chair on "Reorienting Teacher Education to Address Sustainability", which took place at York University, Toronto, Canada. Subsequently, an International Network of Teacher Education Institutions (TEIs) was established with a total of 30 institutions in 28 countries. This document emphasized that to begin the process of reorienting teacher education in addressing sustainability, faculties of education around the world must draw on their own thematic guidelines based on the conceptual descriptions and ideals of sustainability. The document could also play a significant part in the development of the network in the future.

There is a lack of adequately trained teacher educators who are aware of and knowledgeable about the importance of Education for Sustainable Development (ESD). The lack of knowledge in understanding ESD is further exacerbated through limited institutional climate which could support creativity, innovation, and risk-taking necessary to support transformative efforts in reorienting education to address sustainability.

Given the background above and under the auspices of the UNESCO-Japanese Funds-in-Trust Project entitled the "**Developing Capacities of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor Leste in Reorienting Teacher Education to Address Sustainability**", this training workshop is organized in close cooperation with relevant partners from the representatives of the Ministry of Educations, TEIs of the five cluster countries of UNESCO Office Jakarta, and members of the International Network of TEIs in order to provide a clear country guideline for national ESD educators.

The objectives of this training workshop are:

- To assist the five representatives of Teacher Education Institutions (TEIs) from UNESCO Office, Jakarta's cluster countries: Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor Leste in developing their own country ESD guidelines;
- To equip TEIs and representatives Ministry of Educations (MoEs) for teacher's education with capacities to develop their country guidelines to reorient teacher education to address sustainability.

### Expected Outputs

**"A Country ESD Guideline"** developed by training workshop's trainees, i.e. TEIs' teacher educators and the Ministry of Education Representatives from the five cluster countries of UNESCO Office, Jakarta to reorient teacher education to address sustainability in this sub-region.

# AGENDA

Day 1 - Wednesday, 8 December 2010			
<b>08.30 - 09.00</b>		<b>Registration</b>	
<b>Opening Session by Chairman:</b> Dr. Mee Young Choi, UNESCO Office, Jakarta			
09.00 - 09.10	Welcoming remarks	Prof. Hubert Gijzen, Director UNESCO Regional Science Bureau for Asia and the Pacific; Representative to Brunei Darussalam, Indonesia, Malaysia, the Philippines, and Timor Leste, UNESCO Office, Jakarta	10 min
09.10 - 09.20	Opening Remarks	Mr. Supriadi Rustad, Director of Human Resource Affairs , Directorate-General of Higher Education, Ministry of National Education of Republic of Indonesia	10 min
09.20 - 09.30	Key note speech	Dr. Mee Young Choi, UNESCO Office, Jakarta	10 min
<b>09.30 - 09.45</b>		<b>Coffee break and group-photo session</b>	
<b>Session 1. Global, regional and national strategy on Education for Sustainable Development (ESD)</b> <b>Chairman:</b> Dr. Mee Young Choi, UNESCO Office, Jakarta			
09.45 – 10.15	ESD and UNDESD: <i>What is ESD and why do we need it?</i>	Dr. Mee Young Choi, UNESCO Office, Jakarta	30 min
10.15 – 10.45	ESD strategy at global and regional levels: <i>What are the ESD strategies at global, regional and national levels?</i>	Mr. Sangkyu Kang Korean National Commission	30 min
10.45 – 11.15	ESD national strategy development: <i>What do we need to consider when an ESD national guideline is developed linked with the national sustainable development policy and strategy?</i>	Dr. Hendarman Anwar, Ministry of National Education, Indonesia	30 min
11.15 – 12.00	Discussion and Q&A		45 min
<b>12.00 - 13.00</b>		<b>Lunch</b>	
<b>Session 2. ESD curriculum development and national ESD activities</b> <b>Chairman:</b> Prof. Amor Quinto de Torres, Dean of College of Education, and President of the Philippines Association for Teacher Education			
13:00 - 13:30	National ESD curriculum development linked with school activities and ESD network: <i>What are the critical factors in good practices of national ESD school activities?</i>	Mr. Ilyas Asaad Ministry of Environment of the Republic of Indonesia	30 min

Continued Day 1...

13:30 - 14:00	National ESD curriculum development centred on contents reflecting national/indigenous education and environmental needs: <i>What do we need to reflect on an ESD national guideline development in consideration of national/indigenous education/environmental needs?</i>	Assoc. Prof. Masahisa Sato, Tokyo City University, Japan	30 min
14:00 - 14:45	Discussion and Q&A		45 min
<b>15:15 - 15:30</b>	<b>Coffee break</b>		
<b>Session 3. Wrap up Day 1 and closure</b>			
<b>Chairman:</b> Dr. Mee Young Choi, UNESCO Office, Jakarta			
15:30 - 16:30	Wrap up of Day 1 and guidance of Day 2 Closure of Day 1	Dr. Mee Young Choi, UNESCO Office, Jakarta	60 min
<b>18:30 - 20:00</b>	<b>Welcoming dinner</b> Hosted by UNESCO Office, Jakarta		
<b>Day 2 - Thursday, 9 December 2010</b>			
<b>Session 4. ESD Curriculum development</b>			
<b>Chairman:</b> Dr. Mee Young Choi, UNESCO Office, Jakarta			
09:00 – 09:30	Teaching pedagogy development in ESD: <i>What do we need to reflect on an ESD national guidelines development in consideration of teaching pedagogy?</i>	Prof. Annette Gough RMIT University, Australia	30 min
09:30 - 10:00	Guidance group discussions for the preparation of a sub-regional national ESD country guideline.	Dr. Mee Young Choi, UNESCO Office, Jakarta	30 min
10:00 - 10:30	Discussion and Q&A		30 min
<b>10:30 - 10:45</b>	<b>Coffee break</b>		
<b>Session 5. Group discussions on ESD Country Guidelines &amp; handbook</b>			
<b>Chairman:</b> Prof. Annette Gough, Head, School of Education, RMIT University, Australia			
10:45 - 12:00	Group Discussions	All participants	75 min
<b>12:00 - 13:00</b>	<b>Lunch</b>		
13:00 - 14:15	Group Discussions	All participants	75 min
<b>Session 6. Group report on outlines for ESD Country Guidelines</b>			
<b>Chairman:</b> Prof. Annette Gough, Head, School of Education, RMIT University, Australia			
14:15 – 14:30	<i>Brunei report</i>	Brunei Darussalam	15 min
14:30 – 14:45	<i>Guidelines and actions towards reorienting teacher education to address sustainability</i>	Indonesia	15 min
14:45 - 15:00	<i>ESD Philippines guidelines for reorienting teacher education to address sustainability</i>	Philippines	15 min
<b>15:00 - 15:15</b>	<b>Coffee break</b>		
15:15 - 15:30	<i>Guideline for ESD</i>	Malaysia	15 min
15:30 - 15:45	<i>Timor Leste reports</i>	Timor-Leste	15 min
15:45 - 16:30	Discussion and Q&A		45 min
16:30 - 17:00	Day 2 wrap-up and introduction of Day 3 Closure of Day 2	Dr. Mee Young Choi, UNESCO Office, Jakarta	30 min



Continued Day 2...

Day 3 - Friday, 10 December 2010			
Session 7. Closing and follow-ups			
Chairman: Dr. Mee Young Choi, UNESCO Office, Jakarta			
09:00 - 09:30	Closing and follow-ups	Dr. Mee Young Choi, UNESCO Office, Jakarta	30 min
09:30 - 10:00	Day 1 and Day 2 wrap-up	Dr. Mee Young Choi, UNESCO Office, Jakarta	30min
10:00 - 10:10	Closing remarks	Prof. Hubert Gijzen, Director UNESCO Regional Science Bureau for Asia and the Pacific; Representative to Brunei Darussalam, Indonesia, Malaysia, the the Philippines, and Timor Leste, UNESCO Office, Jakarta	10 min
<b>10:00 - 11:30</b>	<b>Closing reception and lunch</b>		

## Abbreviations and Acronyms

<b>ACCU</b>	Asia-Pacific Cultural Centre for UNESCO
<b>APNIEVE</b>	Asia Pacific Network for International Education and Values Education
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>AYEF</b>	ASEAN+3 Youth Environmental Forum
<b>BEST</b>	Brunei Environment, Science and Technology
<b>CHED</b>	Commission on Higher Education
<b>CES</b>	Centre of Environmental Studies
<b>DEPED</b>	Department of Education
<b>DESD</b>	Decade of Education for Sustainable Development
<b>DESDI</b>	Decade of Education for Sustainable Development Indonesia
<b>DFA</b>	Dakar Framework for Action
<b>DITJEN DIKTI</b>	Directorate-General of Higher Education <i>Direktorat Jenderal Pendidikan Tinggi</i>
<b>DITJEN PMPTK</b>	Directorate-General of Quality Improvement of Educators and Education Personnel <i>Direktorat Jenderal Peningkatan Mutu Pendidik dan Tenaga Kependidikan</i>
<b>DITJEN PNFI</b>	Directorate-General of Non-formal and Informal Education <i>Direktorat Jenderal Pendidikan Non-formal dan Informal</i>
<b>EE</b>	Environmental Education
<b>EESD</b>	Energy, Environment and Sustainable Development
<b>EFA</b>	Education For All
<b>EFS</b>	Education for Sustainability
<b>ESD</b>	Education for Sustainable Development
<b>HIV/AIDS</b>	Human Immunodeficiency / Acquired Immunodeficiency Syndrome
<b>ICT</b>	Information and Communication Technologies
<b>IEEP</b>	International Entrepreneurship Educators programme
<b>INFPC-ME</b>	Instituto Nacional de Formação Profissional e Contínua (INFPC), Ministério da Educação, Timor-Leste
<b>IKIP</b>	Indonesia University of Education
<b>IUCN</b>	International Union for Conservation of Nature
<b>JFIT</b>	Japanese Funds-In-Trust
<b>LPTK</b>	Manpower Education Institute of Education <i>Lembaga Pendidikan Tenaga Pendidikan</i>
<b>MDGs</b>	Millenium Development Goals
<b>MOE</b>	Ministry of Environment
<b>MoE</b>	Ministry of Education
<b>MOHA</b>	Ministry of Home Affairs Indonesia
<b>MONE</b>	Ministry of National Education
<b>MORA</b>	Ministry of Religious Affairs
<b>MOU</b>	Memorandum of Understanding
<b>NCTD</b>	National Centre for Teacher Development
<b>NEC</b>	National Education for All Committee
<b>NEEAP</b>	National Environmental Action Plan Framework
<b>NER</b>	Net Enrolment Ratio
<b>NGO</b>	Non-Governmental Organization
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PAFTE</b>	Philippines Association for Teacher Education
<b>PNU</b>	Philippine Normal University

<b>PSF</b>	Programme School Feeding
<b>Q&amp;A</b>	Questions and Answers
<b>RCE</b>	Regional Centre of Expertise
<b>RMIT</b>	Royal Melbourne Institute of Technology University
<b>SD</b>	Sustainable Development
<b>SEAMEO</b>	Southeast Asian Ministers of Education Organization
<b>RESCAM</b>	Regional Centre for Education in Science and Mathematics
<b>SIAD</b>	Sustainable Integrated Area Development
<b>TEIs</b>	Teacher Education Institutions
<b>TESDA</b>	Technical Education and Skills Development
<b>TPTE</b>	Technical Panel for Teacher Education
<b>TVET</b>	Technical and Vocational Education and Training
<b>UK</b>	United Kingdom
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNDESD</b>	United Nations Decade for Education for Sustainable Development
<b>UNITWIN</b>	University Twinning and Networking
<b>UNU</b>	United Nations University
<b>VTE</b>	Vocational Technical Education



Photo: UNESCO Office, Jakarta



Photo: UNESCO Office, Jakarta



## Welcoming Remarks

**Hubert Gijzen**

Director UNESCO Regional Science Bureau for Asia and the Pacific  
UNESCO Representative to Brunei Darussalam, Indonesia, Malaysia,  
the Philippines, and Timor Leste, UNESCO Office, Jakarta

Dear Mr. Supriadi Rustad, Director of Human Resources Affairs, Directorate-General of Higher Education, Ministry of National Education of the Republic of Indonesia

Distinguished guests,  
Ladies and Gentlemen,

Welcome to Jakarta. I am very pleased to have the opportunity to welcome you to the “Capacity Development of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, the Philippines, and Timor Leste in Reorienting Teacher Education to Address Sustainability”.

I would like to congratulate the participants of this meeting on their work on ESD. You are taking a strategic entry point, which are the Teacher Education Institutions (TEI’s). The aim of this meeting is to come up with country guidelines, which is new for each country. Therefore, there is a lot of learning to be done. Learning is done better when learning together. I am pleased to see so many countries present today in developing the ideas of country guidelines for ESD.

The importance of ESD as an integral part of a more comprehensive strategy towards sustainable development cannot be overemphasized. During the international conference Wisdom2010 I attended this week in Jogjakarta, I explained that we live in a world that is dramatically out of balance in two ways. Firstly there is the imbalance between people and nature, which has led to environmental destruction, massive pollution and climate change. That has woken us up three decades ago, when we started thinking about the concept of sustainable development. Secondly, we need to address the sharp imbalance that exists between people. We live in a world where the income of the five richest people is larger than the combined income of all least developing countries. We live in a world where annually millions of people die from curable disease, and where one billion people go to bed hungry day by day, while there are huge surpluses of food in developed countries. I cannot imagine how we can achieve sustainable development when there is such enormous divide between the rich and the poor. Therefore the MDG agenda and the fight of poverty are equally important to aim towards a truly sustainable development pattern. If we don’t face the imbalance between people, sustainability will not occur and we will see a world that is hugely divided with a lot of tensions. Problems like insecurity and terrorism all have their roots and origins in this division, which lead to frustration and dissatisfaction. These factors are very fertile ground for insecurity and maybe even terrorism.

Because of these imbalances we are now in “a dead end road”. We have to turn around, come back to the main road and direct ourselves to Sustainable Development, where people live in harmony with the environment. That is also where ESD is positioned today. How can we achieve Sustainable Development if we don’t involve the young generation in schools. Our generation which is present here in the meeting is the generation that has pitched the word “sustainable development”. We tend to suggest that we understand it; but let us agree that in no way have we been able to change our lifestyles towards a fully sustainable way of life. While political leaders have met recently in Cancun and were talking about climate change, they were only talking about REDUCTIONS of carbon emissions, which mean their discussions

were about how to become less unsustainable, not about how to become sustainable.

I would like to highlight that sustainable development is still a huge challenge that requires a paradigm shift, and can only work if we take onboard the children and young students who are the leaders of tomorrow. They will have to make it happen and make a sustainable development revolution. In order to make it happen, we need to work with the education sector as a whole and as such turn it into a powerful engine for sustainable development.

This highlights the importance of this meeting because you are focusing on the key catalysts in the education sector that is the teachers. The concept of sustainable development is broad and it does not focus only on the relationship between people and nature, but it must also incorporate the relationship between people.

I would suggest that in your discussions on education sustainable development to take this broader picture on board. We should revisit our definition of ESD. I am suggesting that it should not have a narrow focus on environment or climate change exclusively; but it could take a broader ESD agenda and look also at the sharp divides between people. For instance, to teach about the importance of water, health and hygiene, poverty, hunger, food, nutrition. There are so many entry points.

To finalize my remarks, it is also important to look at issues such as peace education. I mentioned terrorism; we are the biggest enemies of the species Homo sapiens. We destroy our own natural resources and our living environment on which we depend on so heavily, and by doing we also worsen the sharp divide that already exists between people. So sustainability needs to address peace education and education in a wider context.

Dear Participants,

I wish you all a very fruitful meeting. You have a strategic focus on teacher education that is a very powerful and visible entry point. Besides the role of the UNESCO Representative Office for the five countries represented here, the UNESCO Office, Jakarta also has a role as the Regional Science Bureau for the Asia and Pacific region. I suggest, in order to continue this discussion to work in collaboration with the UNESCO office in Bangkok to get a coverage on the ASEAN plus one (Timor-Leste) and in collaboration with SEAMEO. There are many opportunities to expand the work from 5 to 11 countries. From there we can expand to the whole region. In order to be able to do that, we cannot always meet physically but in between I suggest keeping the communication going using ICT, video conferencing and networks.

I would like to thank you all for coming to Jakarta and for giving your inputs, as well as sharing your experience and knowledge. I am very much looking forward to the outcomes of this meeting.

Thank you.



## Opening Remarks

**Supriadi Rustad**

Director of Human Resource Affairs, Directorate-General of Higher Education  
Ministry of National Education of Republic of Indonesia

Prof. Hubert Gijzen, UNESCO Jakarta,  
Prominent ESD Experts from UNESCO, International Organization, and Universities,  
Distinguished Guests and Participants from Brunei Darussalam, Indonesia, Malaysia, Philippines, and  
Timor Leste  
Ladies and Gentlemen,

Assalamualaikum Wr. Wb. and Good Morning,

On behalf of the Indonesian Government, I would like to convey our warm welcome to Jakarta, and in particular, for those who are new comers to Indonesia: “SELAMAT DATANG DI INDONESIA”.

Furthermore, I would like to express our sincere appreciation for UNESCO’s initiative to host this important and strategic programme on Education for Sustainable Development, manifested in the theme of the current capacity development of Teacher Education Institutions: “Reorienting Teacher Education to Address Sustainability”.

The term “Sustainable Development” was coined by the Brundland Commission, and has become the most quoted definition for a development process that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (United Nations, 1987). Since the United Nations 2005 World Summit, Sustainable Development is considered to be one of the “interdependent and mutually reinforcing pillars”, i.e. economic development, social development, and environmental protection.

Recently we, in Indonesia, have learnt the hard way in the recent-past that better a standard of social life cannot be achieved solely via economic development. The stake was too high, wide-spread dissatisfaction within the society followed by social unrest transpired. To the same extent, pursuing economic prosperity and social equity but ignoring the environment would, in the long run, degrade the country’s natural capital faster than it could be replenished. Such attitudes would eventually make the respective country unable to support its economical and social development.

How then can we become the founding generation of a better world, one which is always conscious of sustainable development, for the benefit of our future generations? I strongly believe that educating the younger generation and collaborating with neighboring states in the educational process would play a pivotal role in reaching the above said goal. This can only be achieved if we have a more sufficient mass of well-qualified teachers, ready to teach our younger generations about sustainable development.

Here, today, all of us will embark on this strategic and essential odyssey that will give our future generations a better world to live in. We all know that this is a huge undertaking for all parties involved. But as Henry Ford says: “If everyone is moving forward together, then success takes care of itself” and as the old sayings states: “Teamwork divides the task and multiplies the success”.

Finally, I would like to convey my gratitude to all parties and individuals involved, especially to UNESCO and the Indonesian side for bringing this programme together.

May we experience a successful and fruitful training programme.

Wassalamualaikum, Wr. Wb.





## Workshop Objectives and Scopes

**Mee Young Choi**

ESD Team Leader/Programme Specialist in Education  
UNESCO Office, Jakarta

Dear Mr. Supriadi Rustad, Director of Human Resources Affairs, Directorate-General of Higher Education  
Representatives from the Cluster Countries of UNESCO Office Jakarta: Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste  
Distinguished Guests, Ladies, and Gentlemen

It is my great pleasure to welcome all of you to our Training Workshop entitled “Capacity Development of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor Leste in Reorienting Teacher Education to Address Sustainability”, which will commence from today on December 8th until the 10th in the afternoon. This training is the first of TEIs activity related to Education for Sustainable Development/ESD and the development of ESD Country Guidelines of the five cluster countries of UNESCO Office, Jakarta. The main objectives of this training are to assist the five representatives of the TEIs from UNESCO Office Jakarta’s cluster countries (Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor Leste) in developing their own ESD guidelines; and to equip TEIs and representatives of the Ministries of Education for teacher education to address sustainability. This training workshop is organised with support from the Government of Japan through the Japanese Funds-in-Trust (JFIT) Scheme 2010-2011.

Allow me to extend and to express my appreciation and gratitude to the representatives from the UNESCO National Commissions, the Ministries of Education of the five cluster countries, and the hosting country Indonesia for their continued cooperation and support during the preparation and organisation of this training workshop, and for joining us here in this training. I would also like to extend my sincere thanks to the distinguished resource persons for their valuable contributions and for sharing their valuable knowledge, skills and experiences with us in this training. We hope that this training would provide a forum to exchange information and to share knowledge and experiences, particularly in the fields of teacher education and ESD to help develop the ESD, country guidelines for each of UNESCO Office Jakarta’s cluster country. Moreover, UNESCO hopes that this training workshop enables the commencement and development of a networking process between TEIs and those who are working in dealing with ESD related programmes in the sub-region and region in the future.

As we know, there has been a concern relating to the lack of an adequate number of trained teacher educators who are aware of and knowledgeable about the importance of ESD. Teacher education is one of the UNESCO’s priority fields, which has been identified to answer the current global conditions related to environmental and economic issues. UNESCO Technical Paper No. 2, 2005 underlines the need to start developing guidelines and recommendations for reorienting teacher training to address sustainability. In line with this need and with support from the Japanese Funds-in-Trust Project “Developing Capacities of Teacher Education Institutions (TEIs) of Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor Leste in Reorienting Teacher Education to Address Sustainability”, UNESCO Office Jakarta/Education Unit has been working together with representatives from each of the Ministries of Education, TEIs of the five cluster countries of UNESCO Office Jakarta, and members of the International Network of TEIs to organise capacity building exercises to assist five representatives of Teacher Education Institutions (TEIs) from the UNESCO Office, Jakarta’s cluster countries: Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor-

Leste in developing their own appropriate guidelines; and to equip TEIs and representatives Ministry of Educations (MoEs) for teacher's education with capacities to develop their country guidelines to reorient teacher education to address sustainability. The ESD country guidelines will be the first publication on TEIs-ESD in this region.

In closing, I sincerely hope that this training workshop will be fruitful as we learn from each other. I also hope that the experience you gain from this workshop will help you in further developing the ESD country guidelines. Finally, I wish all the participants an enjoyable stay in Jakarta.



**SESSION 1**

GLOBAL, REGIONAL AND NATIONAL STRATEGY  
ON EDUCATION FOR SUSTAINABLE  
DEVELOPMENT (ESD)

## *Session*

### **SUMMARY 1**

---

**Chairman:** Dr. Mee Young Choi, ESD Team Leader/Programme Specialist in Education

- **ESD and UNDESD: *What is ESD and why do we need it?***  
Presented by: Mee Young Choi, Dr., UNESCO Office, Jakarta
- **ESD strategy at global and regional levels: *What are the ESD strategies at global, regional and national levels?***  
Presented by: Mr. Sangkyoo Kang, Korean National Commission, Republic of Korea
- **ESD national strategy development: *What do we need to consider when an ESD national guideline is developed, linked with the national sustainable development policy and strategy?***  
Presented by: Dr. Hendarman Anwar, Ministry of National Education, Indonesia

Dr. Mee Young Choi, UNESCO Office Jakarta provided a presentation on “ESD and UNDESD and why we need it? “ She began by giving an overview of ESD. Dr. Choi underlined the importance of learning and integrating the national, regional, and global strategies on ESD and provided UNESCO’s perspective towards ESD. She also emphasised the need for a clear ESD direction along with a practical framework and policy as a vision. Dr. Choi also took the opportunity to inform the participants about an upcoming UNDESD meeting which will be held in Tokyo, Japan. She emphasised that education requires collaboration between EFA (Education for All), ESD and the Millennium Development Goals (MDGs).

Mr. Sangkyoo Kang, from the Korean National Commission for UNESCO, Republic of Korea, delivered a presentation entitled “ESD Strategy at Global and regional Levels: What are the ESD strategies at global, regional and national levels?” He began by outlining that education has a transformative power and an enormous potential. He stated that there is no workable ESD definition. He gave an example of a Korean initiative introduced in 2008 of a low carbon and green growth initiative linked with education. The challenges in the Green Growth initiative are raising awareness in promoting sustainability. He also highlighted a case study of Tongyoung RCE which adopted a whole school approach and developed ESD by organising meetings and workshops.

Dr. Hendarman, of the Centre for Policy Research, Office of Research and Development, Ministry of National Education of the Republic of Indonesia, informed that there is an existing document on the ESD National Strategy in Indonesia. Indonesia has an ESD model, but, it has not yet been implemented due to the lack of approval from relevant ministerial institutions. There has been a concern towards ESD implementation in Indonesia, particularly on teaching–learning processes involving stakeholders from local and central governments, and non-government organisations. A clear mechanism in ensuring the successful implementation and accountability of ESD in Indonesia is needed, including a clear monitoring, evaluation and reporting system.

# ESD and UNDESD: What is ESD and why we need it?<sup>1</sup>

**Mee Young CHOI**

ESD Team Leader / Programme Specialist in Education, UNESCO Office, Jakarta

Education for Sustainable Development (ESD) is a vision of education that seeks to empower people to assume responsibility for creating a sustainable future. It aims at improving access to quality basic education, reorienting education curricula, training and raising public awareness as well as helping people to develop the behaviors, skills and knowledge they need, now and in the future (UNESCO, Education for Sustainability—from Rio to Johannesburg: Lessons Learnt from a Decade of Commitment, 2002).

Following the Johannesburg Summit, the UNDESD was proclaimed by the UN General Assembly as a ten-year period for education action beginning on 1 January 2005. UNESCO was designated as the lead agency in the promotion of the DESD. DESD seeks to integrate the principles, values and practices of sustainable development into all aspects of education and learning, in order to address the social, economic, cultural and environmental problems we face in the 21st century. The effectiveness of the UNDESD will depend on the strength and inclusiveness of the partnerships, networks, and alliances that develop among stakeholders at all levels.

The four major thrusts of DESD include: promoting and improving quality education; reorienting existing education to address sustainable development; building public understanding and awareness; providing practical training. ESD supports five fundamental types of learning to provide quality education and foster sustainable human development, which are also termed as the five pillars of ESD. The five pillars of ESD comprise of learning to know, learning to be, learning to live together, learning to do, and learning to transform oneself and society:

**Learning to know:** To recognize the evolving nature of the concept of sustainability; to reflect the ever-growing needs of societies; to acknowledge that fulfilling local needs often has international effects and consequences; to address content, context, global issues and local priorities

**Learning to be:** To build on the principles and values that underline sustainable development; to deal with the well-being of all three realms of sustainability – environment, society, and economy; to contribute to a person’s complete development: mind and body, intelligence, sensitivity, aesthetic appreciation and spirituality

**Learning to live together:** To build capacity for community-based decision making, social tolerance, environmental stewardship, adaptable workforce and quality of life

**Learning to do:** To contribute to a concrete reality for all our daily decisions and actions; to build a sustainable and safe world for everyone

Learning to transform oneself and society: To integrate the values inherent in sustainable development into all aspects of learning; to empower people to assume responsibility for creating and enjoying a sustainable future

## **Why do we need ESD?**

There has been a surge of interest in sustainability issues among governments, communities, organizations and in business and industry due to a growing concern about the environment. In response, new policies, legislation and forms of governance at the local, regional, national and international levels, and new approaches to education and learning are emerging that can help to deal with such issues. The diagram

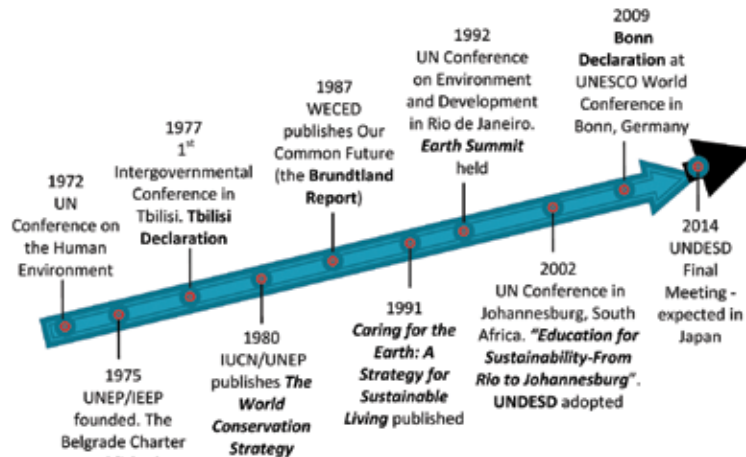
---

<sup>1</sup> This is a full citation from the Education for Sustainable Development (ESD): Learning for Change Leaflet. Please contact the UNESCO Office, Jakarta ESD team for a hardcopy.

below shows the progression of ESD-related key events given the growing importance of ESD.

UNESCO is developing ESD programmes that have an important role to play in educating people how to cope with climate change. There is much to gain by placing Climate Change Education within an ESD framework, particularly in South-East Asia, one of the world's fastest growing regions.

South-East Asia is already suffering from the effects of climate change, as evidenced by increasing temperatures, changing precipitation patterns, rising sea levels, and the growing frequency and intensity of extreme weather events. These events can lead to a more rapid spread of diseases and accelerated loss of biodiversity. Their impacts are likely to reduce economic growth and exacerbate poverty.



### EFA and the MDGs

The Education for All movement is a global commitment to provide quality basic education for all children, youth and adults. It was launched at the World Conference on Education for All held in Jomtien, Thailand, in 1990. EFA has six education goals which aim to meet the learning needs of all children, youth and adults by 2015.

The EFA goals also contribute to the global pursuit of the eight Millennium Development Goals (MDGs). Two MDGs relate specifically to education but none of the eight MDGs can be achieved without sustained investment in education. Education gives the skills and knowledge to improve health, livelihoods and promote sound environmental practices.

Education is the primary agent of transformation towards sustainable development, increasing people's capacities to transform their vision for society into reality. Education for sustainable development teaches individuals how to make decisions that consider the long-term future of the economy, ecology and equity of all communities.

ESD is linked to EFA and the MDGs through these common points:

- The goal of improving the quality of life.
- Promotion of human rights with an emphasis on gender equality and marginalized groups.
- A commitment to education as a key to development.
- An emphasis on primary education.
- Broad participation from government, civil society, communities and individuals.



### What are ESD Strategies?

In order to bring about change in the world, we need to work together to adopt appropriate responses. The strategy is to tackle more than education, addressing the way we live, our values and our behaviour. This approach can be adapted for implementation at all levels, from the global level, regional level in Asia

Pacific to the five cluster countries of UNESCO Office, Jakarta. UNESCO's ESD strategies are as follows:

At the **global level**, UNESCO is to involve itself in: vision-building and advocacy through lobbying to embed ESD in government policies and development plans; consultation and ownership in opening the DESD consultation processes to all interested organizations and individuals, and identify roles and responsibilities for stakeholders; partnership and networks in actively seeking a wide range of stakeholders, identifying existing advocates and work in unison, and identifying partners and networks in all four thrusts of ESD.

Also, UNESCO's ESD strategies at the global level are in capacity-building and training to address professional development needs at all levels, including leadership and building upon existing actors and expertise including NGOs, the private sector, and civil society; research, development and Innovation to develop ESD materials to fill curricular gaps and develop associated assessment instruments and to create research and development agendas for all four thrusts of ESD; information & communication technologies to explore how sustainable development messages can be infused in games and popular culture through ICTs and to use ICTs in training and in-service professional development activities; monitoring and evaluation to develop indicators to assess the impact of the DESD; gather baseline data and set up longitudinal studies and to use data from EFA and other initiatives to track progress.

At the **Regional Level in Asia Pacific**, UNESCO's vision is for every person in the Asia-Pacific region learns how to acquire and adapt their knowledge and behaviour to contribute to change for a sustainable future, and to take responsibility for their actions in consideration of others. Its mission is to develop partnerships and synergies with a variety of partners through all forms of quality learning to empower individuals to make informed, appropriate decisions for our future. The regional strategies include: advocacy through activities such as scenario building (to help address long-term perspectives and uncertainties); development of a shared information platform from which stakeholders can access resources (human, financial, etc.); provision of incentives for engaging 'new' partners such as the private sector; promotion of action research by academia; provision of for a for dialogue amongst stakeholders at local, national, sub-regional, regional and international levels; development of Communication Strategies.

UNESCO Office, Jakarta is mandated to represent the Five Cluster Countries: Brunei Darussalam, Indonesia, Malaysia, the Philippines and Timor Leste. Each Cluster Country has established a National Commission on Education to support the implementation of its programmes as part of UNESCO's cornerstone programmes. The implementation strategies of the five cluster countries of UNESCO Office, Jakarta are: incorporating ESD into existing programmes and activities, and strengthening these programmes; influencing the direction of educational reforms in the five countries; encouraging donors to support ESD; integrating ESD into existing UN initiatives such as the MDGs, EFA and UNLD; sharing information, opportunities and resources.

The Five Cluster Countries of UNESCO Office, Jakarta: A major emphasis of UNESCO's activities is encouraging and supporting reforms towards the development of more qualitative, effective and efficient education systems. This is done by assisting people, particularly marginalized groups, to cope with increasingly widespread poverty, and dealing with social conflicts while competing more effectively in the global market. (See tables 1 and 2 in the following page for the education and economic situations in the five cluster countries).

Under its 2010/2011 biennium programme on Education for Sustainable Development, UNESCO Office, Jakarta organized the first Sub-regional Country Report Meeting 2010 on Education for Sustainable Development (ESD) in South-East Asia: Centred on Five Cluster Countries of UNESCO Office, Jakarta, which took place in Jakarta, Indonesia on 27–28 September 2010. The results of the meeting are shown in the tables 3 and 4 in the following page.

### **What is the Direction for the Future?**

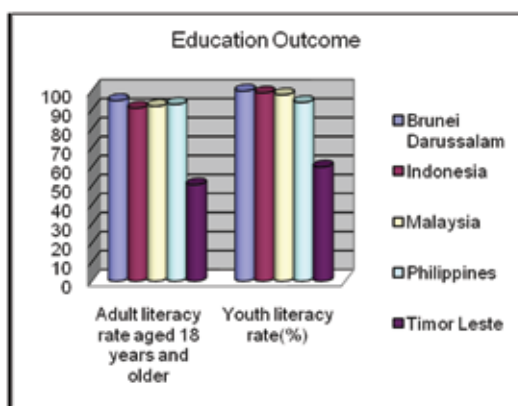
UNESCO's role in leading DESD is fully in line with UNESCO's functions as laboratory of ideas, standard setter, clearing house, capacity builder and promoter of international cooperation. UNESCO will be proactive, and all of the parts of the Organization will work together in an intersectoral manner, to demonstrate the strong leadership and coordination role at international level that UNESCO can and will play to ensure the

Decade's efficiency and success.

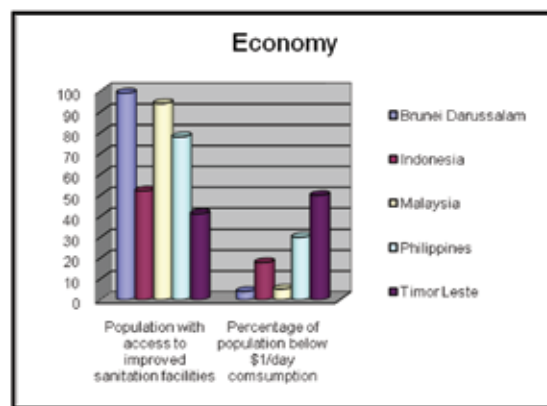
Within the Asia-Pacific Region, there will be continuation of work in these areas: enhancing synergies with different education initiatives to strengthen ESD partnerships; developing and strengthening capacities for ESD; building, sharing and applying ESD-related knowledge; advocating for ESD and increasing awareness as well as understanding of sustainability; developing National ESD Monitoring Systems.

In the Five Cluster Countries, work would continue in the areas of: developing Green Schools Project; developing ESD/Climate Change Education (CCE) instructional materials, including modules and handbooks; developing ESD/CCE National Policy and Strategies; and establishing ESD/CCE Country Guidelines for Teacher Education Institutions (TEIs).

**Tables 1: Education Situations in the Five Cluster Countries**



**Tables 2: Economic Situations in the Five Cluster Countries**



Source: UNESCAP, 2010

**Table 3: National Sustainable Development Priorities in Five Cluster Countries**

Brunei Darussalam	Indonesia	Malaysia	Philippines	Timor Leste
<ul style="list-style-type: none"> <li>- Food Security</li> <li>- Environment</li> <li>- Health</li> </ul>	<ul style="list-style-type: none"> <li>- Noble character development</li> <li>- Poverty alleviation</li> <li>- Environmental conservation</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental education</li> <li>- ESD awareness</li> <li>- Non-formal education for the disadvantaged/minorities</li> <li>- Impact studies of ESD programmes</li> </ul>	<ul style="list-style-type: none"> <li>- Improvement of air and water quality</li> <li>- Improved access to sanitation</li> <li>- Conservation of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>- Improvement of school quality</li> <li>- Nice and friendly environment campaign</li> <li>- Review of curriculum</li> <li>- Establishment of National ESD Implementation Commission</li> </ul>

Source: The 1<sup>st</sup> Country Meeting on ESD, 27-28 September 2010, Jakarta

**Table 4: ESD Status in the Five Cluster Countries**

Country	ESD Framework	Challenges	Achievements
Brunei Darussalam	No specific framework	Integrating ESD into the education system	ESD forums, environment-related clubs
Indonesia	Strategic Plan of Ministry of National Education (2010)	Socialization of ESD in education units	ESD-based school environment
Malaysia	RCEs to deliver ESD to communities	Training of teaching staff at all levels	High literacy rate
Philippines	EPA 21 as the overarching framework for national ESD implementation	Regional indicator framework, National ESD goals, targets and indicators	National SD priorities enshrined in the PA21 and EPA 21
Timor Leste	Implementation of a New Program called "Escoela Noeva"	Reduce poverty and stimulate local economy	Basic Education Law enacted/9-year basic education as a future working plan

Source: The 1<sup>st</sup> Country Meeting on ESD, 27-28 September 2010, Jakarta





# *ESD and UNDES*: What is ESD and why we need it?

Training Programme on Capacity Development of TEIs  
8 December, 2010

Mee Young Choi, Ph.D.  
ESD Team Leader /Programme Specialist in Education  
UNESCO Office, Jakarta



## Definition of Education for Sustainable Development

*“Education for Sustainable Development (ESD) is a vision of education that seeks to empower people to assume responsibility for creating a sustainable future.”* (UNESCO, Paris, 2002)<sup>1</sup>.

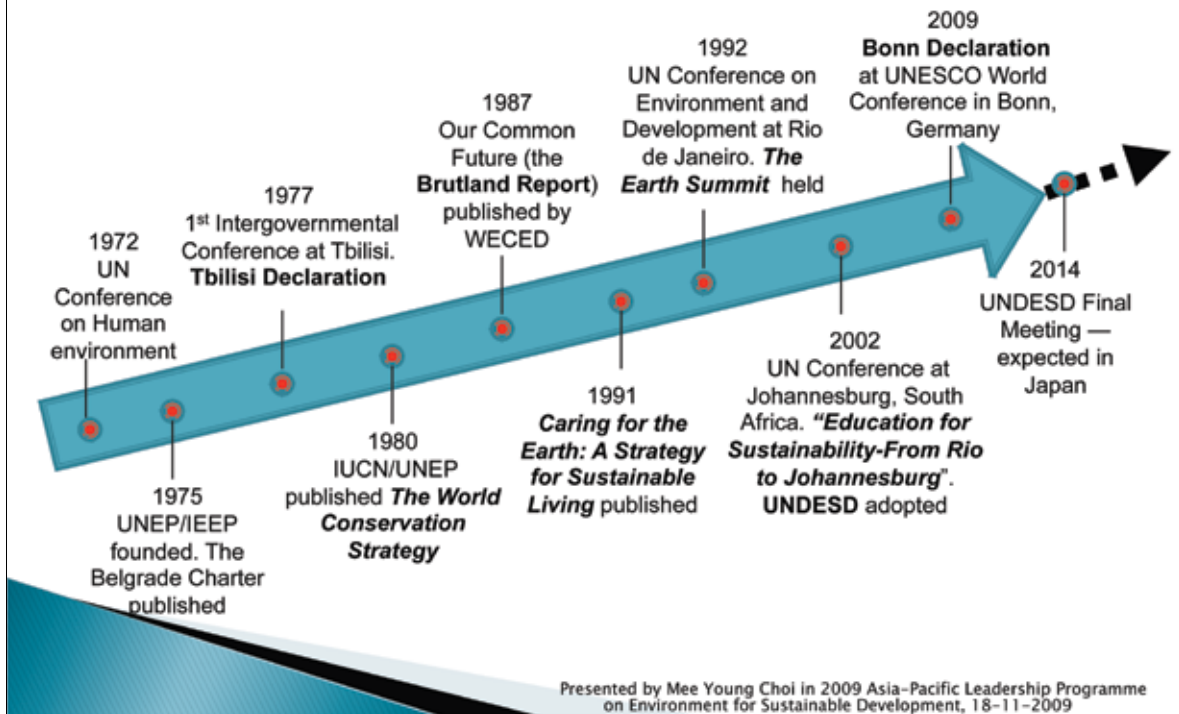
*“Education for Sustainable Development (ESD) is a learning process (or approach to teaching) based on the ideals and principles that underlie sustainability and is concerned with all levels and types of learning to provide quality education and foster sustainable human development – learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society.”* (UNESCO website, Accessed 8 Nov. 2010)



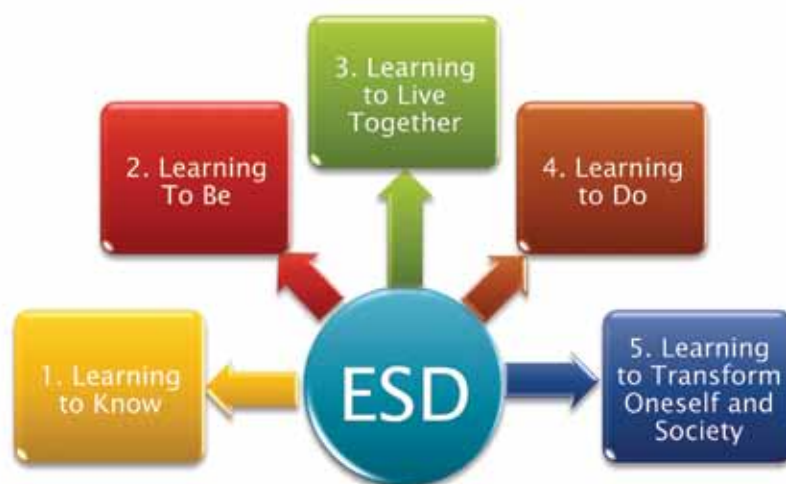
1. Education for Sustainable Development: Report Rio to Johannesburg: Lessons Learnt from a Decade of Commitment. UNESCO, Paris, 2002.

2. <http://unesdoc.unesco.org/images/0014/001416/24169e.pdf>

## ESD-related Key Events



## Five Pillars of ESD





## The Priorities of ESD within education parameter (DESD Themes)



<http://www.unesco.org/en/education-for-sustainable-development/>



## The United Nations Decade of Education for Sustainable Development (2005-2014)

From the Johannesburg Summit, the DESD was proclaimed by the UN General Assembly as the ten-year period education action beginning on 1 January 2005.

*In 2000*

UNESCO was designated as the lead agency in the promotion of the DESD, and; UNEP was designated as a key partner in defining and promoting the environmental perspectives of ESD and coordinating environmental lobbying.

*In 2003*

DESD seeks to integrate the principles, values, and practices of sustainable development into all aspects of education and learning, in order to address the social, economic, cultural and environmental problems we face in the 21st century.

*In 2005*

<http://www.unesco.org/en/esd/> [http://www.unep.org/Training/downloads/PDFs/strat\\_full.pdf](http://www.unep.org/Training/downloads/PDFs/strat_full.pdf)

## The DESD at a Glance

**What is Sustainable Development, and how can we make it happen?**

- Fostering peace
- Fighting against global warming
- Reducing North/South inequalities and fighting against poverty
- Fighting against the marginalization of women and girls
- SD means having a different vision of the world

**Why a DESD?**

- Education is a motor for change.

**What we expect from the Decade?**

- The Decade will contribute to enabling citizens to face the challenges of the present and future and leaders to make relevant decisions for a viable world.

**How? (Priority Actions of DESD)**

- Promoting and Improving quality education
- Reorienting existing education to address SD
- Building public understanding and awareness
- Providing practical training

**What are the challenges?**

- Going beyond environmental education to reach SD
- Drawing up an inventory of what exists for the Decade
- Mobilizing the media
- Establishing partnerships and creating synergies among the initiatives and programmes

The DESD a Glance": <http://unesdoc.unesco.org/images/0014/001416/24169e.pdf>

## Education for All

**The World conference on EFA in 1990**

- ✓ The World Declaration on EFA defined a bold new direction in education,
- ✓ The intention: children, youth and adults would "benefit from education opportunities designed to meet their basic learning needs"

**The Mid-Decade Conference in 1996**

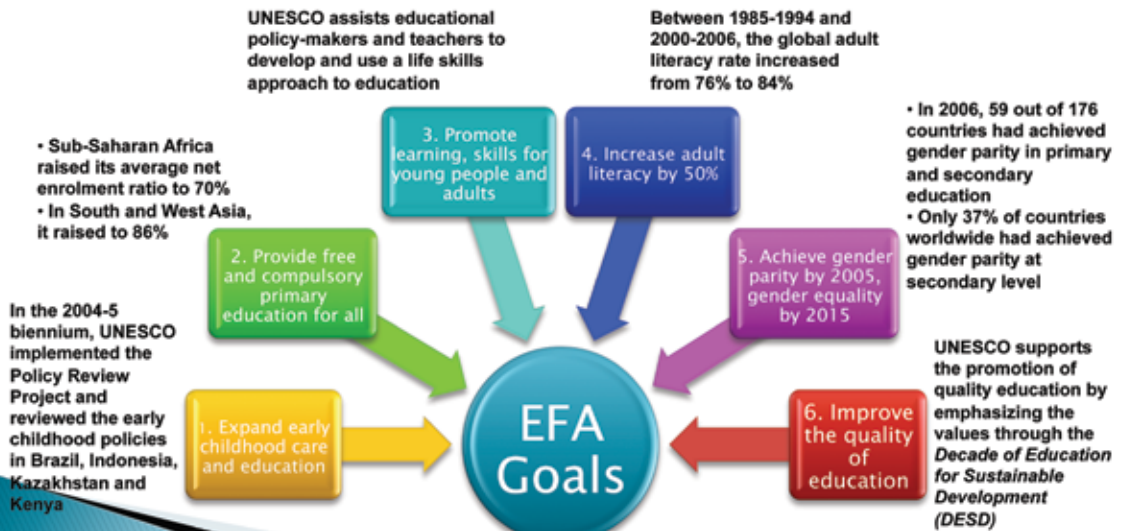
Promoted a holistic view of education consisting of four "pillars": 1) learning to know 2) learning to do 3) learning to be, and 4) learning to live together

**The World Education Forum in 2000**

- ✓ Adopted Dakar Framework for Action (DFA): Education for All: Meeting our Collective
- ✓ DFA commits governments to achieving quality basic education for all by 2015

[http://www.unesco.org/education/efa/ed\\_for\\_all/](http://www.unesco.org/education/efa/ed_for_all/)

# Six goals of EFA and contributions to ESD



<http://www.unesco.org/en/efa/efa-goals/>

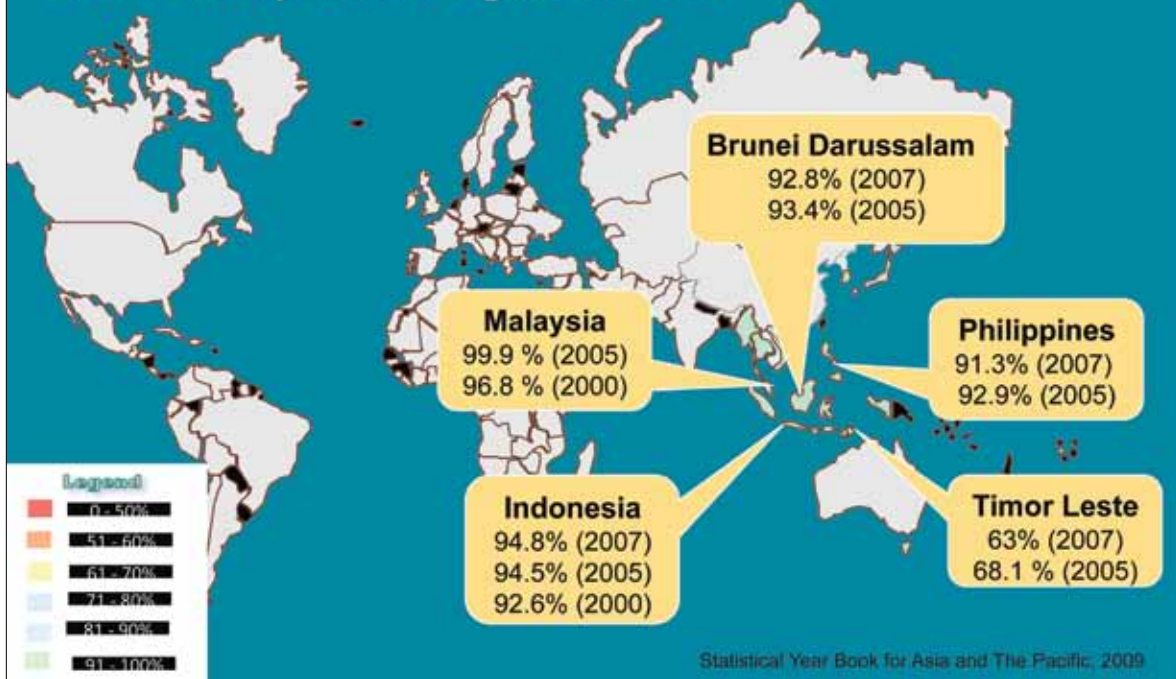
## Net Enrolment Ratio in Primary Education % of Primary School-Aged Children

### South-East Asia

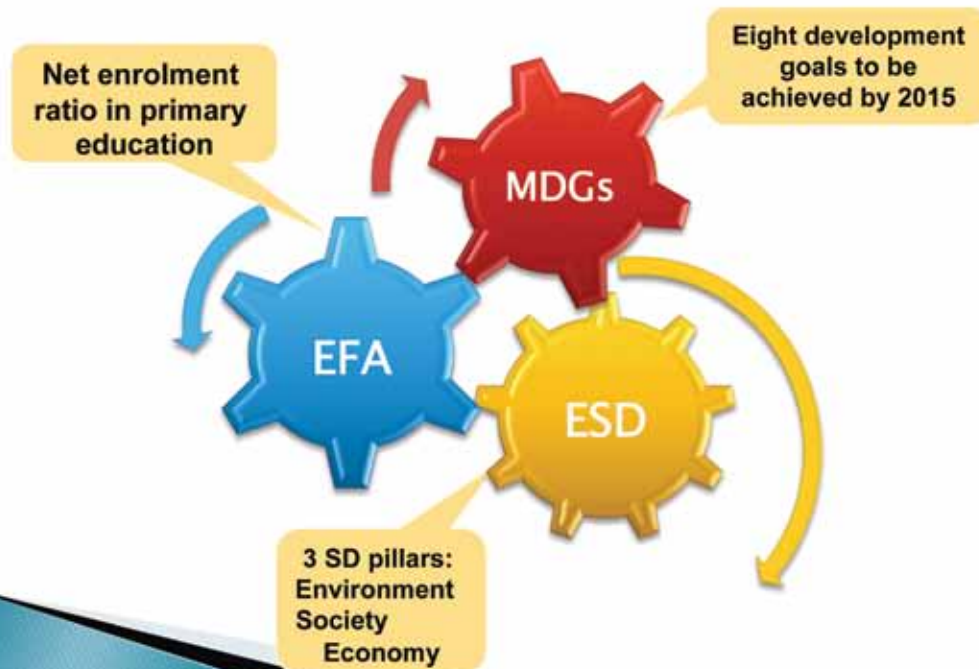


Statistical Year Book for Asia and The Pacific, 2009

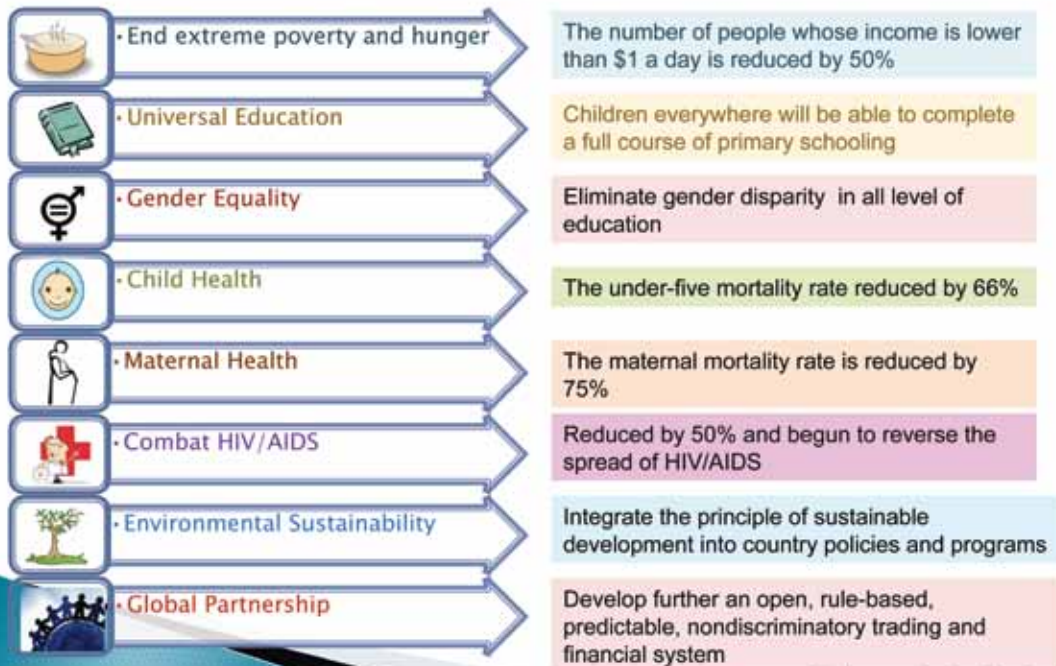
## Net Enrolment Ratio in Primary Education % of Primary School-Aged Children



## Why do we need ESD?

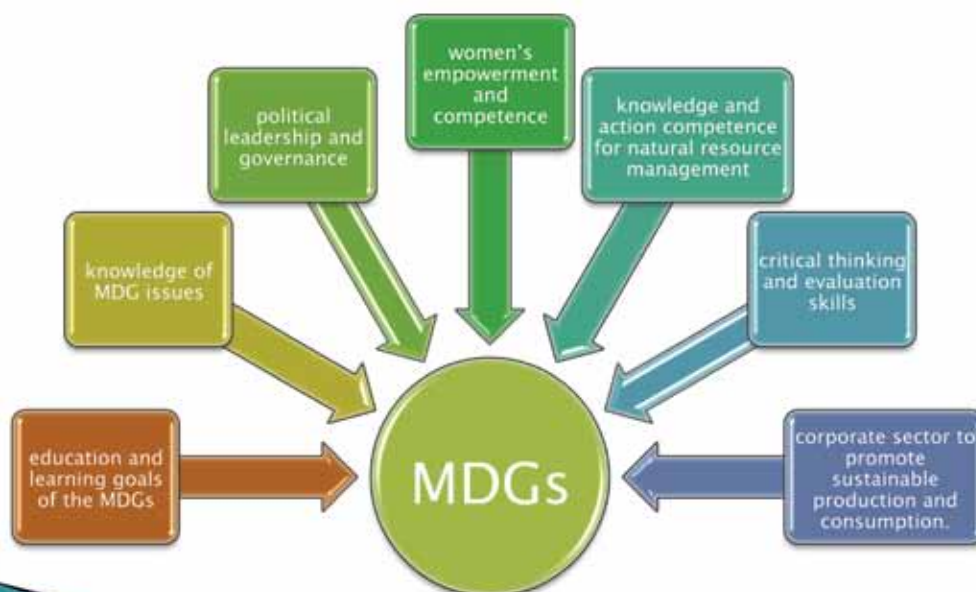


## Millenium Development Goals (By 2015)



<http://www.undp.org/mdg/basics.shtml>

## How ESD Contributes to the MDGs?



<http://unesco.org/education/esd/un-decade-of-esd/other-global-initiatives/linkages-with-the-un-millennium-development-goals/>

## ESD at Global Level

### POLICIES

- advocacy and vision-building;
- consultation and ownership;
- partnership and networks;
- capacity-building and training;
- research and innovation;
- information and communication technologies (ICTs);
- monitoring and evaluation

### STRATEGIES

- Provide a situational analysis of key sustainable development issues and their relevance to education, training and public awareness;
- Identify key stakeholders involved in ESD;
- Develop country-based goals and strategies for ESD;
- Identify lead agents and an implementation mechanism (including roles and budgets);
- Establish a multi-stakeholder forum or committee to steer implementation; and
- Establish a monitoring and evaluation system to ensure continuous improvements

<http://unesdoc.unesco.org/images/0014/001486/148654E.pdf>

## Learning for Change: UNESCO Asia-Pacific ESD Strategy (2005–2015)

### Vision

- **Every person in the Asia-Pacific region learns how to acquire and adapt their knowledge and behaviour to contribute to change for a sustainable future and take responsibility for their actions in consideration of others.**

### Mission

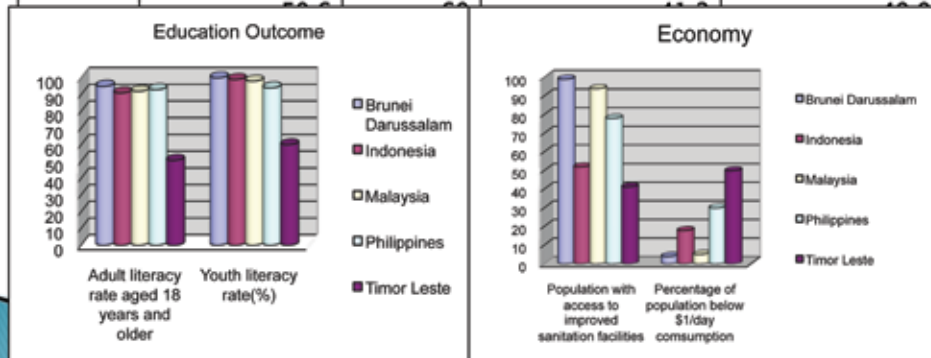
- **To develop partnerships and synergies with a variety of partners through all forms of quality learning to empower individuals to make informed, appropriate decisions in our future.**

<http://www.unescobkk.org/education/esd/un-decade-of-esd/>



## Five Cluster Countries

Country	Adult literacy rate aged 18 years and older (%)	Youth literacy rate (%)	Population with access to improved sanitation facilities (%)	Percentage of population below \$1/day consumption
Brunei Darussalam	95	100	99	4
Indonesia	91	99	52	17.8
Malaysia	92	98	94	5.1
Philippines	93	94	78	30



UNESCO Country Programming Document

## National Sustainable Development Priorities in Five Cluster Countries



South-east Asia ESD Coordination and Capacity Building Workshop, 18-21 Sept 2008

## ESD Status in Five Cluster Countries

Country	Brunei Darussalam	Indonesia	Malaysia	Philippines	Timor Leste
ESD Framework	No specific framework	Strategic plan of MONE (2010)	RCEs to deliver ESD to communities	EPA21 for national ESD implementation	Implementation of a new program "Escola Noeva"
Challenges	Integrating SD in Education system	Socializing ESD at Education Unit	Training of all level Teaching staff	Regional indicator, framework, NESD goals, targets and indicators	Reduce poverty and stimulate local economy
Achievements	ESD Forums, environment-related clubs are increased	ESD-based School Environment	High percentage of Literacy rate	National SD priorities enshrined in the PA21 and EPA 21	Decreed law on "Basic Education" 9 year-basic-education as future working plan

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## ESD Status in BRUNEI DARUSSALAM

Historical Milestones	ESD Framework	Challenges	Achievements
2009: The 1 <sup>st</sup> ESD Task Force was formed. > 3 major priorities: Health, Energy and Environment > More local initiatives were held through ESD briefing (Nov 09) and Capacity building on ESD Mapping (Apr 09)	<ul style="list-style-type: none"> <li>No specific ESD framework</li> <li>National Sustainable Development agenda is tackled by individual ministries</li> </ul>	<ul style="list-style-type: none"> <li>Find direction of ESD for MOE</li> <li>The next steps and the integration of ESD in the education system, and</li> <li>Existence of misconceptions</li> </ul>	<ul style="list-style-type: none"> <li>22-25 April 2010: ASEAN+3 Youth Environmental Forum (AYEF) in Brunei Darussalam.</li> <li><b>Increasing Environmental-related clubs in schools and launching of Energy Clubs in schools.</b></li> <li>STEP Center with Brunei Shell Petroleum Company Sdn. Bhd. Organize Brunei Environment, Technology and Science (BEST) Awards.</li> </ul>

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## ESD Status in INDONESIA

Historical Milestones	ESD Framework	Challenges	Achievements
<p><b>2009</b> - planning and implementation of ESD in Indonesia was transferred from Ministry of Environment to Ministry of National Education</p> <p>4 Directorate Generals actively involve in ESD related programs:</p> <ol style="list-style-type: none"> <li>1. Non Formal and Informal Education</li> <li>2. Management and Education of Primary &amp; Secondary Schools</li> <li>3. Quality Improvement of Teachers and Education Personnel</li> <li>4. Higher Education</li> </ol>	<p>Paradigm of Education for Sustainable Development (PUP3B)</p> <p style="text-align: center;">↓</p> <p>Strategic Plan of the Ministry of National Education (2010)</p>	<ul style="list-style-type: none"> <li>❖ ESD policies not in clear and measurable design</li> <li>❖ Socialization of ESD at education unit</li> <li>❖ Involving multiple agencies in ESD</li> </ul>	<ul style="list-style-type: none"> <li>• Draft for the scope of ESD beyond the field of environment</li> <li>• <b>ESD based School Competition (Green School Award/Adiwiyata Award).</b></li> <li>• ESD based SCS-CEL Program (Student Community Service – Community Empowerment Learning Program) since 2009</li> </ul>

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## ESD status in MALAYSIA

Historical Milestones	ESD Framework	Challenges	Achievements
<p><b>2001</b> - MOE launched the Education Development Plan (2001-2010), taking into account:</p> <ul style="list-style-type: none"> <li>➢ National Vision Policy,</li> <li>➢ The 3<sup>rd</sup> Outline Perspective Plan (OPP3)</li> <li>➢ The Malaysia Development Plan</li> </ul>	<p>Regional Centres of Expertise (RCE), a network of existing formal, non-formal and informal education organisations, mobilised to deliver education for SD to local and regional communities.</p>	<ul style="list-style-type: none"> <li>❖ Creating knowledge base for sustainability through research activities;</li> <li>❖ Educating the next generation both professionals and educated people in all subjects;</li> <li>❖ Training and retraining of teaching staff at all levels of education, both formal and non-formal; and</li> <li>❖ Providing outreach and service to society</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing number of school and education institution enrollment.</li> <li>• <b>High percentage (65%) basic literacy, Youth literacy rate (98%), adult literacy rate (above 92%) and basic numeracy skills (74%)</b></li> </ul>

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## ESD Status in PHILIPPINES

Historical Milestones	ESD Framework	Challenges	Achievements
<p><b>1989</b> – National Strategy on Environmental Education.</p> <p><b>1992</b> - National Environmental Action Plan Framework (NEEAP) for 1992 to 2002.</p> <p><b>2008</b> - Adoption of RA 9512 "National Environmental Awareness and Education Act" and Updated NEEAP 2005-2014 incorporating DESD.</p> <p><b>2010</b> - New administration revising the implementation of ESD.</p>	<ul style="list-style-type: none"> <li>✓ The previous Coordinator and Focal Point adopted the UNESCO Asia Pacific ESD Strategy (2005-2014)</li> <li>✓ The Strategy was presented to the National Education For All Committee (NEC). No formal adoption at the national level.</li> <li>✓ EPA 21 as the overarching framework for national ESD implementation.</li> </ul>	<ul style="list-style-type: none"> <li>✦ Closer collaboration with key DESD stakeholders (the education agencies of DepEd, CHED and TESDA with NGO Local government units and different Govt. agencies and academe.</li> <li>✦ Need to sustain the awareness drive particularly at local level</li> <li>✦ Reactivate UNESCO Clubs to actively involve young adults in ESD</li> <li>✦ Obtain commitment from high-level officials</li> <li>✦ National ESD goals, targets and indicators as well as regional indicator Framework</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops and DESD related activities conducted by The Philippine National commission TWG on Lifelong Learning for Sustainable Development (LLSD)</li> <li>• <b>The National SD priorities are enshrined in the PA 21 and EPA 21.</b></li> <li>• PCSD's Sustainable Integrated Area Development (SIAD) localized the PA21</li> <li>• The creation of the Technical Working Group to work on the framework, strategies, criteria and monitoring systems for DESD.</li> <li>• NEEAP Action Plan for EE in all learning levels.</li> </ul>

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## ESD Status in TIMOR LESTE

Historical Milestones	ESD Framework	Challenges	Achievements
<ul style="list-style-type: none"> <li>➢ Used Indonesian System until 2006</li> <li>➢ October 2008: The National Act Was approved by The National Parliament and promulgated by the PR.</li> <li>➢ Late 2009: The National Committee was established</li> </ul>	<ul style="list-style-type: none"> <li>✓ Public Grants/Subsidy, Program School Feeding (PSF)</li> <li>✓ Reformation of Curriculum</li> <li>✓ Implementation of a New Program called "Escoela Noeva"</li> <li>✓ Updated curriculum in accordance to the progress of the globalize world.</li> </ul>	<ul style="list-style-type: none"> <li>✦ Reduce poverty</li> <li>✦ Increase Income of local community</li> <li>✦ Promote local products</li> <li>✦ Stimulate local economy</li> </ul>	<p><b>The Decreed law on 'Basic Education' / 9-year-basic education as Future Working Plan</b></p>

The 1<sup>st</sup> ESD Country Meeting on ESD, 27-28 September 2010, Jakarta

## Future Directions

### Regional in Asia- Pacific

- Enhancing synergies with different education initiatives to strengthen ESD partnership
- Developing and strengthening capacities for ESD
- Building, sharing and applying ESD related knowledge
- Advocating for ESD and increasing awareness as well as understanding of sustainability

### In 5 Cluster Countries

- Developing Green School Program
- Integrating ESD in education system
- Developing National ESD Monitoring System

Derek Elias and Karampreet Satchatep, *ESD Currents*, 2009, Bangkok

*“Our hope is that environmental philosophy will become in part a forum for exchanging ideas on how best to educate future philosophers trained to engage decision-makers and scientists (Briggle et al., 1977: 4)”*

*“Our problems are solvable, but as we try to solve them, we will hear a million nos. No, we need not change; no, we cannot change; no, we must prepare for war; no, we cannot risk making peace, Yet after that final now will come a yes (Sachs, 2008: 313)”*

*“Investment in ESD is an investment in the future, and can be a life-saving measure, especially in post-conflict and least developed countries (Article 3, Bonn Declaration, 2009)”*



*Thank you for your kind attention!*

For Further Information, Please Contact  
Mee Young CHOI/Nuzulia Latifah  
Programme Specialist/Programme Assistant  
Education Unit, UNESCO Office, Jakarta:  
Tel: +62 21 7399818 Ext. 836/ Fax: +62 21 7279 6489  
E-mail: [ESDjakarta@unesco.org](mailto:ESDjakarta@unesco.org)  
[www.unesco.org/jakarta](http://www.unesco.org/jakarta)

# **Unlocking the Potential of ESD for Reframing Education - Korean Contribution to ESD Strategy at National Level<sup>2</sup>**

**Mr. KANG Sangkyoo**

Programme Specialist in Education,  
Korean National Commission for UNESCO, Republic of Korea

During this period of global economic turbulence and climate change, we are at a point where we must speak up about the need for change and our capacity for achieving it. Such change will lead us to take on economic, social and environmental issues in a more convergent manner, and thus compel education of all types and levels to become a tool for tackling the pressing challenges in view of global balance and local reality. A wide variety of problems are profoundly interlinked and a single possible solution will never fix them all at once. Education is a slow but ultimately crucial means by which to change the complex equation.

Our generation and those who follow are facing challenges, including financial crises, global warming, a loss of biodiversity poverty and food and water shortages. United Nations Secretary-General Ban Ki-moon has called for a 'Global Green New Deal' that would help rebuild and reshape the economy of our planet. World leaders argue that this crisis is a call to speed up the creation of a new energy economy. It is in this spirit that the Korean government announced Green Growth as a national vision that would shape Korea for the next six decades.

Korea's economy is largely dependent on external factors, including foreign oil and export earnings. Rapid economic growth since the 1960s has produced an imbalance in environmental and social integrity. Military and diplomatic tensions between North and South Korea threaten political stability. Low birthrates and an ageing population will feed the national vulnerability in the immediate future. Sustainability issues are pivotal for the country's survival and prosperity as conventional and emerging issues unfold nationally and internationally.

Green Growth was introduced in 2008 to promote the belief that growth and environmental sustainability are not merely compatible, but mutually necessary for the future of humankind. The government has already enacted the Framework Act on Green Growth and embarked on an official launch of the Global Green Growth Institute (GGGI) in 2010. While the Act serves as the guiding principle for development in Korea, the Institute is expected to become a platform through which Korea cooperates and collaborates with emerging and developing nations in their efforts to create and implement national and local strategies and policies for pursuing green growth. Seen in this light, the UN Decade of Education for Sustainable Development (DESD) in Korea has vast potential to be implemented in alignment not only with the priorities of the national sustainable development objectives but also as part of global efforts for a sustainable common future.

During the first half of the decade, the Korean National Commission for UNESCO has played a facilitating role for national implementation of ESD by organising teacher training workshops and guiding publications. The Asia-Pacific Centre of Education for International Understanding (ACEIU), a UNESCO Category II Center in Korea, has organised a series of EIU/ESD events, including in-service teachers training workshops, a photo exhibition and essay contests. In collaboration with UNESCO Bangkok and the United Nations University respectively, it published *Two Concepts, One Goal: EIU and ESD* (2006) and *A Training Manual for EIU and ESD* (2008).

Looking forward to the second half of the decade, the Korean National Committee on ESD was launched in 2009 as a DESD national coordinating body. The Committee, composed of 20 members, brings together government bodies, educational institutes, university networks and representatives from different sectors

---

<sup>2</sup> The article is a revision of "Unlocking the Potential of ESD for Green Growth" that was originally included in the UN DESD Publication *Tomorrow Today* (2010).

of society. It aims to devise ESD policies at the national level by spotting and acting on ESD imperatives, as well as formulating a national ESD strategy.

There has been no statement from concerned government ministries for their involvement in the DESD process. However, the Ministry of Environment introduced the Environment Education Promotion Act in support of sustainable development in 2008 and published an ESD resource book for teachers in primary education in 2009. The Ministry of Education, Science and Technology has paid attention to the strengthening of ESD by financing the operation of the ESD Committee and incorporating 'Environment and Green Growth' into the revision of the national curriculum for secondary education in 2010.

Despite the developments mentioned above, key constraining factors have also been identified and will need to be addressed during the second half of DESD. First, the green growth strategy has brought about a new impetus for raising public awareness and promoting sustainability issues nationwide. However, it also came coupled with serious debates and scepticism. Some critics argue the government-driven initiative aims to achieve another economic breakthrough by advancing green technologies and greening its industry, claiming the tech-savvy framework is not inclusive or holistic enough to transform the past development model. In view of DESD, moreover, the green growth approach still falls short of proving itself as a catalyst capable of addressing the new role of education for sustainable development in response to global uncertainties and ensuing national risks in the immediate decades to come.

Second, a profound reorientation of existing education structures and programmes needs to be addressed for change in formal education in Korea. The current national curriculum is organized around too many academic subjects and excessively centered on competition for college entry. In hope of prioritising and promoting quality education at all levels, partners and stakeholders from diverse thematic areas need to work together for education for sustainability. In particular, with environmental issues still dominating ESD thinking and activities, the mobilisation of high-level political will and inter-ministerial commitment is a demanding part of the efforts toward moving forward.

Third, a rapidly evolving communication network with educational potential has not been fully mobilized. Like other countries in Asia, Korean society is being reshaped by the explosion of digital networks, such as blogging, emailing, text messaging and social networking. A to-do-list of DESD action at the national level has long included the construction of a website offering guiding documents, materials, research and activities at home and abroad. Still, the limited number of ESD researchers, experts, teachers, and activists do not have an online forum where they exchange information and ideas on ESD practices. In this context, the second half of DESD needs to tap into the potential of the digital fabric to harness demand-supply chains of ESD in non-formal and informal mutual learning. With unprecedented opportunities for local people to join in becoming increasingly interconnected and wired to global issues at a distance, the online networks weaving individuals and societal trends can be organised as transformative agents for every economic and social activity.

The Korean National Commission for UNESCO began to hold the ESD Colloquium Series in a bid to tackle those impediments. The unifying theme for the 2010 Series is 'How shall Korea utilise ESD?' Each event, co-organised by the Commission and its partner institutions, intends to stretch the benefits and potentials of ESD beyond the 'inner circle'. Thematic areas associated with the series range from green technology, creative learning, local development, social integration and educational innovation, to other adjectival educations. The series is designed to foster conditions for identifying and expanding the alliances for ESD in Korea, so that the ESD constituency reaches out to diverse stakeholders, including government, civil society, the private sector and academia.

More often than not, the Korean success story of realising the principles and values ESD has to focus on Tongyeong, a harbour city located in the southernmost part of the Korean peninsula. Tongyeong is a coastal region of 138,000 people in an area of 240 square kilometres. Marine resources and cultural heritage are the lynchpin of its economic activities, based on fisheries and eco-tourism. Providing all citizens with a quality education in support of generational equity and global justice has been deemed an imperative



for prosperity and for the very existence of local society. Since being designated as a Regional Centre of Expertise (RCE) by United Nations University in 2005, the island has vividly illustrated how ESD can lead to dramatic changes in local education and people's lives.

An ESD model elementary school, Inpyoung, has integrated ESD into its curriculum and extracurricular activities through a whole-school approach. At first, teachers there had difficulty understanding the concept of ESD and in finding where and how to start the teaching-learning process. However, after participating in workshops and forums offered by the RCE, they developed their own ESD syllabus by studying the local environmental, social and economic issues. Parents are also given chances to participate in school activities, such as the exhibition entitled 'Future of Our Town,' which saw parents, teachers, and students all working together. In order to expand ESD within and outside of the limited numbers of model schools, the RCE has operated ESD programmes and activities that have a significant impact on local communities, in collaboration with 35 local educational NGOs. The efforts have led not only to sharing the key principles, practices and values that are required for the city's sustainability among the local people, but also to bringing critical shifts in many aspects of educational programmes organised by those NGOs.

The main reasons for Tongyeong's outstanding success among many other RCEs worldwide include enduring financial and administrative backing from local authorities. People's active participation and subsequent feedback are also integral parts of the story. Encouraged by political and grass-root support, the RCE continues to plan the expansion of its ESD practices at all levels, from kindergarten to college, until 2012. While spreading and elaborating on educational projects, the city is preparing an ambitious scheme for the establishment of the Education for Sustainable Development Foundation and ESD Sejahtra Center in an attempt to ensure the sustainability of the RCE itself. The Tongyeong case suggests that the widespread application of its best practices in broader parts of country could eventually change our notions of cities encompassing urban and rural areas. A city can be transformed by spurring education for sustainable future into people's daily lives.

Our tomorrow will be different if educational endeavours like Tongyeong can be brought into the mainstream, contributing to achieving sustainable green growth in Korea and beyond. Change could begin in this small city thanks to the proclamation of the UN Decade. However, history shows that even a small bit of personal or social change is much more powerful than a big, swaggering political slogan. DESD has still a long way to go if it is to achieve its aims and produce a strong case for ESD in the real world, not just in theory. In the end, the hope is that ESD will prove itself to be a sustainable form of future education and learning for the people of the whole world



**“Unlocking the Potential of ESD for  
Reframing Education”  
- Korean Contribution to ESD Strategy  
at National Level”**

**KANG Sangkyoo**  
Programme Specialist in Education  
Korean National Commission for UNESCO

**Potential of Education**

“Education is about hope and change”  
- An old lady



## Transformative Power of Education

“A decade into the twenty-first century, the world faces substantial, complex and interlinked development and lifestyle challenges and problems (that) arise from values that have created unsustainable societies.”

- 2009 Bonn Declaration on ESD



## What is education for?

“Education for Development”

- 20<sup>th</sup> century

“Education for Sustainable Development”

- 21<sup>st</sup> century



## Education for Sustainability

“Potential for reframing our whole education and bringing complimentary and quality components into current education policy”

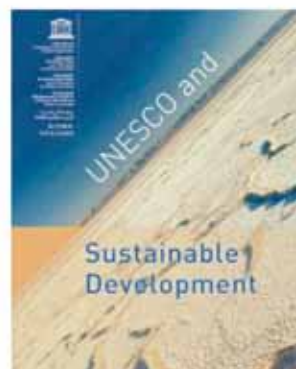
- Two year experience



## New Role of Education

“Every person learns how to acquire and adapt their knowledge and behavior to contribute to change for a sustainable future and take responsibility for their actions in consideration of others.”

- UNESCO



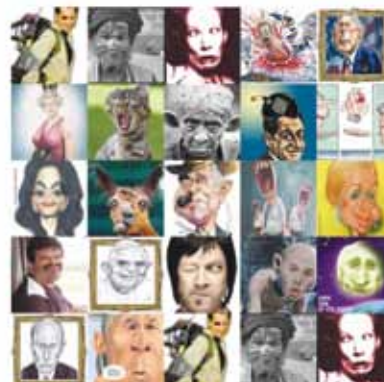
## Questions on ESD

There is no root in 'my country'?



## Questions on ESD

There is no 'workable' definition?



## Questions on ESD

There is no substantial 'evidence' for its benefits?



## World Conference on ESD

- Why is ESD relevant?
- What can we learn from each other?
- What have we achieved so far, what are the lessons learnt?
- Where do we want to go from here?



## A Green Economy Initiative

“We are now on the threshold of a global transformation – the age of green economics.”

- United Nations Secretary General  
Ban Ki-moon



## Low Carbon, Green Growth

“We are preparing to utilize our collective wisdom to transform the climate crisis facing our planet into an opportunity.”

- President of the Republic of Korea  
Lee Myung-bak



## National SD Issues: Korean Case

- Economy is largely dependent on external factors, including foreign oil and export earnings
- Rapid economic growth has produced imbalance in environmental and social integrity



## National SD Issues: Korean Case

- Military and diplomatic tensions between North and South Korea threaten political stability
- Low birthrates and an ageing population will feed the chronic national vulnerability





## Low Carbon, Green Growth

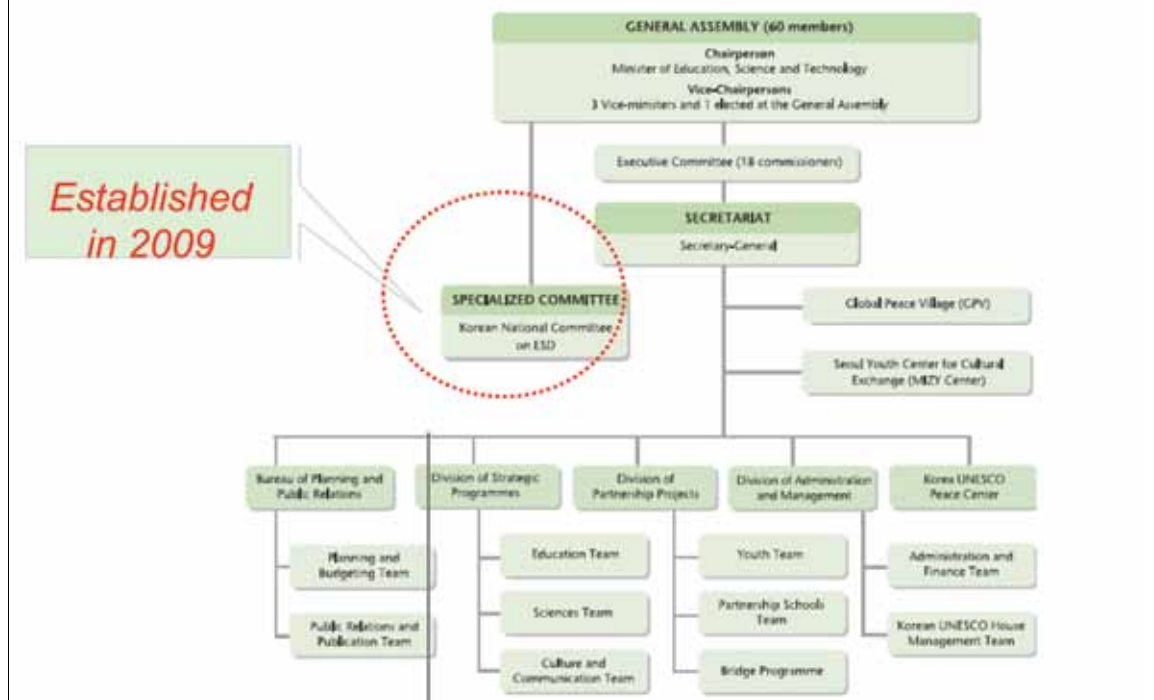
- Enactment of Framework Act on Green Growth (2010)
- Official launch of the Global Green Growth Institute (2010)



## Guiding Publications at National Level



# Korean National ESD Committee



## 1st Half of DESD at National Level

- Declaration of National Vision for Sustainable Development (2005)
- Adoption of National Strategy for SD including the Action Plan for ESD (2006)
- Approval of the Basic Law on SD and the Environmental Education Promotion Act (2007)



## 1st Half of DESD at National Level

- Announcement of a Low Carbon, Green Growth policy (2008)
- Application of the revised 7<sup>th</sup> National Curriculum reflecting ESD (2009)
- Establishment of Korean National Committee for ESD (2009)



## 2nd Half of DESD at National Level

- Enactment of Framework Act on Green Growth (2010)
- Launch of the Global Green Growth Institute (2010)
- Kick-off of the ESD Colloquium Series (2010)
- Development of ESD Moduls for Primary and Secondary Schools (2010)



## ESD Colloquium Series

- Intended to stretch the benefits and potentials of ESD beyond “inner-circles”
- Associated with diverse thematic areas including green technology, local development, and creative learning
- Designed to foster conditions for identifying and expanding the alliances for ESD



## ESD Official Project

- Intended to recognize the best practices of ESD beyond the theoretical debate on “definitions”
- Associated with diverse stakeholders including government, local authorities, academia, civil society, and schools
- Designed to raise the profile and visibility of ESD and encourage mirror actions



## Challenges and Opportunities

- Coordination among national bodies while maintaining the political will of government and legislature
- Reorientation of existing education structures and programmes in order to open a new avenue for ESD

## Challenges and Opportunities

- Collaboration among partners and stakeholders with different mandates and foci on diverse thematic areas
- Application of new digital tools to spread ESD principles and harness committed human resources for all sectors of society through real-time communication

## Strategy for the 2nd Half

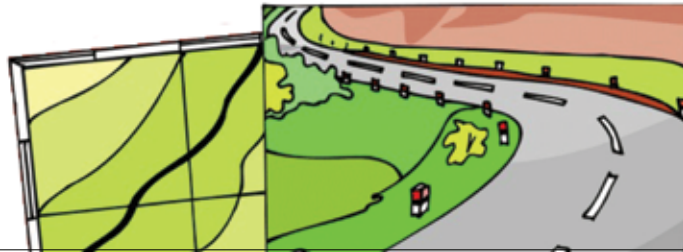
- Involvement of the broader UNESCO family at national, regional, and international levels
- Enhancement of links between UNESCO initiatives and UNU Regional Centre of Expertise for ESD (RCE)

## Strategy for the 2nd Half

- Expansion of capacity-building workshops for national commissions, experts, and key ministerial officials
- Utilization of key national, regional, and international meetings and events to keep DESD momentum viable and sustainable

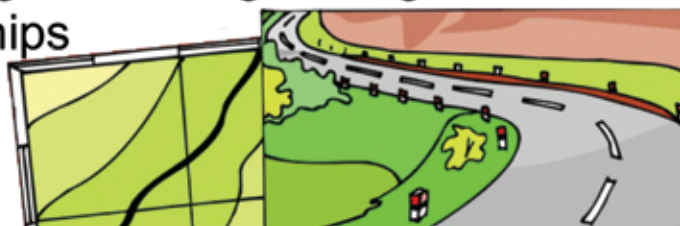
## Strategic Roadmap for the 2<sup>nd</sup> Half of the Decade

- Addressing global challenges through ESD
- Developing capacities
- Further re-orienting education and training to address sustainability concerns
- Building and Sharing knowledge, as well as generating new knowledge through research



## Strategic Roadmap for the 2<sup>nd</sup> Half of the Decade

- Advocating for ESD, and increasing awareness and understanding of sustainability
- Reinforcing/enhancing synergies between different education and development initiatives
- Extending and strengthening ESD partnerships



## Higher Education for SD (UN Mid-term Report, 2010)

- Reorient curriculum and teacher education programmes to integrate ESD into both pre-service and in-service programmes
- Involve youth in the design and implementation of ESD



## Higher Education for SD (UN Mid-term Report, 2010)

- Develop knowledge through ESD networking
- Encourage and enhance scientific excellence, research and new knowledge development for ESD through the involvement of higher education institutions and research network in ESD





## Case Studies: Tongyoung RCE

- Need for local initiatives translating global agenda into local action
- Need for partnerships involving the combined expertise of communities, professions, NGOs and governments
- Need for an innovative platform for multi-stakeholder dialogue that enables diverse groups to interact, learn collaboratively and take collective decisions and actions towards sustainable development

## Case Studies: Tongyoung RCE

- RCEs contribute to developing ways of collaboration among higher education institutions, systems, and local governments
- RCEs create local knowledge base and promote international cooperation in ESD
- RCEs assist with the vertical alignment of curriculum from primary through university education and with interlinking formal and non-formal learning

## Investment in the Future

“Investment in education for sustainable development (ESD) is an investment in the future and can be a life-saving measure.”

- 2009 Bonn Declaration on ESD



For Our Common Future

**Thank you**

# **A proposal for the development of national strategy for ESD in Indonesia**

**Hendarman, Ph.D.**

Head for Centre for Policy Research, Office of Research and Development,  
Ministry of National Education of Republic of Indonesia

## **1. Introduction**

UNESCO sets the period of 2005-2014 as a decade of Education for Sustainable Development (DESD). As the lead agency, UNESCO seeks to integrate the principles, values and practices of sustainable development into all aspects of education and learning. ESD (Education for Sustainable Development) itself aims to help people to develop the attitudes, skills and knowledge to make informed decisions for the benefit of themselves and others, now and in the future, and to act upon these decisions.

One of the important issues that could impede the implementation of ESD is the fact that many related parties dealt with education sector have not fully understood the importance and nature of ESD. For example, teachers generally have not understood about how to plan, implement and evaluate the teaching-learning process concerning ESD. As a result, such efforts undertaken for institutional development and implementation of ESD learning have yet to promote and show the best achievement.

One of the efforts to overcome those problems may be through the reorientation of education to being more sustainable development oriented. With this in mind, the beneficiaries at school level, including teachers, will be aware of the importance of ESD in their lives. For this to take place, the cooperation and support from related stakeholders ranging from central government and local governments, to education units is very critical. More importantly, it is pivotal to develop a national ESD strategy that is consistent with the Strategy and National Policy on Sustainable Development.

This paper proposes such a National Strategy for ESD to support the development and implementation of such a policy aiming for reorienting teacher education towards sustainable development. This proposal has been discussed and under the progress at the Centre for Educational Policy Research and Innovation, the Office of Research and Development, the Ministry of National Education (MONE), Republic of Indonesia. The proposal considers among others, the importance of: (1) existence of related strategies and policies, (2) roles of different units within the Ministry of National Education, (3) roles of local government at provincial, district and city-levels.

## **2. National Strategy and Policy on Sustainable Development**

The national strategy and policy on sustainable development is referred to (a) the Long-Term National Development Plan of 2005-2025 the so-called "RPJPN 2005-2025"; and (b) Strategic Plan of National Education Development 2010-2014. The description is as follows:

### **a. RPJPN 2005-2025**

#### **1) Vision and Mission of RPJPN 2005-2025**

National Development Vision in the year 2005-2025 is: An Indonesia that is independent, advanced, just and prosperous. The vision will be achieved through the eighth National Development Mission, one of which is to realise sustainable development, as follows:

"Realising a harmonious and sustainable Indonesia is to improve the management of development implementation that can maintain a balance between the utilisation, sustainability, availability and usefulness of natural resources and environment by maintaining the functionality, carrying capacity, and comfort in life in the present and future, through (i) spatial matching between the use for residential,

social and economic activities, and conservation efforts; (ii) improve the economic utilisation of sustainable natural resources and environment; (iii) improve the management of natural resources and environment to support the quality of life; (iv) provide beauty and comfort of life; and (v) to improve maintenance and utilisation of biological diversity as a basic capital of development/construction.”

## **2) Direction of the Second Medium Term Development (2010-2014)**

In order to achieve sustainable development, the management of natural resource and conservation of environmental functions is developed more through institutional strengthening and increased public awareness, that is characterized by (i) the development process of rehabilitation and conservation of natural resources and environment, accompanied by the strengthening of active participation of society; (ii) preservation of biodiversity and distinctiveness of other tropical natural resources utilised to realise the added value, competitiveness of the nation, as well as national development capitals in the future; (iii) solid institutional, anticipatory capacity, disaster management at every level of government and implementation of marine development as a movement supported by all sector. This condition is supported by the improvement of quality of spatial planning and consistency of space utilisation which integrated into development planning documents and regulatory enforcement to control the use of space.

### **b. Strategy and Policy Direction of National Education Development Year 2010-2014**

Strategy and direction of national education development policy year 2010-2014 consider various international conventions, including the World Summit on Sustainable Development and the DESD. Education development policies associated with ESD is poured in the paradigm of Education for Growth, Development, and/or Sustainable Development (PuP3B). The paradigm asks for people to think about the sustainability of planet earth and the whole universe (National Ministry of Education’s Strategic Plan, 2010). Strategic Plan mandates that education should foster an understanding of the importance of sustainability and ecosystem balance, namely the understanding that requires humans to be part of the ecosystem. Education should provide an insight on the values of social and natural responsibility to give a concept to the learners that they are part of the social system which must synergize with other human beings, and part of the natural systems that must work together with nature and all of its contents. The comprehension of the values will display a critical understanding of the environment (social and natural) and all forms of investment into the environment, the good and the bad, including development.

Operationally, the ESD policy is characterised by the agreement between the Ministry of Environment and Ministry of National Education. The Minister of Environment as the first party is responsible in the field of environmental protection and management is obliged to preserve the function of the environment and prevent pollution and/or damage to the environment. Whereas, MONE as the second party is responsible for managing the education system to determine national policy and national education standards to ensure quality education in Indonesia. The implementation of sustainable national development requires human resources that are conscious and able to maintain the continuity of environmental functions. Knowledge, values, attitudes, behaviors and insights about the environment needs to be given from an early age and to all levels of society from an early age and to learners in all units, paths, levels and type of education. The knowledge and empowerment of community and institutions actors and environmentalists need to be improved (Joint Decree between Minister of Environment and Minister of Education, 2010).

### **3) Considered-Elements for the Preparation of ESD National Strategy**

In order for the ESD national strategy to be successful in its planning and implementation, various legal aspects and agreements have to be taken into account. These include:

- a. The international agreements related to ESD, such as the Bonn agreement of 2009:
  - 1) Promotion of ESD contribution at all levels, lines and types of education.
  - 2) Increased community understanding and awareness of sustainable development and education for sustainable development (ESD).
  - 3) Re-orientation of education and training systems that cater to sustainability through a coherent policy on national and local level.

- 4) Developing and strengthening international, national, and regional levels cooperation and mechanisms for ESD that respects cultural diversity.
- b. Duties and functions of each stakeholder (government, local government and education units) in accordance with laws and regulations.
- c. A clear and measured translation of ESD policy from the centre to the regions.
- d. Socio-cultural characteristics and diversity of natural resources and human resources conditions
- e. Central and local government to provide funding to implement ESD.
- f. The existence of ESD materials that can be used as learning materials and provide understanding for other interested parties.
- g. Training and socialisation on the importance of ESD, the nature of ESD, ESD policies for teachers, principals and other interested parties.

## 2. Description of Indonesian National Strategy on ESD Implementation

### a. Suggested DESD targets until 2014

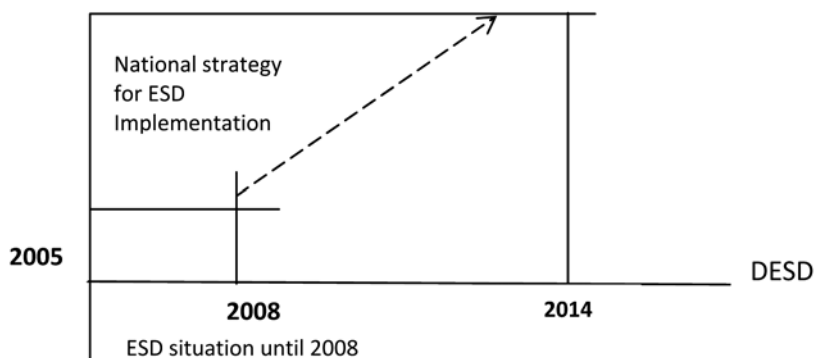


Figure 1. Time-frame of Situation Analysis and National Strategic Plan for Achieving ESD Goals

### b. Suggested Strategic Plan on ESD Implementation

#### 1) Strategic Implementation Model

Strategies, programs and activities arranged clear and measurable, making it easy to evaluate its success. Process of making operational policies, strategies, programs and activities made brief and clear to avoid misperceptions between government, local government and education units. This is all packaged in a national strategic plan for the implementation of education for sustainable development (Figure 2).

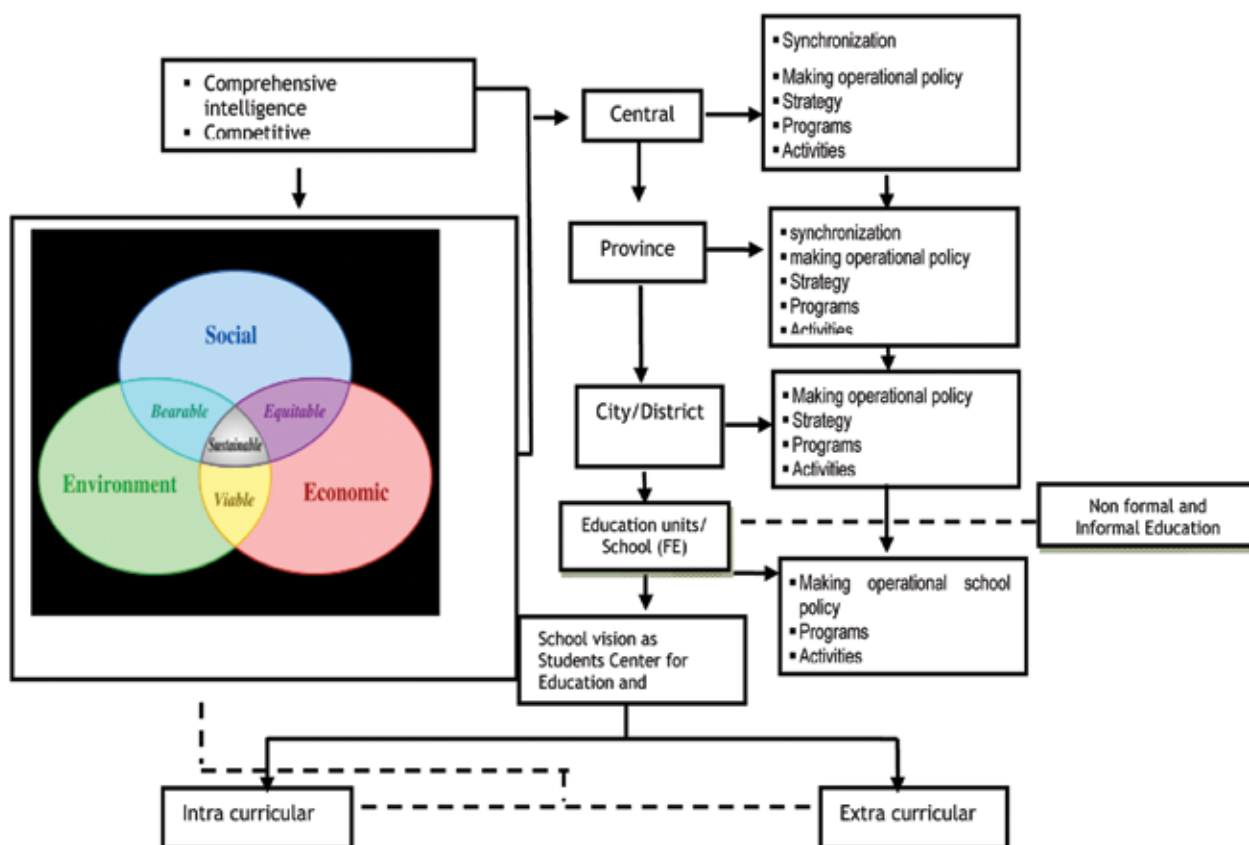


Figure 2. Model of Strategic Planning on ESD Implementation

### 3. Suggested Roles of Various Units within the Ministry of National Education

The following will highlight the suggested policies, programs and/or activities of ESD which could be undertaken by main units within the Ministry of National Education.

Main Units	Policies, programs and / or activities of ESD
Office of Research and Development (Balitbang)	<ul style="list-style-type: none"> <li>Promote and discuss ESD policies with related stakeholders.</li> <li>Analyse research findings relevant to policy formulation and development of M &amp; E strategy.</li> <li>Develop policy proposals regarding (1) national strategy on ESD implementation, (2) M &amp; E strategy, (3) reorientation of the educational system, (4) improved the relationship between formal, non-formal and informal education through ESD, ( 5) reorienting the education system and training of ESD.</li> <li>Develop models of ESD implementation;</li> <li>Promote the results of research related to ESD, including those implemented through UNESCO programs;</li> <li>Develop national ESD indicators for the progress and analysis of ESD achievement;</li> <li>Develop ESD M &amp; E system at national, provincial and district/city levels;</li> <li>Develop incentive structures to support research-development of ESD;</li> <li>Implement the exchange of information on good practices in the implementation of ESD;</li> <li>Coordinate the implementation of ESD at the Ministry of Education and the related units outside the Ministry of Education, and accountable to the Minister of Education.</li> </ul>

<p><b>Directorate General of Primary and Secondary Education Management (Ditjen MPDM)</b></p>	<ul style="list-style-type: none"> <li>• Increase the availability of preschool education and formal primary education for all children of school age;</li> <li>• Identify and provide support to schools that can be a center of expertise and innovation to develop and disseminate knowledge, as well as ESD resource development;</li> <li>• Establish institutional structure and organisation for the flexibility, learner participation, and multidisciplinary programs in the implementation of ESD;</li> <li>• Promote the contribution of ESD in basic and secondary education, as well as kindergarten to achieve quality education;</li> <li>• Develop and expand partnerships within the frame-work of the integration of ESD by involving the community;</li> <li>• Integrate the values of ESD in primary and secondary education, and kindergarten;</li> <li>• Support for reorientation of basic and secondary education, and kindergarten systems for sustainable development.</li> </ul>
<p><b>Directorate General for Non-Formal and Informal Education (Ditjen PNFI)</b></p>	<ul style="list-style-type: none"> <li>• Increase the availability of non formal and informal pre-school, primary and secondary education for all school age children and literacy education for all adults as an important part in sustainable development;</li> <li>• Identify and provide support for a centre of expertise and innovation to develop and disseminate knowledge, as well as ESD resource development;</li> <li>• Establish the institutional structure and organisation for the flexibility, learner participation and multidisciplinary programs in the implementation of ESD;</li> <li>• Promote the contribution of ESD in non-formal and informal education to achieve quality education;</li> <li>• Support the achievement of ESD agenda at the national level through non-formal and informal education;</li> <li>• Making operational ESD policy through non-formal and informal education in coordination with other related agencies and involving business institutions and industries, local communities, and relevant experts;</li> <li>• Develop and expand partnerships within the framework of the integration of ESD;</li> <li>• Integrate the values of ESD in non-formal and in-formal education;</li> <li>• Support the reorientation of non-formal and informal education systems, early childhood education, and training dedicated to sustainable development, particularly through the integration of ESD.</li> </ul>
<p><b>Directorate General of Higher Education (Ditjen Dikti)</b></p>	<ul style="list-style-type: none"> <li>• Identify and provide support to higher education institutions, research institutes and education centers and networks to be a center of expertise and innovation in disseminating knowledge, as well as ESD resource development;</li> <li>• Establish institutional and organisational structure that facilitates flexibility, learner participation, and multi-disciplinary programs in the implementation of ESD;</li> <li>• Foster the relationship between ESD and EFA (Education For All) in a coherent and systematic approach;</li> <li>• Develop and expand partnerships within the framework of the integration of ESD by involving civil society, public and private sectors, non-governmental organisations and other partners;</li> <li>• Encourage and enhance the development of scientific excellence, research and new knowledge for ESD through the involvement of higher education and research networks on ESD;</li> <li>• Mobilise the core functions of universities (teaching, research, and</li> </ul>

	<p>community service) to strengthen the global knowledge and local wisdom about ESD;</p> <ul style="list-style-type: none"> <li>• Support LPTKs to build a network of research and development</li> <li>• Develop incentive structures to support research and the development of ESD in higher education.</li> <li>• Support the reorientation of higher education systems for sustainable development, particularly through the integration of ESD.</li> <li>• Support the reorientation of teacher education curricula and programs to integrate ESD into the pre-job education.</li> <li>• Increase sense of belonging among students about ESD issues.</li> <li>• Expand the involvement and commitment of the community in stimulating discussion and community participation in introducing ESD activities.</li> </ul>
<p><b>Directorate General of Teacher and Education Personnel (Ditjen PMPTK)</b></p>	<ul style="list-style-type: none"> <li>• Support the teachers and principals to carry out research and development on ESD, including support to teacher training institutions and quality assurance of the education institution.</li> <li>• Make special efforts to support teachers in developing ESD learning strategies and evaluating the learning process.</li> <li>• Identifying and providing support to teacher training and quality assurance of education institutions which can be a center of expertise and innovation in developing and disseminating ESD knowledge, as well as ESD resource development.</li> <li>• Support educators and educational personnel in promoting ESD in all lines, types and levels of education to achieve quality education.</li> <li>• Support the achievement of ESD agenda at the national level through teacher training.</li> <li>• Support educators and education personnel in the making of operational ESD policies in the educational unit that coordinates with other related agencies and involving business institution and industry, local communities, and relevant experts.</li> <li>• Support educators and educational personnel in improving understanding and awareness on sustainable development and ESD with the prioritisation given to the expansion of learning and insight of ESD during the first 5 years which include increasing the role and contribution of mass media to foster public awareness and understanding about issues of sustainability and capacity building of professional media;</li> <li>• Develop and expand partnerships within the framework of the integration of ESD into the implementation of teacher training by involving civil society, public and private sectors, nongovernmental organizations and other partners;</li> <li>• Integrate the values of ESD in teacher training and quality assurance of education;</li> <li>• Support the reorientation of teacher training system that intended for sustainable development particularly through the integration of ESD, including the reorientation of curricula and training programs;</li> <li>• Increase a sense of ownership among teachers about ESD issues; and</li> <li>• Expand the involvement and commitment of teachers to stimulate discussion and public participation in introducing ESD activities through various activities.</li> </ul>



#### **4. Suggested Roles of Local Government and Education Units**

##### **a. Provincial Government**

In line with the policy issued by the central government, provincial governments are expected to follow up with implementation efforts in its administrative area of the province. Suggested roles of provincial government in implementing ESD are as follows:

- Issue local regulations or the so-called “Peraturan Daerah” that set a follow-up of national and provincial government policy concerning the implementation of ESD. The “Peraturan Daerah” is required because ESD has a cross sectors scope;
- Socialise ESD through various activities such as seminars, discussion forums, workshops, competitions, meetings, groups, associations, teacher-clusters (KKG, MGMP), principal-clusters (KKKS, MKKS), and various media interaction and communication appropriate in local areas and others.
- Develop monitoring and evaluation (M & E) system;
- Coordinate the activities of ESD cross-sectors and units of work involving the business and industrial sector, civil society, local communities, and the scientific community in the implementation of ESD in the region;
- Find out alternative solutions for problems associated with ESD using an integrated and systemic approach in formal, non-formal and informal education at all levels and types of education;
- Disseminate the contribution of ESD in all lines, levels and types of education to achieve quality education;
- Support the building of networks among educational institutions and teacher training as well as quality assurance of education institution; and
- Develop ESD strategies that can be run with larger class sizes and the evaluation of ESD learning processes ESD

##### **b. District/ City Governments**

Local governments with the right of autonomy have specific duties as stipulated in Law No. 32, 2004 article 14 paragraph (1). One of the duties is the provision of education. Education implementation at the local government district/city is conducted by the District/City Education Services. District/City Education Service is the element of the District/City government which has the task to organise the educational affairs of the authority of the government district/city.

Although districts and cities have a right to autonomy with greater authority in managing aspects of educational development territory, the execution of such authority is not independent from the policy that comes from government and provincial governments, including the implementation of ESD. Suggested Programs and activities that can be done by the district/ city government associated with the implementation of ESD are as follows:

- Implement ESD in the region consider its cross-sector scope needs to set forth in local legislation;
- Socialise ESD, through various activities such as seminars, discussion forums, workshops, competitions, meetings, groups, associations, teacher-clusters (KKG and MGMP), principal-clusters (KKKS and MKKS), and various media interaction and communication;
- Develop M & E system;
- Provide support to various types of school activities as well as
- Identify potential and development of the resources required for ESD implementation;
- Involve local industrial and business sector, civil society, local communities, and the scientific community through all levels and types of education in the formal, non-formal and informal education;
- Provide supervision and support for problems associated with ESD using an integrated and systemic approach at all levels and types of education in formal, non-formal and informal education.
- Develop ESD strategies that can be run with larger class sizes, and evaluate ESD learning processes.

### **c. Education Unit**

At each education unit, suggested programs are as follows:

- Develop the implementation of ESD learning programme that refers to government policy either through intra-curricular or extra-curricular;
- Implement ESD into active teaching-learning processes;
- Conduct evaluation; and
- Prepare reports.

## **5. Conclusion**

- a. To the fact that the implementation of ESD in Indonesia becomes critical especially in relation to teaching-learning process, it requires attention, commitment, participation of various stakeholders at the central and local levels including government and non-government organisations;
- b. To make ESD implementation in place, there should be clear roles of each related units within the Ministry of National Education as well as at the local level – provincial and district/city. With this respect, each related and responsible unit need to develop a short-term (annual), medium (five years), and long-term (twenty-five years) plan of actions where each shall be in coordinated in compliance with the decided basic tasks and function; and
- c. To assure the level of success and for its transparency as well as accountability there should be a mechanism system of monitoring and evaluation as well as reporting, which can be user friendly and easily accessed by the public.

## **References:**

- Kementerian Pendidikan Nasional. (2010). Rencana Strategis Kementerian Pendidikan Nasional 2010-2014. Jakarta: Kemdiknas.
- Puslitjaknov, Balitbang Kemdiknas. (2009). Laporan: Pembentukan Insan Cerdas Komprehensif dan Kompetitif. Jakarta: Puslitjaknov, Balitbang Kemdiknas.
- UNESCO. (2005). UN Decade of ESD (Education for Sustainable Development). In <http://www.unesco.org>

# **A PROPOSAL FOR THE DEVELOPMENT OF NATIONAL STRATEGY FOR ESD IN INDONESIA**

by:  
Hendarman, Ph.D.  
Head of the Center for Educational Policy Research and Innovation

Ministry of National Education  
Office of Research and Development  
Center for Educational Policy Research and Innovation  
Jakarta-Indonesia, 2010

## **INTRODUCTION**

- The period of 2005-2014 was set by Unesco as a Decade of Education for Sustainable Development / (DESD).
- One of the efforts can be done in this decade is through the reorientation of education that is more sustainable development oriented, supported by all stakeholders ranging from government, local governments, to education units.
- For it is necessary to develop national ESD strategy that is consistent with the Strategy and National Policy of Sustainable Development.

## **STRATEGY AND NATIONAL POLICY OF SUSTAINABLE DEVELOPMENT**

### **1. Vision and Mission of RPJPN 2005-2025**

- National Development Vision in the year 2005-2025 is: **Indonesia that is independent, advance, fair and prosperous.**
- The vision will be achieved through the eight national development missions, one of which is **to actualize sustainable development** by improving the management of development in order to maintain a balance between utilization, sustainability, and availability of natural resources and environment ..."

### **2. The Direction of the Second Medium Term Development (2010-2014)**

In order to achieve sustainable development, the management of natural resources and conservation of environmental functions is more developed by capacity building and increasing public awareness.

### **3. Strategies and Policy Direction of the Development of National Education (2010-2014)**

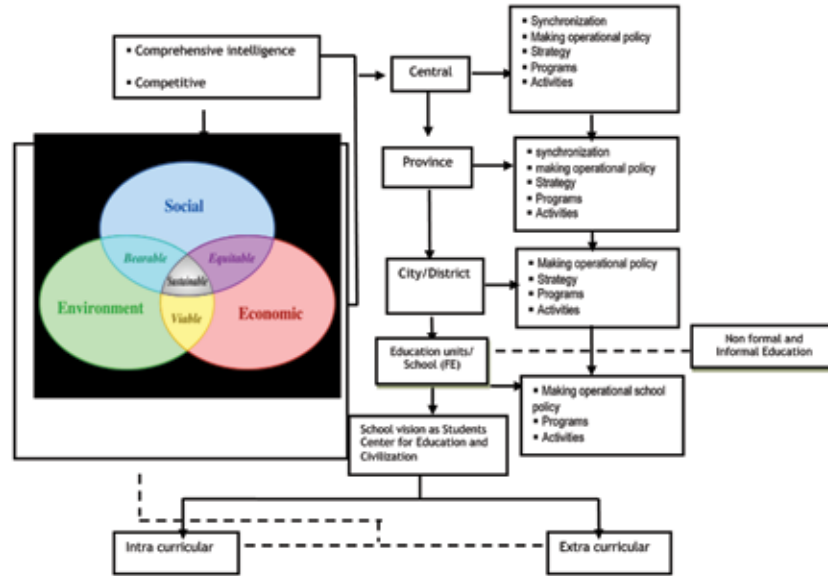
ESD is one of the three paradigms taken into account in efforts to improve education provision (MONE Strategic Plan, 2010).

## **CONSIDERATIONS IN THE PREPARATION OF THE NATIONAL STRATEGY FOR ESD**

- The international agreements related to ESD, such as Bonn Declaration of 2009
- The duties and functions of each stakeholder (government, local government, and education units)
- Socio-cultural characteristics and diversity of natural and human resources.

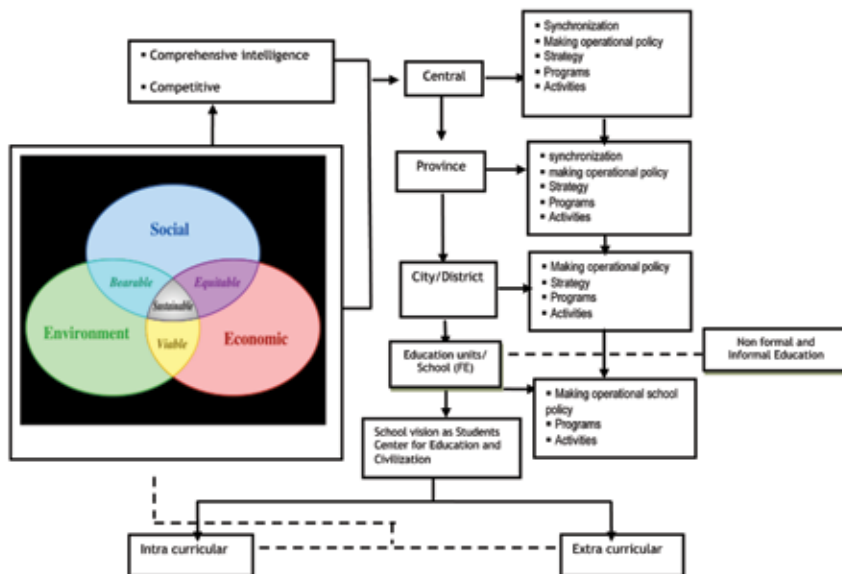
- Clarity of ESD policy at the central government as well as local government
- Funding provision both by central and local governments
- Availability of ESD materials that can be used as learning materials
- Training and socialization on the importance of ESD (what, why and how to implement it) to relevant parties.

# THE DESCRIPTION OF THE ESD NATIONAL STRATEGY IN INDONESIA



Model of Strategic Planning on ESD Implementation

# THE DESCRIPTION OF THE ESD NATIONAL STRATEGY IN INDONESIA



Model of Strategic Planning on ESD Implementation

## 2. Main Task and Functions

<b>Office of Research and Development (Balitbang) MONE</b>	
<b>Main Task and Functions</b>	<b>Policies, programs and / or activities of ESD (based on 2009 Bonn agreements)</b>
<p>Conducting research and development in education. In carrying out those tasks, it performs the functions in:</p> <ul style="list-style-type: none"> <li>• Policy research formulation and development of education;</li> <li>• preparation of plans and programs of research and development of education;</li> <li>• research and development of education;</li> <li>• coordination of research and development of education;</li> <li>• evaluation and preparation of reports; and</li> <li>• office administration. (Permendiknas No.40, 2006)</li> </ul>	<ul style="list-style-type: none"> <li>• Promote and discuss ESD policies with stakeholders.</li> <li>• Utilize research findings relevant to policy formulation, and development of M &amp; E strategy.</li> <li>• Develop policy proposals regarding (1) national strategy on ESD implementation, (2) M &amp; E strategy, (3) reorientation of the educational system that emphasizes lifelong learning, (4) improved the relationship between formal, non-formal, and informal education through ESD, ( 5) reorienting the education system and training of ESD.</li> <li>• Develop models of ESD implementation</li> <li>• Promote the results of research related to ESD, including those implemented through UNESCO programs.</li> <li>• Identify and provide support to research institutions in disseminating knowledge and resource development, and enhance the development of scientific excellence, research, and new knowledge for ESD through ESD research network involvement.</li> <li>• Developing national ESD indicators that can indicate progress and analysis of ESD achievement.</li> <li>• Develop ESD M &amp; E system at national and regional levels, and taking the initiative to develop strategies and implementation of ESD that can provide guidance for the UN in providing concrete conclusions.</li> <li>• Develop incentive structures to support research and development of ESD.</li> <li>• Implement the exchange of information on good practices in the implementation of ESD.</li> <li>• Coordinate the implementation of ESD at the main unit of the Ministry of Education and the related units outside the Ministry of Education, and accountable to the Minister of Education.</li> </ul>

<b>Directorate General of Primary and Secondary Education Management (Ditjen Mandikdasmen) - MONE</b>	
<b>Main Task and Functions</b>	<b>Policies, programs and / or activities of ESD (based on 2009 Bonn Declaration)</b>
<p>Formulate and implement policies and technical standardization in the field of primary and secondary education management. In carrying out this task Directorate General of Primary and Secondary Education Management (Mandikdasmen) function is:</p> <ul style="list-style-type: none"> <li>• Prepare ministry policies formulation in the field of primary and secondary education management;</li> <li>• implement policies in the management of primary and secondary education;</li> <li>• develop standards, norms, guidelines, criteria, and procedures for ESD in primary and secondary education management;</li> <li>• provide technical guidance and evaluation in the field of management of basic education;</li> <li>• carry out administrative affairs of the directorate-general. (Permendiknas No.14, 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the availability of preschool education and formal primary education for all children of school age as an important part in sustainable development (ESD).</li> <li>• Identify and provide support to schools that can be a center of expertise and innovation to develop and disseminate knowledge, as well as ESD resource development.</li> <li>• Establish institutional structure and organization of elementary and secondary education and kindergarten units which can facilitate the flexibility, learner participation, and multidisciplinary programs in the implementation of ESD.</li> <li>• Promote the contribution of ESD in the basic and secondary education, as well as kindergarten to achieve quality education.</li> <li>• Develop and expand partnerships within the frame-work of the integration of ESD into the implementation of basic and secondary education, and kindergarten by involving the role of the community.</li> <li>• Integrate the values of ESD in primary and secondary education, and kindergarten.</li> <li>• Support for reorientation of basic and secondary education, and kindergarten system for sustainable development.</li> </ul>

<b>Directorate General of Non formal and Informal Education(Ditjen PNFI)</b>	
<b>Main Task and Functions</b>	<b>Policies, programs and / or activities of ESD (based on 2009 Bonn agreements)</b>
<p>Ditjen PNFI has the task to formulate and implement policies and technical standardization in the field of non-formal and informal education. In performing these, Directorate General has Functions to:</p> <ul style="list-style-type: none"> <li>• Formulate ministry policies in the field of non-formal and informal education;</li> <li>• implement policies on non-formal and informal education;</li> <li>• develop standards, norms, guidelines, criteria, and procedures on non-formal and informal education;</li> <li>• provide technical guidance and evaluation in the field of non-formal and informal education;</li> <li>• carry out administrative affairs of the directorate-general. (Permendiknas No. 28, 2007).</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the availability of non formal and informal pre-school, primary and secondary education for all school age children and literacy education for all adults as an important part in sustainable development.</li> <li>• Identify and provide support for non-formal educational institutions and informal education that can be a center of expertise and innovation to develop and disseminate knowledge, as well as ESD resource development.</li> <li>• Establish the institutional structure and organization of non-formal and informal education, and training that can facilitate the flexibility, learner participation, and multidisciplinary programs in the implementation of ESD.</li> <li>• Promote the contribution of ESD in non-formal and informal education to achieve quality education</li> <li>• Support the achievement of ESD agenda at the national level through non-formal and informal education.</li> <li>• Making operational ESD policy through non-formal and informal education in coordination with other related agencies and involving business institutions and industries, local communities, as well as relevant experts.</li> <li>• Develop and expand partnerships within the framework of the integration of ESD into the implementation of non-formal and informal education by involving the role of the community.</li> <li>• Integrate the values of ESD in non-formal and in-formal education.</li> <li>• Support the reorientation of non-formal and informal education system, early childhood education, and training dedicated to sustainable development, particularly through the integration of ESD.</li> </ul>

<b>Directorate General of Higher Education (Ditjen Dikti)</b>	
<b>Main Task and Functions</b>	<b>Policies, programs and / or activities of ESD (based on 2009 Bonn agreements)</b>
<p>Formulate and implement policies and technical standardization in the field of higher education. In carrying out this task Ditjen Dikti has the functions to:</p> <ul style="list-style-type: none"> <li>•Prepare ministry policies formulation in higher education;</li> <li>•implement policies in higher education including preparation of standards, norms, guidelines, criteria and procedures in the field of higher education;</li> <li>•maintaining and developing the higher education based on the development of science, technology and art.;</li> <li>•provide technical guidance and evaluation in higher education;</li> <li>•carry out administrative affairs of the directorate-general. (Permendiknas No. 15, 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying and providing support to higher education institutions, research institutes, and education centers and networks that can be a center of expertise and innovation in disseminating knowledge, as well as ESD resource development.</li> <li>• Establish institutional and organizational structure that facilitates flexibility, learner participation, and multi-disciplinary programs in the implementation of ESD.</li> <li>• Promote the contribution of ESD in higher education to achieve quality education, with special attention to foster the relationship between ESD and EFA in a coherent and systematic approach.</li> <li>• Support the achievement of ESD agenda at the national level through higher education</li> <li>• Develop and expand partnerships within the framework of the integration of ESD into the implementation of higher education by involving civil society, public and private sectors, nongovernmental organizations, and other partners.</li> <li>• Encourage and enhance the development of scientific excellence, research, and new knowledge for ESD through the involvement of higher education and research networks on ESD.</li> <li>• Mobilize the core functions of universities (teaching, research, and community service) to strengthen the global knowledge and local wisdom about ESD, the utilization of leadership and a network of UNESCO programs in ESD.</li> <li>• Supports LPTKs to build a network of research and development regarding the implementation of learning activities within the framework of ESD.</li> <li>• Develop incentive structures to support research and development of ESD in higher education.</li> <li>• Integrate the values of ESD in higher education.</li> <li>• Support the reorientation of higher education systems that intended for sustainable development, particularly through the integration of ESD.</li> <li>• Support the reorientation of teacher education curricula and programs to integrate ESD into the pre-job education.</li> <li>• Increased sense of belonging among students about ESD issues.</li> <li>• Expanding the involvement and commitment of the community in stimulating discussion and community participation in introducing ESD activities.</li> </ul>



**Directorate General of Quality Improvement of Educators and Education Personnel  
(Ditjen PMPTK) - MONE**

Main Task and Functions	Kebijakan, program dan/atau kegiatan ESD (sesuai kesepakatan Bonn 2009)
<p>Formulate and implement policies and technical standardization in the field of improving the quality of teachers and early childhood education, elementary education, secondary education, and non-formal education. In carrying out this task DG of PMPTK organize its function to:</p> <ul style="list-style-type: none"> <li>• Prepare ministry policies formulation in the field of quality improvement of educators and educational personnel;</li> <li>• Implement policies on quality improvement of educators and education personnel;</li> <li>• Develop standards, norms, guidelines, criteria, and procedures on quality improvement of educators and education personnel;</li> <li>• Provide technical guidance and evaluation in quality improvement of educators and education personnel;</li> <li>• Carrying out administrative affairs of the directorate-general. (Permendiknas No. 8, 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Support the teachers and principals to carry out research and development on ESD, including support to teacher training institutions and quality assurance of education institution.</li> <li>• Make special efforts to support teachers in developing ESD learning strategies and evaluating the learning process.</li> <li>• Identifying and providing support to teacher training and quality assurance of education institutions which can be a center of expertise and innovation in developing and disseminating ESD knowledge, as well as ESD resource development.</li> <li>• Support educators and educational personnel in promoting ESD in all lines, types, and levels of education to achieve quality education.</li> <li>• Support the achievement of ESD agenda at the national level through teacher training.</li> <li>• Support educators and education personnel in the making of operational ESD policies in the educational unit that coordinates with other related agencies and involving business institution and industry, local communities, and relevant experts.</li> <li>• Support educators and educational personnel in improving understanding and awareness on sustainable development and ESD, prioritizing the expansion of learning and insight of ESD during the first 5 years which then applied to the policies and programs on public awareness and various forms of informal learning. These include increasing the role and contribution of mass media to foster public awareness and understanding about issues of sustainability and capacity building of professional media.</li> <li>• Develop and expand partnerships within the framework of the integration of ESD into the implementation of teacher training by involving civil society, public and private sectors, nongovernmental organizations, and other partners.</li> <li>• Integrate the values of ESD in teacher training and quality assurance of education.</li> <li>• Support the reorientation of teacher training system that intended for sustainable development particularly through the integration of ESD, including the reorientation of curricula and training programs.</li> <li>• Increased sense of ownership among teachers about ESD issues.</li> <li>• Expand the involvement and commitment of teachers to stimulate discussion and public participation in introducing ESD activities through various activities.</li> </ul>

**b. Provincial Government**

- Issuing local regulations (Perda) based on national government policy concerning the implementation of ESD in the scope of the administrative area of the province.
- Socializing ESD through various activities such as seminars, discussion forums, workshops, competitions, meetings, groups, associations, and various media interaction and communication appropriate in local areas, and others.
- Developing monitoring system for implementation of ESD in the working area of the provincial government.
- Coordinating the activities of ESD cross sectors and units of work involving business and industrial sector, civil society, local communities, and the scientific community in the implementation of ESD in the region.
- Resolving problems associated with ESD using an integrated and systemic approach in formal, non-formal, and informal education at all levels and types of education.
- Disseminating the contribution of ESD in all lines, level and type of education to achieve quality education.
- Supporting educational institutions and teacher training as well as quality assurance of education institution to build a network.
- Developing ESD strategies that can be run with larger class sizes, and the evaluation of ESD learning processes ESD.

### **c. District/ City Governments**

- Implementation of the follow up of government policies concerning the implementation of ESD in the region consider its cross-sector scope needs to set forth in local legislation.
- Socialization of ESD, through various activities such as seminars, discussion forums, workshops, competitions, meetings, groups, associations, and various media interaction and communication specifically appropriate in the relevant areas.
- System development and monitoring towards implementation of ESD in the working area of the district/ city.
- Identification and provision of support to various types of school activities as well as identification of potential and development of the resources required for implementation of ESD.
- Implementation of cross working sector/ unit coordination involve local industrial and business sector, civil society, local communities, and the scientific community in the implementation of ESD through all levels and types of education in the formal, non-formal and informal education at the district / city.
- Provision of support for solving problems associated with ESD using an integrated and systemic approach at all levels and types of education in formal, non-formal, and informal education.
- Socialization of the ESD to all level of education and to achieve quality education.
- Developments of ESD strategies that can be run with larger class size, and evaluate ESD learning process.

### **d. Units implementing formal and non formal education (ie. School)**

- the policy of central government, provincial, and district regarding the implementation of ESD in the scope of the relevant district/city administrative area.
- Developing programs on the implementation of ESD at the school level through that refers to government policy either through intra curricular or extracurricular.
- Conducting learning process
- Conducting evaluation
- Report writing

# CONCLUSION

The implementation of ESD requires attention, commitment, participation of various parties as follows.

- Based on the duties, functions and authority, each major unit within the Ministry of National Education and relevant offices / agencies at the local level need to plan a short-term action (annual), medium (five years), and long-term (twenty-five years) which are coordinated between the central and local levels, manage the implementation of activities in accordance with basic tasks and function, carry out monitoring and evaluation, and provide the necessary budget.
- In order to know the level of success as well as barriers, and develop options and ways to overcome the problems, and as the realization of public accountability, it is necessary to implement monitoring, evaluation, and reporting systematically from the education unit level, local government, to the central government level.



**SESSION 2**

ESD CURRICULUM DEVELOPMENT  
AND NATIONAL ESD ACTIVITIES

## *Session* **SUMMARY 2**

---

**Chairman** : Prof. Amor Quinto de Torres, Dean of College of Education, and President of the Philippine Association for Teacher Education

- **National ESD curriculum development linked with school activities and ESD network: *What are the critical factors in good practices of national ESD school activities?***  
Presented by: Mr. Ilyas Asaad, Deputy Minister for Environmental Communication and Public Participation, Ministry of Environment of Republic of Indonesia
- **National ESD curriculum development centred on contents reflecting national/indigenous education and environmental needs: *What do we need to reflect on an ESD national guideline development in consideration of national/indigenous education/environmental needs***  
Presented by: Assoc. Prof. Masahisa Sato, Tokyo City University, Japan

Mr. Ilyas Asaad explained that Indonesia is working towards sustainable development. He highlighted the history, achievements and challenges of the *ADIWIYATA* Award which was launched in 2006 in Indonesia. The selection mechanism for the *ADIWIYATA* Award programme is through general paper and field evaluation. This programme focuses on schools with environmental education programmes. He also reported that Indonesia has a new law on Environmental Protection and Management which environmental education is underlined in Article 32 of this law. There has been a difficulty in implementing ESD in Indonesia as it needs to negotiate through integrated institutional arrangements and a lack in human resources.

Prof. Masahisa Sato is from the Faculty of Environmental and Information Studies at Tokyo City University, Japan. Prof. Sato informed the participants that the key concepts of ESD have changed. ESD encompasses two types of diversity: biodiversity and cultural diversity. The teachers have developed their own concept and programmes in this particular field. The teachers need to link subject and content and also local and global contexts. It is important to develop the content of ESD teaching as it does not exist. In Japan, there is no EE subject. ESD is not an addition but an implication and a constant message of sustainability into the current curriculum. He further underlined that it is important to address ESD research in order to implement ESD in schools.

# Towards Sustainable Indonesia Development

**Mr. Ilyas Asaad**

Deputy Minister for Environmental Communication and Community Empowerment  
Ministry of Environment of Republic of Indonesia

Sustainable development has been high on the political agenda since the 1992 Earth Summit. A vital measure for promoting sustainable development is in developing the capacity of all stakeholders through education.

## **What is Education for Sustainable Development?**

Education for Sustainable Development (ESD) is a concept that goes far beyond environmental education. ESD is the educational process of achieving human development (“the three pillars of human development” proposed by UNDP: economic growth, social development, and environmental protection) in an inclusive, equitable and secure system. It includes education for poverty alleviation, human rights, gender equality, cultural diversity, international understanding, peace and many more.

## **Indonesia: Programs and Activities (2006-2010)**

Some of the ESD programs and activities in Indonesia between the years 2006 to 2010 include: a 2006 study of ESD in Indonesia in collaboration with University of Indonesia funded by UNEP; seminar of Education for Sustainable Development (ESD) Strategy in Indonesia; dissemination and socializing of ESD Strategy to five region (Sumatera, Sumapapua, Bali and Nusa Tenggara, Java, Kalimantan); conducting training on ESD for all stakeholders, development of National ESD Program; conducting Workshops on ESD Programmes for all stakeholders; conducting Training of Trainers on Environmental Education (EE) for teachers (33 provinces) in accordance with the levels of education (kindergarten, elementary, junior & senior high schools including vocational school); conducting Training of Trainers on EE for training facilitators (non-formal / informal); developing education and campaign materials (books/modules, posters, documentary film, slides, etc) on EE in accordance with levels of education (formal) and for non-formal/informal EE; establishing guidance on various methods of EE (formal, non-formal/informal); and enhancing EE for ESD through the ADIWiyata Program.

The Law number 32 in year 2009 regarding Environmental Protection and Management include the right (Article 65) which stated clean and Health Environment as part of Human Right, Environmental Education, Information Access, and Justice. The Obligation (Article 67) stated the obligation to manage the environment and to control environmental pollution and degradation

## **The Development of EE Policy**

- 1983-1984 : EE development through formal and non-formal, the policy is signed by the minister of Education, Environment, Religion, and Internal affair
- 1996 : MOU between Ministries of Education and Ministry of the Environment about EE Development
- 2004 : National policy on environmental education
- 2005 : MOU between Ministries of National Education and Ministry of the Environment about EE Development
- 2006 : Environmental Education for formal education program → ADIWiyata  
Prepared EE material for formal education  
Implemented Informal education for community
- 2006: Development draft Strategy for Indonesia DESD 2006 - 2014
- Since 2007 : Every year conducting national workshop for ESD

## **ADIWIYATA Program**

The word ADIWIYATA originated from Sanskrit Language. 'Adi' means great, good, holy, ideal, perfect. 'Wiyata' is a place where somebody is able to obtain good knowledge, norm and ethics in his/her social life. So put-together, the word 'ADIWIYATA' means a good and ideal place for someone to obtain good knowledge, 'norm', and ethics as the platform or base for human beings to achieve progress towards sustainable development.

The goal of ADIWIYATA programme is to create good and conducive conditions for schools to be a place for learning and awareness process of school community (teachers, students, and other workers), to enable them to participate and be responsible in managing and protecting the environment to achieve sustainable development.

The basic principles of the ADIWIYATA program are two-fold:

- Participatory: school community engagement in integrated school management covers the entire process of planning, implementation and evaluation of appropriate responsibilities and roles;
- Sustainable: all activities must be done in a planned and a comprehensive manner.

The indicators for the programme include: a) development of school policy that environmental perspective: philosophy, vision and mission of an environmental sound school; policy on the development of environmental education materials; policy on Human resource development; policy on natural resources saving; policy on fund allocation for environmental activities; and other policies that support the development of the environmentally sound school;

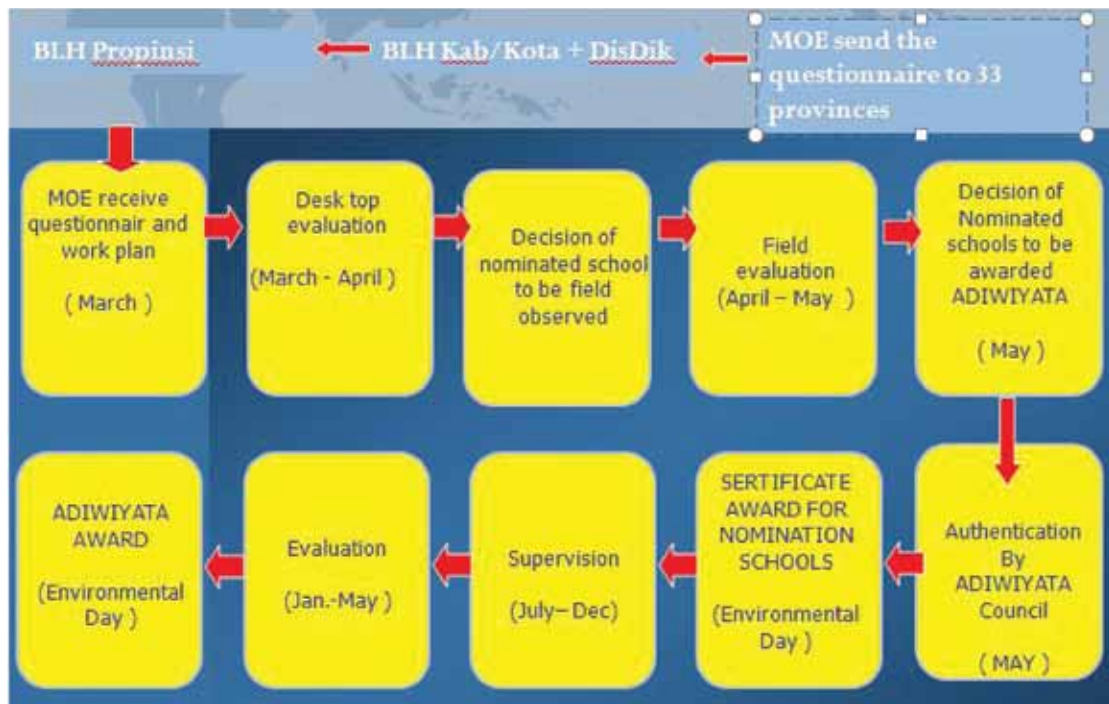
b) development of environment-based curriculum: development of an environment learning model (integrated/monolithic); development of environment content and problems that cause local and global issues; development of intra curricular activities regarding the environment; development of a learning method;

c) development of participatory-based activities: to create intra and extra-curricular activities that support the development of EE; participating in environment activities held by other parties; to develop partnership activities (government, private, NGO) in supporting the enhancement of EE.

d) development and management of environmentally sound school facilities: improvement in the quality of existing school infrastructure for EE; improvement of environmental management quality in the surrounding school area, include sanitation facilities and a canteen; development of saving programme in energy, water, stationary and school supplies; development of waste treatment system; development of school herb garden.

The mechanism of the ADIWIYATA Award includes several stages. Stage 1 which is a desk-evaluation and document review stage: reviewing the questionnaires that describe existing conditions based on 4 indicators. The weights of the indicators are respectively 40%-30%-20%-10% each; Stage 2 is a field evaluation stage: observation and depth interview with school community in related to the 4 indicators; Stage 3 is the final evaluation with the sum of document review field evaluation valued.

The following chart shows the selection mechanism of the ADIWIYATA Program.



### Problems of EESD Implementation

Some of the problems faced in the implementation of EESD include: minimum public participation, limited understanding and lack of commitment, the material and the method for the implementation so far have been considered inadequate, the material method is not applicable in the respective region, limited facilities and infrastructure, the lack of available budget, poor inter agencies coordination to develop EE, and the absence of Regional and Local Government policy.

### Way Forward

There are several ways proposed in moving forward the ESD agenda, including improving institutional arrangements, human resources, management and community infrastructures.

1. Institutional Arrangement: enhance institutional coordination; increase government budget for environmental education; increase monitoring and evaluation
2. Human Resources: develop capacity building for EE teachers and facilitators; develop capacity building for TOT trainers; increase access for teachers and facilitators to participate actively in environment organizations
3. Infrastructures aspects: develop EE modules, materials, books, posters and other audio visual aids; facilitate the development of EE centers in every region; develop EE Data Base and Information System
4. Management aspect: develop EE information and communication centers at region; conduct capacity building for EE management; upgrade working networks among EE stakeholders; develop EE communication media for trainer and training administrators; persuade Business Sectors to support implementation of EE
5. Community: change behavior and consumption pattern in the pilot community (e.g; start to give attention on: composition & package of product, waste sorting instead of burning it, 'litterbug' habits, medical herbs, etc); increase knowledge on: day to day-used chemical or hazardous waste, impact of environment damage or pollution to their health, etc; increase common understanding that environment issues focus not only on big issues, global problems, etc but also about our neighborhood and that environment education is not only about biological science or conservation but also moral attitudes (behavior pattern) towards the environment



## **Strategic Plan for Implementation of DESD Indonesia (2005-2014)**

### **Phase 1: Start Up (2006)**

- Identification of ESD problems and announcing of Indonesia readiness
- Made DESDI concept, priority decision and strategic plan for institutional building
- Arrange Promotion/Publication Kit and Launching ESD Nasional – DESDI(Indonesia)
- Plan prototype program of ESD (existing and new) and piloting project

### **Phase 2: Post Launch and Partnership (2007 – 2008)**

- Monitor and Evaluation prototype programme
- Publication, Initial movement of National ESD and Campaign of ESD Image
- Formulate collaborative programmes based on the stakeholders needs
- Develop a realistic prototype program and duplicate for local community through collaborative action

### **Phase 3: Success Story and Innovation (2009 – 2010)**

- Create a success story
- Develop Innovation program / ESD product based on local wisdom: Concept, Approach, method, technical aspect, education infrastructure, etc
- Publication and Campaign Programme of ESD: testimonial approach (success stories)

### **Phase 4: Good to Great (2011 – 2013)**

- Adding Material Availability / Modules of ESD
- Enhance Organisation Capacity and Programme for Legislative
- Leadership enhancement, Super leaderships Development at local level (Local Champion)
- Strengthen Local Capacity
- Develop community discipline through discipline action
- Publication and Campaign: “ESDI in Progress”

### **Phase 5: Indonesia: The New Achievers in Sustainable Development Country (2014)**

- Make documentary Film “The Indonesian Way in Achieving SD’s State”
- Promotion/ Intensive publication / campaign (ATL/ BTL; off-air /on-air): “We (Indonesians) are Ready”
- Enhance ESDI Networks, ESDI reposition ESD of Indonesia as Framework Base
- National Movement on ESD

# *TOWARDS SUSTAINABLE INDONESIA DEVELOPMENT*

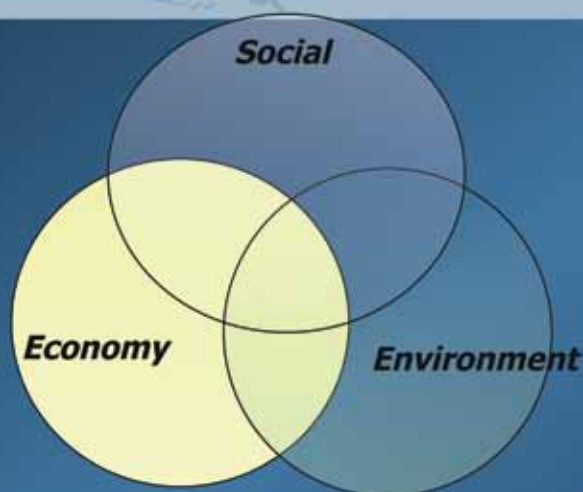


**Ilyas Asaad**  
Deputy Minister for  
Environmental Communication and Community Empowerment

**REORIENTING TEACHER EDUCATION TO ADDRESS SUSTAINABILITY**  
Atlet Century Hotel, Jakarta 8 December 2010

Ministry of Environment, Republic of Indonesia

# **SUSTAINABLE DEVELOPMENT**



## SUSTAINABLE DEVELOPMENT

- Sustainable development has been high on the political agenda since the 1992 Earth Summit.
- A vital measure for promoting sustainable development is developing the capacity of all stakeholders through **education**.

## What is Education for Sustainable Development?

Education for Sustainable Development (ESD) is **a concept that goes far beyond environmental education**.

ESD is the educational process of achieving human development ("the three pillars of human development" proposed by [UNDP](#): economic growth, social development, and environmental protection) in an inclusive, equitable and secure manner. It thus includes education for poverty alleviation, human rights, gender equality, cultural diversity, international understanding, peace and many more.

# ESD Issues

*(As a Reference for Each Country Basic Strategy)*



1. Information and Communication Awareness
2. Knowledge/Science
3. Environmental Conservation and Protection
4. Intercultural Understanding and Peace
5. Local Content Context
6. Public and Rural Transformation
7. Cultural Diversity
8. Cross Cutting Issues: Human Right, Gender, etc
9. Health Promotion
10. Environmental Education
11. Leadership Involvement

## *Programs & Activities (2006-2010)*

1. Study of ESD in Indonesia in collaboration with University of Indonesia funded by UNEP (2006)
2. Seminar of Education for Sustainable Development (ESD) Strategy in Indonesia
3. Dissemination and socializing an ESD Strategy to five region (Sumatera, Sumapapua, Bali and Nusa Tenggara, Java, Kalimantan);
4. Conducting Training on ESD for all stakeholders
5. Development of National ESD Program. Conducting Workshops on ESD Program for all stakeholders;
6. Conducting Training of Trainers on EE for teachers (33 provinces) in accordance with level of education (kindergarten, elementary, junior & senior high schools including vocational school);

## *Programs & Activities (2006-2010)*

6. Conducting Training of Trainers on EE for training facilitators (non-formal / informal);
7. Developing education and campaign materials (books/modules, posters, documentary film, slides, etc) on EE in accordance with levels of education (formal) and for non-formal/informal EE;
8. Establishing guidance on various methods of EE (formal, non-formal/informal);
9. Enhancing EE for ESD → **ADIWIYATA Program**, Etc

## *LAW no 32 year 2009 regarding Environmental Protection and Management*

### **RIGHT (Article 65) :**

- Clean and Health Environment as part of Human Right
- Environmental Education, Information Access, Justice

### **OBLIGATION (Article 67) :**

- Obligation to manage the environment and to control environmental pollution and degradation

## The Development of EE Policy

- 1983-1984: EE development through formal and non-formal, the policy is signed by the minister of Education, Environment, Religion, and Internal affair
- 1996: MOU between Ministries of Education and Ministry of the Environment about EE Development
- 2004 : National policy on environmental education
- 2005: MOU between Ministries of Nasional Education and Ministry of the Environment about EE Development
- 2006 : Environmental Education for formal education program → ADIWIYATA
  - ✦ Prepared EE material for formal education
  - ✦ Implemented Informal education for community
- 2006 : Development draft Strategy for Indonesia DESD 2006 - 2014
- Since 2007 : every year conducting national workshop for ESD

## ADIWIYATA

**Originated from Sanskrit Language, the understanding of ADIWIYATA is as follow :**

• **ADI** : great, good, holy, ideal, perfect  
• **WIYATA** : a place where somebody is able to obtain good knowledge, norm & ethics in his/her social life.

• **ADIWIYATA: a good/ideal place to obtain a** place where somebody is able to obtain good knowledge, norm & ethics as the platform/base of human being to achieve welfare towards sustainable development

10

# ADIWIYATA

## Goal :



To create good and conducive conditions for school to be a place for learning & awareness process of school community (teachers, students & other workers), to enable them to participate and responsible in managing and protecting the environment to achieve sustainable development.



11

# ADIWIYATA



## Basic Principles:



### Participatory

- School community engaged in integrated school management covers the entire process of planning, implementation & evaluation of appropriate responsibilities & roles.

### Sustainable

- All activities must be done in a planned & a comprehensive continuing.

12

# ADIWIYATA



## Indicators

1. Development of school policy that environmental perspective
2. Development of Environment-based curriculum
3. Development of participatory-based activities
4. Development and management of environmentally sound school facilities

13

## 1 *Development of environmental policy in school*

- Philosophy, vision and mission of environmental sound school
- Policy on the development of environmental education materials
- Policy on Human resource development
- Policy on natural resources saving
- Policy on fund allocation for environmental activities
- Other policies that support the development of environment sound school



## 2

### *Development of Environment-based curriculum*

- Development of environment learning model (integrated/monolithic)
- Development of environment content and problems that exist in local issue as well as in global issue
- Development of intra curricular activities in environment
- Development of learning method

## 3

### *Development of participatory-based activities*

- To create intra and extra curricular activities that support the development of EE
- Participating in environment activities held by other parties
- To develop partnership activities (government, private, NGO) in supporting the enhancement of EE

# 4

## *Development and management of environmentally sound school facilities*

- ✦ Improvement the quality of existing school infrastructure for EE
- ✦ Improvement of environmental management quality in surrounding school area, include sanitation facility and canteen.
- ✦ Development of saving program in energy, water, stationary and school supplies
- ✦ Development of waste treatment system
- ✦ Development of school herb garden dll


## *Mechanism of ADIWiyATA Award*

- ✦ Stage 1:
  - ✦ Desk-evaluation/document review
    - Reviewing the questionnaires that describe existing condition based on 4 indicators. The weight of each indicators are 40%-30%-20%-10%
- ✦ Stage 2:
  - ✦ Field Evaluation
    - Observation and depth interview with school community in related to the 4 indicators
- ✦ Stage 3:
  - ✦ Final evaluation is the sum of document review value and field evaluation value

# Selection Mechanism



## Progress of ADIWIYATA PROGRAM 2006-2010

	Tahun 2006	Tahun 2007	Tahun 2008	Tahun 2009	Tahun 2010
	P. Jawa (5 prop)	Nasional (17prop)	Nasional (24 prop)	Nasional (29 prop)	Nasional (31 prop)
<b>Schools Participation</b>	156	146 (301)	248 (549)	254 (803)	276 (1079)
<b>Award</b>					
> School Model	10				
> Prospective		30	30	40	37
> ADIWIYATA		10*	40	60	67
> Adiwiyata Mandiri				10	35



## *Sharing of information*



## *Field visit to observe nature*





## Action



## Action





## *Problems of EESD Implementation*

1. Minimum public participation
2. Limited understanding & lack of commitment.
3. The material & the method for the implementation so far have been considered inadequate.
4. The material & the method are not applicable in the respective region.
5. Limited Facilities & infrastructure.
6. The lack of available budget.
7. Poor inter agencies coordination to develop EE.
8. The absence of Regional and Local Government policy.



## *Way Forward*

### ● **Institutional Arrangement**

1. Enhance institutional coordination
2. Increase government budget for environmental education
3. Increase monitoring and evaluation

### ● **Human Resources**

1. Develop capacity building for EE teachers and facilitators
2. Develop capacity building for TOT trainers
3. Increase access for teachers and facilitators to participate actively in environment organizations

### ● **Infrastructures aspects**

1. Develop EE modules, materials, books, posters and other audio visual aids
2. Facilitate the development of EE centers in every region
3. Develop EE Data Base and Information System

### ● **Management aspect**

1. Develop EE information and communication centers at region
2. Conduct capacity building for EE management
3. Upgrade working networks among EE stakeholders
4. Develop EE communication media for trainer and training administrator
5. Persuade Business Sectors to support implementation of EE



## Way Forward

### • **Community**

- Change behavior and consumption pattern in the pilot community (e.g; start to give attention on: composition & package of product, waste sorting instead of burning it, litterbug habit, medicine herb, etc)
- Increase knowledge on: day to day-used chemical or hazardous waste, impact of environment damage or pollution to their health, etc
- Increase common understanding that environment issues focused not only on big issues, global problems, etc but also about our neighborhood and that environment education is not only about biological science or conservation but also moral attitude (behavior pattern) towards environment



## Strategic Plan for Implementation of DESD INDONESIA (2006 - 2014)

### **Phase 1: Start Up (2006)**

- Identification of ESD problems and announcing of Indonesia readiness
  - Made DESDI concept, priority decision and strategic plan for institutional building
  - Arrange Promotion/Publication Kit and Launching ESD Nasional – DESDI(Indonesia)
- Plan prototype program of ESD (existing and new) and piloting project

### **Phase 2: Post Launch and Partnership (2007 – 2008)**

- Monitor and Evaluation prototype program
- Publication, Initial movement of National ESD and Campaign of ESD Image
  - Formulate collaborative program based on stakeholder need
  - Develop a realistic prototype program and duplicate for local community through collaborative action



## **Strategic Plan for Implementation of DESD INDONESIA (2006 - 2014)**

### **Phase 3: Success Story and Inovation (2009 – 2010)**

Create a success story

Develop Inovation program / ESD product based on local wisdom: Concept, Approach, method, technical aspect, education infrastructure, etc

Publication and Campaign Program of ESD: testimonial approach (success story)

### **Phase 4: Good to Great (2011 – 2013)**

- Adding Material Availability / Modules of ESD
- Enhance Organization Capacity and Program for Legislative
- Leadership enhancement, Super leaderships Development at local (Local Champion)
  - Strengthen Local Capacity
- Develop community discipline → discipline thought → discipline action
  - Publication and Campaign: "ESDI in Progress"



## **Strategic Plan for Implementation of DESD INDONESIA (2006 - 2014)**

### **Phase 5: Indonesia: The New Achievers for Sustainable Development Country (2014)**

Make documentary Film "The Indonesian Way in Achieving SD's State"

Promotion/ Intensive publication / campaign (ATL/ BTL; off-air /on-air): "We (Indonesian) are Ready"

Enhance ESDI Networks, ESDI reposition ESD of Indonesia as Framework Base  
National Movement on ESD





**THANK YOU**

Jakarta, December 8, 2010

# Development of Framework for National ESD Curriculum centered on contents reflecting national/indigenous education and environmental needs: What do we need to reflect on an ESD national guideline development in consideration of national/indigenous education/environmental needs?

Associate Professor Masahisa Sato, Ph.D.,<sup>\*3</sup> and Masakazu Goto, Ph.D.<sup>\*\*4</sup> \*,  
Tokyo City University, \*\*National Institute for Education Policy Research, NIER, Japan

## 1. INTRODUCTION

In December 2002, the United Nations General Assembly (UNGA) adopted resolution 57/254 to put in place a United Nations Decade of “**Education for Sustainable Development (DESD, 2005-2014)**”. UNESCO was requested as a lead agency for the implementation of the Decade, and developed an **International Implementation Scheme (DESD-IIS)** for the Decade(UNESCO, 2005)<sup>5</sup>. According to the DESD-IIS, the goal of the Decade is to integrate the principles, values and practices of sustainable development into all aspects of education and learning. Furthermore, it is stated that the educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations. ESD is regarded as more value oriented, respecting change of lifestyles, and collective action for positive social transformation.

Pursuit to this resolution, each government has developed related materials, such as National Implementation Strategies, National Action Plans and Evaluation Schemes, for the implementation of ESD at national level. However, still few countries have developed the Guiding Principle in Formal Education, Framework & Guidelines for Curriculum Development for ESD, in spite of the fact that formal education is recognised as one of leading areas for the promotion of ESD. This paper describes some points to be considered for the development of framework of ESD related curriculum, with consideration of educational / environmental needs. And the Japanese case is introduced how the educational / environmental needs were reflected to the development of framework in “**Teacher’s Guide for Environmental Education**”, and “**ESD Policy Research in Formal Education**”. Further, the authors introduce ten perspectives of ESD, based on review of ESD related documents and discussion in formal education of some countries.

## 2. JAPANESE EFFORTS FOR INCORPORATING “ESD” VIEWS INTO SCHOOL ACTIVITIES

### 2-1. Japan’s Action Plan for DESD

Pursuit to this resolution of DESD, in December 2005, Japanese government established the Inter-ministerial Liaison Meeting for the DESD in the cabinet to strive for close coordination among related institutions. In March 2006, “Japan’s Action Plan for the DESD” was published by the Inter-ministerial Meeting for the DESD, and emphasised the important roles of formal education (Inter-ministerial Meeting for the DESD, 2006)<sup>6</sup>. In the Action Plan, it is stated on the importance of educational curriculum development as follows (Table 1).

<sup>3</sup> Ph.D., Associate Professor, Faculty of Environment and Information Studies, Tokyo City University, 3-3-1, Ushikubo-Nishi, Tsuzuki-Ku, Yokohama, 224-0015, JAPAN. e-mail: m-sato@tcu.ac.jp

<sup>4</sup> Ph.D., Senior Researcher, Department for Curriculum Research, Curriculum Research Center, National Institute for Educational Policy Research, NIER

<sup>5</sup> UNESCO, 2005, United Nations Decade of ESD (2005-14) International Implementation Scheme. Paris: UNESCO.

<sup>6</sup> Inter-ministerial Meeting for the “United Nations Decade of Education for Sustainable Development”, 2006, Japan’s Action Plan for the “United Nations Decade of Education for Sustainable Development” Inter-ministerial Meeting on the “United Nations Decade of Education for Sustainable Development”, Japan.

**Table 1: The Statement on Education Curriculum in Japan's Action Plan for DESD (2006)**

- Issues that are subject to ESD, including environment and development education, peace and human rights, have been taught in school curriculums as social studies, science, technical arts and home economics, or in the period of comprehensive study as well as at social educational facilities and in community activities. Moreover, leaders providing education about the environment, international understanding, human rights, consumers, careers, and nutrition at school, social educational facilities, and in NPO activities and corporate training are equipped with skills to provide education in each field. ESD, however, requires not only these individual programs but also must handle them in a comprehensive way by connecting the diverse fields. This requires people with professional knowledge about each field to mutually study and understand each other's field, and collaborate with each other.
- It will become important for students to study ESD in curriculums or in the period of comprehensive study through the entire school educational system from primary schools to junior high and high schools. During the period of integrated study, students will be able to deepen their understanding of ESD by checking what they learned in each subject, putting together their thoughts, and presenting them in class. Through these lessons, they must acquire a mindset to participate in community building. Social education and regional activities could also be developed into ESD by being interlocked and involved with individual issues as well as other fields. In promoting ESD, it is important that ESD, while being based on programs for various issues and not limited to individual fields, is treated both in an interdisciplinary and comprehensive manner from the each aspect of the environment, economy and society. With a falling birthrate and aging population, we are about to enter an era of declining population, that is, a shrinking workforce. Against this background, many foreign nationals have been entering our country. To maintain our dynamic society, it has become necessary that these foreign nationals participate in our society. For this reason, we need to provide them with Japanese-language courses.

Inter-ministerial Meeting for the DESD, 2006

## **2-2. Environmental Needs for Sustainability, Enactment of "Law for Enhancing Motivation on Environmental Conservation and Promoting of Environmental Education"**

In order to resolve current environmental problems, such as climate change, waste disposal, loss of biodiversity, and the shrinking of the immediate natural environment, and to create a sustainable society, citizens, businesses, and private-sector organisations as well as the government must actively engage in environmental conservation activities. To respond to the environmental needs and for creating sustainable society, the **Law for Enhancing Motivation on Environmental Conservation and Promoting Environmental Education** (in short, the Environmental Conservation and Education Law, *Kankyō Kyōiku Suishin Hō*), was enacted in July 2003 as a legislation proposed by law makers in order to lay foundations for the creation of a sustainable society. This law, the principal objectives of which are to promote environmental education and motivate each and every citizen to play a part in environmental conservation, sets forth the respective duties and responsibilities of the government, local governments, business, citizens and private-sector organisations. Since the enactment of this law and the establishment of basic government policy in accordance with it, inter-ministerial coordination has been promoted. Furthermore, local governments have formulated basic policies and plans for environmental education, and the development of human resources and teaching materials that further encourage such education. Concepts and principles can be seen in the following portions of the Fundamental Policy, which was approved in a Japanese Cabinet in 2004. (Table 2).

**Table 2: Reflection of the Concepts of “Sustainable Development” into the Fundamental policy of the Environmental Conservation and Education Law**

- Maintain a long-term perspective which includes passing on the blessing of nature to future generations
- Seek out a new society and culture that deepens bonds with the workings of earth’s nature
- Emphasise meeting the basic needs of humans and while avoiding wasteful habits, improve the economic sustainability of the entire world by practicing a new path of development
- Participation of people from diverse positions, cooperation and delegation of responsibilities are indispensable

Fundamental Policy for Enhancing Motivation on Environmental Conservation and Promoting of Environmental Education 1-(1), 2004.

### **2-3. Educational Needs for Sustainability, Formulation of “Basic Promotional Plan for Education” and Revision of “Courses of Study”**

The aims, ideals and principles of education in Japan are set forth in the “**Fundamental Law of Education (*Kyōiku Kihon Hō*)**”, which was enacted in 1947. In more than half a century since then, however, the conditions facing education in Japan have dramatically changed and a variety of challenges has arisen. Responding to the change of conditions, the Fundamental Law of Education was revised in 2006. The revised law contributes for the formulation of the “**Basic Promotional Plan for Education (*Kyōiku Shinkō Kihon Keikaku*)**”. This Basic Plan includes basic principles for the comprehensive and systematic implementation of policy measures of education in Japan, which was accordingly formulated in 2008.

According to Japan’s Action Plan for the DESD (Inter-ministerial Meeting for the DESD, 2006), the Basic Plan positions “Sustainable Development” as one of the important principles of education in Japan and identifies ESD as a policy that should be pursued over the next five years. In the same year 2008, the **Courses of Study (*National Curriculum, Gakushū Shidō Yōryō*)**, which form the basis of school education in Japan, were also revised. Revision of the Course of Study resulted in the principle of “**Sustainable Development**” being explicitly incorporated into the curriculum in subjects. It is stated with regard to Sustainable Development as “there is also a requirement to construct a sustainable society by putting in place socio-economic devices that will support the efforts made by individuals”. The principle of ESD has thus become clearly incorporated into national education policy in Japan, and efforts are now underway to put it into practice.

### **2-4. School Course**

“**Periods of Integrated Study**” were incorporated into the primary and secondary curricula to provide for schools for the pursuit of their own creative and distinctive educational activities suited to local conditions and students’ needs. Further, these Periods contribute to provide opportunity to learn about the interdisciplinary themes, such as international understanding, information technology, the environment, health and welfare. Issues related to sustainability, e.g. environment, international understanding, welfare, social justice, human rights, peace, are also addressed in individual subjects. Nowadays, **various educational programmes are being taught in line with the principles of sustainability**. In the Periods of Integrated Study, children learn through experience about nature and day-to-day life, and recognize the relationship among environmental, socio-cultural, and economical aspects, and its interdependence, by effectively using some venues and topics, e.g. at the country side, river side, natural forest, living environment, social places, on the energy & water, production & consumption, food & drinks, well-living and habitat. These Periods also contribute to children in terms of the provision

of opportunities to explore key principles of sustainability, which include: interdependence, diversity, carrying capacity, resource limitation, fairness & responsibility, communication & collaboration, action for change.

## 2-5. UNESCO's Associated Schools Project, and Junior Eco-Club Project

UNESCO's Associate School Network is also regarded as hub for the promotion of ESD. The Network aims at realising the ideals of UNESCO and at promoting peace and international collaboration through practices in classroom / school. Now the number of Associate Schools is being increased, and it is expected that the Network contributes to share information and ideas of practices and to involve different stakeholders like business and industries, NPOs and universities for collective actions. Since 2009, national meeting has been held annually by involving: practitioners of UNESCO Associated Schools, teachers, education administrators, scholars, workers from private companies and students<sup>7</sup>. As the other project, Environmental Education project named "**Junior Eco-Club Activities (Kodomo Eco Kurabu)**" lead by the Ministry of Environment is also one of good example in terms of: involvement of different stakeholders, positive actions for the improvement of local conditions, inter-generation collective actions, interactive communication and experiential learning.

## 2-6. Environmental Education Guideline (NIER, 2007)<sup>8</sup>, responding to the Needs of Sustainability



Since the environmental issues are global problematiques, each individuals needs to comprehensively grasp the environment and its issues, find ways and act to solve such issues, adopt measures that will lead to solutions, strive to change in behavior of our daily lives. In order for children proactively participate / collectively act in these type of activities, it is important that education enhances children's "Zest for Living, Ikiru Chikara" which includes the ability and character to find problems, self-initiating learning, make proactive judgements and take action. As environmental issues are broad and multifaceted, and Environmental Education should be comprehensive as well as cut across curriculum and school level, a special subject has not been created for environmental education in schools. In this reason, Environmental Education is implemented through a school's entire education activities as relevant within all class subjects, moral education and special activities.

The enactment of the Law for the Enhancing Motivation on Environmental Conservation and Promoting of Environmental Education in 2003 further brings the great significance for Environmental Education in Japan. In responding to the needs of Environmental Education, Japan has promoted Environmental Education in schools through National Environmental Learning Fair, Model School Project of Environmental Education, and Basic Course for Environmental Education Leader Training, and so forth. A series of Teacher's Guide for Environmental Education has also been published by the National Institute for Educational Policy Research (NIER)<sup>9</sup>, and used by the

<sup>7</sup> See in detail from: [http://www.unesco-school.jp/index.php?action=pages\\_view\\_main&page\\_id=500](http://www.unesco-school.jp/index.php?action=pages_view_main&page_id=500)

<sup>8</sup> NIER, 2007, Teacher's Guide for Environmental Education (Elementary School Edition), Curriculum Research Centre, National Institute for Educational Policy Research of Japan.

<sup>9</sup> NIER started out as the National Institute for Educational Research in June 1949 and conducted basic and practical research surveys concerning education. In January 2001, following the central government restructuring, the institute was restructured and reorganized to become a comprehensive policy research body with a new name the "National Institute for Educational Policy Research". The purpose of the changes was to strengthen the role and characteristics of the institute as a research organization which contributes to the promotion and formulation of educational policy plans. The Curriculum Research Center and the Guidance and Counselling Research Center were established to work together with the government to carry out more specialized research surveys, as well as to enhance the support and recommendation functions of the institute. See in detail from, [http://www.nier.go.jp/English/aboutus/menu\\_2.html](http://www.nier.go.jp/English/aboutus/menu_2.html)

teachers in Schools. Following to these previous editions<sup>10</sup> with some major revisions in order to accommodate to a new century of environment, “**Teacher’s Guide for Environmental Education (2007)**”<sup>11</sup> was published in 2007 by NIER. It aims at further reflecting trends in international Environmental Education and current issues, and contributing to the overall advancement of Environmental Education in Japanese Schools.

The Guide shows the guiding principles for the implementation of Environmental Education: (1) aim to create sustainable society; (2) collaborate with schools, families, communities, etc.; (3) be creative with content and methodology appropriate to individual development level; (4) start with actual community conditions; and (5) pay attention to aspects of consumer life. With regard to Environmental Education objectives in elementary school, these are based on the “Report of the Central Council for the Education, First Report”, which was mapped out and Environmental Education policy implemented in schools in 1996, to learn “in”, “about”, and “for” the environment. In the Guide, these objectives of Environmental Education in elementary school are described as: (1) foster receptivity towards nature; (2) foster environmental perspectives and thinking; and (3) foster ability to take action concerning the environment. Further, skills and attitudes emphasized by Environmental Education include: (1) problem discovery; (2) planning; (3) deduction; (4) utilizing information; (5) consensus building; (6) fair judgment; and (7) proactive participation and self-realization. And the Guide describes environmental perspectives to be included are: (1) cycles; (2) diversity; (3) ecosystems; (4) symbiosis; (5) limitation; and (6) conservation.

## 2-7. Policy Research Meeting on ESD in Schools (NIER, 2010)<sup>12</sup>



In September 2010, National Institute for Educational Policy Research (NIER) has published a policy research report entitled “**Education for Sustainable Development in Schools, Mid-Term Report**” (NIER, 2010), which follows the “Teacher’s Guide for Environmental Education” in 2007. The policy research report was developed with three discussion sessions, i.e. planning meeting, consultative meeting, and meeting with practitioner’s in schools. The Mid-Term Report describes that six perspectives for the creation of sustainable society, they are: (1) interdependence; (2) diversity; (3) limitation; (4) fairness; (5) responsibility; and (6) collaboration. Further, it is stated that skills and attitudes emphasized by ESD include: (1) critical thinking and judgment; (2) future forecasting and planning; (3) multiple & holistic thinking; (4) communication; (5) collaborative with the others; (6) respect of interrelationship; and (7) respecting responsibility. As some points to be considered, the report describes the importance of: (1) interrelationship among subjects; (2) interrelationship among people and people; and (3) inter-relation between ability and attitude. Some differences can be seen between “Teacher’s Guide for Environmental Education” and “Education for Sustainable Development in Schools, Mid-Term Report”, in terms of: (1) perspectives; (2) ability and attitude to be acquired; and (3) points to be considered for the actual implementation.

<sup>10</sup> Three editions have been published, i.e. elementary, middle/ high school, and case example editions.

<sup>11</sup> Teacher’s Guide for Environmental Education (2007) is comprised of the following three main content items: (1) comprehensive explanation of principles and initiatives necessary to create a sustainable society, including international trends; (2) explanation of the fundamental principles and instruction development necessary to actively promote environmental education in elementary schools; and (3) case examples of environmental education in all subjects.

<sup>12</sup> NIER, 2010, ESD in Schools, Mid-Term Report, NIER, Tokyo, JAPAN.

## 2-8. In-Service Teacher Training for Environmental Education / ESD

In Japan, it is a legal duty for teachers to take constant training. For this reason, each prefectural board of education strives to improve the qualifications and quality of teachers by giving chances for them to take training. Teachers also take on-the-job training to improve themselves in their schools. At the same time, the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) plays a role in supporting teacher training to improve the educational standards of the nation. For this, MEXT established the National Centre for Teacher Development (NCTD)<sup>13</sup> not only to foster leaders of teachers but also to provide direct teacher training dealing with pressing educational matters. Under the national needs for sustainability, Environmental Education has been recognised as a priority theme to be trained, a series of national training programmes for in-service teachers on Environmental Education, e.g. central training programme, overseas training programme, issue based training programme, have been implemented. ESD is also discussed in these training programmes, as application of Environmental Education with some handout materials which include: “Teacher’s Guide for Environmental Education”, “Education for Sustainable Development in Schools, Mid-Term Report”, and “ACCU’s Guide to Developing and Using ESD Materials”.



Japan - Issue Based Training Programme for In-service Teachers  
(Environmental Education), Myokou, 2009



Japan - Overseas Training Programme for In-service Teachers  
(Environmental Education), New Zealand, 2010

## 3. TEN ESD PERSPECTIVES (Sato, M. et.al.2008)<sup>14</sup>

According to the DESD-IIS, characteristics of ESD are described as follows (Table 3).

**Table 3: ESD Characteristics described in DESD-IIS<sup>15</sup>**

### **Education for Sustainable Development:**

- is based on the principles and values that underline sustainable development;
- deals with the well-being of all three realms of sustainability – environment, society and economy;
- promotes life-long learning;
- is locally relevant and culturally appropriate;

<sup>13</sup> In 2001, as part of government restructuring, NCTD was founded as an independent administrative institution that provides educational training for teachers and other educational personnel in more synthesized, unified and effective ways. Since that time, NCTD has enhanced training sessions and played a central role in its function in improving the qualifications and quality of teachers all over Japan. See in detail from, [http://www.nctd.go.jp/X\\_sosiki/organization\\_outline\\_x\\_eng.html#point1](http://www.nctd.go.jp/X_sosiki/organization_outline_x_eng.html#point1)

<sup>14</sup> Sato, M., Abe, O., Michel, A. 2008, From Tbilisi to Ahmedabad, Lessons Learnt from a Series of International Discussion on Environmental Education and Further Development of Environmental Education, Kankyou Jyohou Kagaku, 37-2, 2008.

<sup>15</sup> UNESCO, 2005, International Implementation Scheme, UNESCO, Paris, France.

- is, but acknowledges that fulfilling local based on local needs, perceptions and conditions needs often has international effects and consequences;
- engages formal, non-formal and informal education;
- accommodates the evolving nature of concept of sustainability;
- address content, taking into account context, global issues and local priorities;
- builds civil capacity for community-based decision making, social tolerance, environmental stewardship, adaptable workforce and quality of life;
- is interdisciplinary. No one discipline can claim ESD for its own, but all disciplines can contribute to ESD;
- uses a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills.

UNESCO, 2005, International Implementation Scheme, UNESCO, Paris France.

For the development of ESD National Guideline, the authors stress the following ten perspectives, based on review of some cases, i.e. Baltic Sea Region, UK, Germany, Japan, Australia, New Zealand (in detail, see Appendix-1), in particular are of great importance: (1) awareness of relationships; (2) contextualization of activities; (3) formulation of sustainability principles and concepts; (4) respect for environmental ethics and diverse values; (5) utilization of and learning with diverse educational methods and higher-order thinking skills; (6) interaction amongst diverse education community; (7) collaborative approach and capacity building; (8) social learning mechanism and creation of a lifelong learning system; (9) connections with international education initiatives; and (10) positive societal transformation.

### 3-1. Awareness of Relationships

The DESD International Implementation Scheme (DESD-IIS) (UNESCO, 2005) emphasizes that activities should be conducted with the three sustainability realms (environment, society and economy) in healthy condition. All countries are directly affected by social issues such as employment, human rights, gender, peace and personal safety, as well as by environmental problems such as water and waste. Additionally, all countries need to address economic issues such as poverty reduction and corporate responsibility and accountability. HIV/AIDS, immigration, climate change, and urbanization are all deeply related to the three realms of sustainability. As this is the case, when considering such global and highly complex problems, it is essential that one does not only consider them merely as environmental problems but also as social and economic problems and that one have an awareness concerning inter-phenomena relationships (***awareness of connectedness***) to understand their interrelatedness / interdependency. One must also be aware of the various subjects that are involved. Awareness of inter-subject relationships (***awareness of inclusiveness***) -- such as between various organisations and stakeholders -- is particularly essential.

In today's environmental education one can see an emphasis on an ***awareness of connectedness*** and ***awareness of inclusiveness*** through cross-curriculum and interdisciplinary curriculum in the period of integrated studies. Education practices that emphasise this kind of awareness of relationships make it possible to create linkages with other educational initiatives dealing with various themes and enables improvement of awareness for sharing community resources, self-awareness and civic awareness.

### 3-2. Contextualization of Activities

The DESD International Implementation Scheme points out that, "ESD is based on local needs, perceptions and conditions, but acknowledges that fulfilling local needs often has international effects and consequences." On one hand, local contextualization (***awareness of depth***) linked with spirituality, culture and history is important. On the other hand, global contextualization (***awareness of scope***) linked with globalization and market economy is also important. In today's environmental



education there are many examples of activities based in local context, however examples that are based on both perspectives. Local environmental education needs to be given meaning within a global context, not just its local. Additionally, awareness needs to be heightened concerning the international effects of local educational initiatives.

### **3-3. Formulation of Sustainability Principles and Concepts**

The principles of sustainability have been highly debated throughout the 1990s. Today, debate continues about not only “sustainability of the natural environment / ecological sustainability” and “sustainability of the social environment / social equity,” but also about “sustainability of spiritual environment / ethics, values, diversity,” and there are linkages amongst all of these perspectives. The DESD International Implementation Scheme emphasizes the need for ESD to “accommodate the evolving nature of the concept of sustainability.” To debate, learn and create this evolving concept of sustainability, will require educational practices based on a collaborative creation of values or “knowledge acquisition / linkage”, not the traditional “transfer of knowledge”.

### **3-4. Respect for Environmental Ethics and Diverse Values**

The ways communities decide how to approach sustainable development will be closely linked to the values held in these societies. Understanding your own values, the values of the society you live in, and the values of others around the world is a central part of educating for a sustainable future. Each nation, cultural group and individual must learn the skills of recognizing their own values and assessing these values in the context of sustainability. Which values to teach and learn in environmental education programmes is a matter for discussion. The goal is to create a locally relevant and culturally appropriate values component that is informed by the principles and values inherent in sustainable development.

### **3-5. Utilisation of and Learning with Diverse Educational Methods and Higher-order Thinking Skills**

In order to create the values of sustainable development and advance behavior and attitudes towards positive social transformation, ESD needs to utilize a variety of pedagogical techniques that promote higher-order thinking skills. In particular, problem-solving, vision-building, and consensus building cannot be accomplished merely with pedagogical techniques based on the “transfer of knowledge”. Utilizing participatory/dialog style learning and teaching methods in this process enable collaborative creation of values or “knowledge acquisition/linkage.” Learning related to the development and application of these learning processes raises awareness and supports citizen independence based on participation and consensus building. Higher-order thinking skills such as systems thinking that considers the interdependency of phenomena, vision-building supported by future thinking, action research that repeatedly stimulates theory and practice, and participatory evaluation, heighten awareness related to time and relationships and contribute to the advancement of a collaborative approach and improved awareness.

### **3-6. Interaction amongst Diverse Education Community**

The DESD International Implementation Scheme defines four major thrusts of education for sustainable development: (1) improving access to quality basic education; (2) reorienting existing education programmes; (3) developing public understanding and awareness and (4) providing training. In order to create ESD programmes that contain the four thrusts, all sectors of the education community will have to work together in a cooperative manner. Formal education (i.e., primary, secondary) will need to work closely with the non-formal education sector (e.g. non-governmental organisations, social education facilities) and with new partners from the informal education sector (i.e. the media and interpersonal communication). By weaving the context of ESD into environmental education, its significance as a life-long process will be strengthened and it will

touch the lives of citizens at different ages.

### 3-7. Collaborative Approach and Capacity Building

In the development of environmental education, the role of educator varies greatly depending on the goals. In environmental education that aims to transfer know “about” the environment, the educator plays the role of “conveyor of knowledge”. However, in environmental education that emphasises experiential learning “in” the environmental, the educator plays the role of “field experience organiser”. Additionally, in environmental education that focuses on environmental improvement and action “for” the environment, the educator plays the role of “fellow participant and inquirer”. Having fully understood the different roles that educators play according to the goals of environmental education, it is important to conduct effective communication based on educational goals. A new collaborative approach that aims for a “knowledge acquisition/linkage” and is based on action, participation and dialog, is necessary in the context of ESD. Coordination and leadership are also necessary for adjustments.

Capacity building not only for individuals but also for organisations and citizens is essential when carrying out collaborative activities. The environmental education declaration of the Tbilisi Conference indicates that the subjects of environmental education are primarily targeting individuals (individual capacity building). However, capacity building of individuals is not enough today as we seek positive societal transformation. Capacity building of organisations and citizens is essential.

Of the seven strategies<sup>17</sup> put forth in the DESD International Implementation Scheme, organisational capacity (management, organization decision making, networking, partnerships, etc.) is indispensable. It would be difficult to accomplish the scheme merely with the capacity of individuals. In school education the Whole School Approach depends on the collective skills of the organization, not the individual. An essential factor is the entire school’s involvement and linkages with the community. Another characteristic of ESD raised in the DESD International Implementation Scheme is citizen capacity building. Capacity building empowers citizens and improves their awareness through vision sharing, community decision making, and improvement of community issues. A collaborative process requires effective communication, as are in the goals of environmental education, as well as capacity building for individuals, organisations and citizens.

### 3-8. Social Learning Mechanisms and Creation of a Lifelong Learning System

The role of environmental education as stated above must not just mean individual and organisational capacity building but it needs to create social learning mechanisms and a lifelong learning system in order for society to be more aware of learning. A report of the International Commission on Education for the Twenty-first Century<sup>21</sup> “**Learning: The Treasure within**”<sup>18</sup> explored and recommended that lifelong learning be interpreted broadly as education for the development of humans. In particular the report identifies four pillars of education (1) learning to know, (2) learning to do, (3) learning to live together and (4) learning to be; in addition to the basic human right of access to learning. These pillars do not only link education and learning with various stages in life but also cross educational fields and learning opportunities. Based on the context of ESD, Dr. Sheldon Shaeffer, former director of UNESCO Asia-Pacific Regional Bureau for Education<sup>18</sup>, has pointed out the need to add “learning to transform”<sup>19</sup> to the educational principals. Treating “transformation” as an educational principle

---

<sup>17</sup> UNESCO. 1996. Learning: The Treasure within. The Report of the International Commission on Education for the Twenty-first Century. UNESCO.

<sup>18</sup> UNESCO Asia-Pacific Regional Bureau for Education

<sup>19</sup> Shaeffer, S. 2007. Filling a Half-Empty Glass: Learning to Live Together Through Education for Sustainable Development, Plenary Presentation, XIII World Congress of Comparative Education Societies, Sarajevo, Bosnia and Herzegovina, September 3-7, 2007.

creates an awareness of education for transformation of individuals and society and contributes to social learning mechanisms and the creation of a lifelong learning system.

### **3-9. Linking with International Education Initiatives**

As can be inferred from Annex I of the DESD International Implementation Scheme, today's environmental education needs to consider not only "sustainable development and education" but must also be conscious of "improving access to quality basic education." In other words, it is important to situate the environmental education with respect to efforts in which the international community is already engaged. In particular the Millennium Development Goal (MDG)<sup>20</sup> process, the Education for All (EFA)<sup>21</sup> movement, and the United Nations Literacy Decade (UNLD)<sup>22</sup> have close links with various aspects of environmental education in a global arena.

However, the focus of Japan's environmental education has been limited within a national context and does not include the context of international education initiatives. The concept of sustainable development goes beyond the category of education; it is clear that it will affect all aspects of society and system frameworks. Linking environmental education with the concepts of sustainable development and improving access to quality basic education will enable social and development projects to internalise all of its goals. Expect that environmental education continues to define and develop based on its relationship to UNLD, EFA and other international education initiatives.

### **3-10. Positive Societal Transformation**

The basic vision of the DESD from the International Implementation Scheme is "a world where everyone has the opportunity to benefit from education and learn the values, behavior and lifestyles required for a sustainable future and for positive societal transformation". This "positive societal transformation" has turned into an educational goal. Environmental education can no longer be limited to education "in" or "about" the environment; it must shift to "transformative education" that aims to create a sustainable society and emphasise attitudes, actions and values "for" the environment.

It is also essential to consider the "Infrastructure to support the DESD"<sup>23</sup> as outlined in the DESD International Implementation Scheme. By advancing a "continuation of learning and collaborating

---

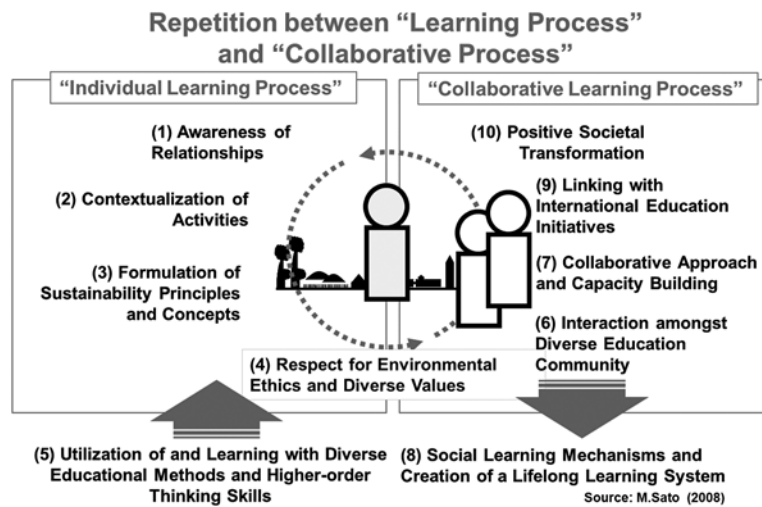
<sup>20</sup> The eight goals and 18 targets of the Millennium Development Goals constitute an over-arching framework for international development cooperation, agreed at the level of the United Nations. The provision of primary education and gender equality in education are the two areas where the MDGs overlap with the EFA agenda – other aspects of basic education, such as literacy, quality and non-formal education, are implied as conditions for the realization of the MDGs.

<sup>21</sup> The six EFA goals are concerned with extending the reach of basic education to every child and adult and with the nature of such provision – it should be available to both female and male learners of all ages, offering relevant learning and life skills and striving for ever-increasing quality. While basic education is clearly intended to have a positive impact on the quality of life and on deprivation, the nature of this impact – and the content of education, which might be most appropriate to achieve it – is a broader question. In other words, the role and provision of education are central, and this drives the EFA agenda forward; the underlying purpose of education is either assumed or considered to be a matter for wider socio-political debate.

<sup>22</sup> The UNLD situates itself within the EFA movement, where literacy is a thread through all the six goals and a condition for their attainment. As a key instrument of learning, it must be factored into the realization of all forms and stages of education. There is no meaningful access to structured learning opportunities without close attention to the acquisition of literacy of sufficient quality. In some respects, the UNLD goes beyond the educational process, by demonstrating strategic links to other aspects of life – the acquisition and uses of literacy have an impact on mother and child health, on fertility rates, on income levels, as well as on less tangible effects such as an increase in self-confidence, initiative, participatory citizenship and cultural self-esteem.

<sup>23</sup> (1) Leadership; (2) Governance structures; (3) Administrative support; (4) Human resources; (5) Financial resources; (6) Material resources; (7) Accountability; (8) Evaluation, tracking and reporting; (9) Vision-building; and (10) Engagement and retention.

processes” and emphasising the “creation of learning mechanisms,” the context of ESD can be woven into educational activities and a “citizenship” which acts on local and global responsibilities can be obtained. It is necessary to stimulate the empowerment of citizens through such a learning spiral which aims to achieve a lifelong learning society.



**Figure 1: Repetition between Learning Process and Collaborative Process**

#### **4. POINTS TO BE REFLECTED ON AN ESD NATIONAL GUIDELINE FOR CURRICULUM DEVELOPMENT**

##### **4-1. Curriculum components of Education for the reorientation to address Sustainability**

The following excerpts from the “Education for Sustainable Development Toolkit” describes one approach to reorienting curriculum to address sustainable development (UNESCO, 2006).

*ESD is more than a knowledge base related to environment, economy, and society. It also addressed learning skills, perspectives, and values that guide and motivate people to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner. ESD also involved studying local and when appropriate, global issues. Therefore, these five, i.e. knowledge, skills, perspectives, values and issues, and interrelationship among them must all be addressed in a formal curriculum that has been reoriented to address sustainability. Simply adding more to the curriculum will not be feasible in most schools; they already have a full curriculum. Deciding what to leave out – what does not contribute to sustainability or is obsolete – is an integral part of the reorienting process.*

*(UNESCO, 2006)<sup>24</sup>*

The authors stress the additional importance of the reorienting process of the curriculum development. “Incorporating ESD views into all the subjects” is critical when developing ESD related curriculum. As teachers might refuse the “New Content” in the curriculum in terms of their acceptance and the use, critical elements for the ESD implementation need to be introduced and shown for the in-corporation into the curriculum. Asia/Pacific Cultural Centre for UNESCO (ACCU)<sup>25</sup> published book entitled “**A Guide to Developing and Using ESD Materials, ESD Kyouzai**

<sup>24</sup> UNESCO, 2006, Education for Sustainable Development Toolkit, UNESCO, Paris France.

<sup>25</sup> ACCU is a non-profit international organization implementations co-operative activities in the field of culture, education and personal exchange, mainly for countries in Asia and the Pacific. See in detail from, <http://www.accu.or.jp/jp/en/index.html>



*Katsuyou Gaido*” to be responsive to school principals and teachers in charge of particular grades and subject areas who might have questions such as “What is ESD?” “How should we promote ESD?” and “How is ESD connected with the educational activities that we are currently pursuing in the school and my own educational practices?” (ACCU, 2008)<sup>26</sup>. In the Guide Book, it stresses the importance of incorporating ESD views into existing content of subjects and of promoting inter-subject relationship.

The Toolkit further shows these five components, of an education reoriented to address sustainability.

- **Knowledge:** *sustainable development encompasses environment, economies and society. Therefore, people need basic knowledge from natural sciences, social sciences, and humanities to understand the principles of sustainable development, how they can be implemented, the values involved and ramifications of their implementation. Knowledge based on traditional disciplines supports ESD (p11).*
- **Issues:** *ESD focuses largely on the major social, economic, and environmental issues that threaten the sustainability of the planet. Many of these key issues were identified at the Earth Summit in Rio de Janeiro and are found in Agenda 21. Understanding and addressing these issues are the heart of ESD, and locally relevant issues should be included in any programme related to education for sustainability (p12).*
- **Skills:** *to be successful, ESD must go beyond teaching about local issues. ESD must give people practical skills that will enable them to continue learning after they leave school, to have a sustainable livelihood, and to live sustainable lives. These skills will differ with community conditions. Note that skills fall into one or more of the three realms of sustainable development –environmental, economic and socio-cultural.. In addition, pupils will need to learn skills that will help them manage and interact with the local environment (p14).*
- **Perspectives:** *ESD carries with it perspectives that are important for understanding global issues as well as local issues in a global context. Every issue has a history a future. Looking at the roots of an issue and forecasting possible futures based on different scenarios are part of ESD, as is understanding that many global issues are linked.. The ability to consider issue from the view of different stakeholders is essential to ESD. Considering an issue from another viewpoint besides your own leads to intra-national and international understanding. The understanding is essential for creating the mood of cooperation that will underpin sustainable development (p15).*
- **Values:** *values are also integral part of ESD. In some cultures, values are taught overtly in the schools. In other cultures, however, even if values are not overtly taught, they are modeled, explained, analysed or discussed. In both situations, understanding values is an essential part of understanding your own world view and other people’s viewpoints. Understanding your own values, the values of the society you live in, and the values of others around the world is a central part of educating sustainable future (p15).*

In the UNESCO report “Learning, the Treasure Within” (UNESCO, 1996), Delors recognises four pillars of education of 21<sup>st</sup> Century: (1) learning to know (knowledge & issues); (2) learning to do (skills); (3)

<sup>26</sup> ACCU, 2008, A Guide to Developing and Using ESD Materials, ACCU.  
[http://www.unesco-school.jp/index.php?action=pages\\_view\\_main&page\\_id=500](http://www.unesco-school.jp/index.php?action=pages_view_main&page_id=500)

learning to be (values); and (4) learning to live together (perspectives). They partly correspond with the often used competence fields: domain competences, methodological competences, personal competences and social competences. In consideration of ESD, a fifth pillar needs to be added in learning identified in “Learning, the Treasure Within”. The fifth pillar is referred to as “Learning to Transform Society and the Change the World”. The objective of this fifth pillar is for individuals to gain the skills and knowledge to achieve social goals such as social equality, non-discrimination, social solidarity, transition to a low-carbon society and to live sustainability (Shaeffer, 2006)<sup>27</sup>.

#### 4-2. Competence-based Curriculum<sup>28</sup> - Case of Germany



In case of Germany, in the programme named “**Transfer 21**”, key competencies are proposed in linked with OECD Key Competencies (Table 4). According to Transfer 21 (2007), it is noted that ESD particularly serves the acquisition of “**Shaping Competence, Gestaltungskompetenz**).

**Gestaltungskompetenz** describes the ability to apply knowledge of sustainable development and to identify the problems of non-sustainable development (Transfer-21, 2007). Then, **Gestaltungskompetenz** can be broken down into ten part competencies: (1) to create knowledge in a spirit of openness to the world, integrating new perspectives; (2) to think and act in a forward-looking manner; (3) to acquire knowledge and act in an interdisciplinary manner; (4) to be able to plan and act in cooperation with others; (5) to be able to participate in decision-making processes; (6) to be able to motivate others to become active; (7) to be able to reflect upon one’s own principles and those of others; (8) to be able to plan and act autonomously; (9) To be able to show empathy for and solidarity with the disadvantaged; and (10) to be able to motivate oneself to become active. Transfer-21 programme describes the reason why the OECD’s concept of ‘**Key Competencies**’ has been selected as a reference framework for the characterisation of Gestaltungskompetenz, as it is international in scope and also of great importance for education policy and planning. Then it also points that the OECD does not only initiate and conduct the PISA tests, but also provides the reference framework for modern competencies (Transfer-21 Programme, 2007).

<sup>27</sup> Shaeffer, S., 2006, Beyond ‘Learning to Live Together’: The Key to Education for Sustainable Development, Presentation at UNESCO Expert Meeting on ESD: Reorienting Education to Address Sustainability, 1-3 May 2006, in Kanchanaburi, Thailand.

<sup>28</sup> The competence-based curriculum is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in. In constructivism, learning is understood to be an active construction of knowledge. The main idea is that knowledge is not mediated from lecturer to a student, but a student or a learner constructs knowledge for him/herself. Learning is situational, contextual and based on interaction (Wilson, 1996): Wilson, B.G.1996, What is constructivist learning environment? Constructivist Learning Environments: Case studies of instructional design, Educational Technology Publications, New Jersey.

**Table 4: Breakdown and Classification of part-competences of Gestaltungskompetenz (Shaping Competencies)<sup>29</sup> - Case of Germany**

Classical competence terms	Competence categories in line with OECD (2005)	Part-competences of Gestaltungskompetenz
<b>Subject and Methodological Competence</b>	<b>Interactive use of media and methods (tools)</b> <ul style="list-style-type: none"> <li>• Ability to use language, symbols and text interactively</li> <li>• Ability to use knowledge and information interactively</li> <li>• Ability to use technologies interactively</li> </ul>	T.1 Gather knowledge with an openness to the world and integrating new perspectives T.2 Think and act in a forward-looking manner T.3 Acquire knowledge and act in an interdisciplinary manner
<b>Social Competence</b>	<b>Interacting in socially heterogeneous groups</b> <ul style="list-style-type: none"> <li>• Ability to maintain good and durable relationships with others</li> <li>• Ability to cooperate</li> <li>• Ability to overcome and resolve problems</li> </ul>	G.1 Ability to plan and act together with others G.2 Ability to participate in decision-making processes G.3 Ability to motivate others to get active
<b>Personal Competence</b>	<b>Acting autonomously</b> <ul style="list-style-type: none"> <li>• Ability to act within the wider context</li> <li>• Ability to form and implement a life plan and personal projects</li> <li>• Awareness of rights, interests, boundaries and requirements</li> </ul>	E.1 Ability to reflect upon one's own principles and those of others E.2 Ability to plan and act autonomously E.3 Ability to show empathy and solidarity with the disadvantaged E.4 Ability to motivate oneself to get active

Germany-Transfer-21 Programme, 2007

#### **4-3. Beyond School Curriculum Development, Whole School Approach and Community Linkages - Case of UK**

Curricular change in educational institutions often occurs at the individual course level. As these efforts are successful, wider programmatic change can occur. ESD contributes to not only such a reorientation of curriculum, but also approaches at school level, decision making and management, connection between schools and communities, and the social change. “**Sustainable School**”<sup>30</sup> in UK and “**Enviro School**” in New Zealand, are examples to show ESD potentiality in formal education, ESD contributes to the change of: curriculum, the school itself (management and decision making) and interrelations with communities. A set of “**Eight Doorways**”<sup>31</sup>, “**Three Impetus**” and “**Self Evaluation Form (SEF) in School**”<sup>32</sup>, “**Self Evaluation Form for Local Authorities**”<sup>33</sup> as introduced in

<sup>29</sup> Transfer-21 Programme, 2007, Guide, Education for Sustainable Development at Secondary Level, Justification, Competence Learning Opportunities

<sup>30</sup> EnviroSchool, See in detail from <http://www.enviroschools.org.nz/>

<sup>31</sup> In case of UK Sustainable School, eight doorways are introduced: (1) Food and Drink; (2) Energy and Water; (3) Travel and Traffic; (4) Purchasing and Waste; (5) Buildings and Grounds; (6) Inclusion and Participation; (7) Local Well-Being; (8) Global Dimension.

<sup>32</sup> (1) Characteristics of your school; (2) Views of learners, parents/carers, community and other stakeholders; (3) Achievement and standards; (4) Personal development and well-being; (5) The quality of provision; (6) Leadership and management (DCSF, 2008), DCSF (2008) s3: sustainable school self-evaluation: Driving school improvement through sustainable development, London: DCSF.

<sup>33</sup> DCSF (2009) s3+: sustainable schools self-evaluation for local authorities who support sustainable schools: Enabling local authorities to strategically drive school improvement through sustainable development, London: DCSF.

UK Sustainable Schools can be also one of the set of ideas to promote inter-subject linkages, whole school approaches, and School-community partnership (Figure 2, 3).

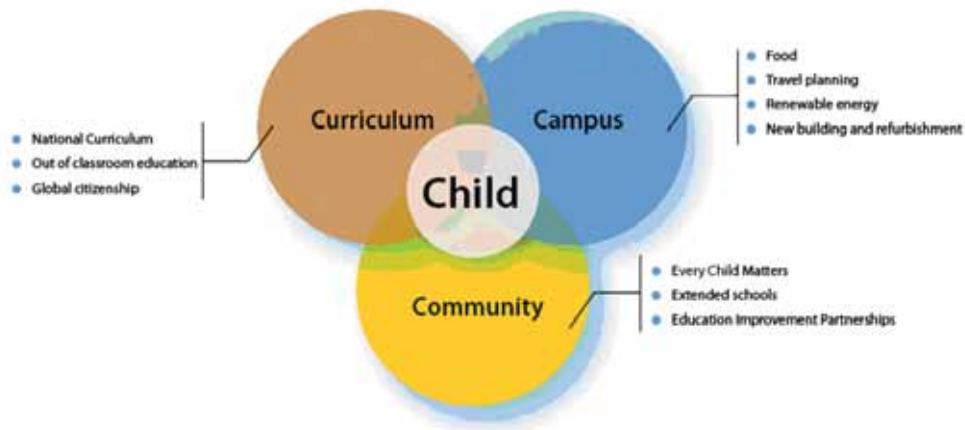


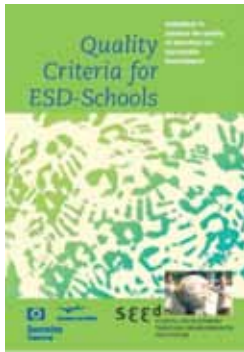
Figure 2: Current Impetus for UK Sustainable Schools (DfES, 2006)<sup>34</sup>

AREAS OF SCHOOL LIFE				
DOORWAYS	Curriculum (teaching provision and learning)	Campus (values and ways of working)	Community (wider information and partnership)	EXPECTATIONS
Food and drink	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Energy and water	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Travel and traffic	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Purchasing and waste	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Buildings and grounds	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Inclusion and participation	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Local well-being	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
Global dimension	Schools use the ...	Schools review the ...	Schools use their ...	By 2020 ...
	Schools use the curriculum to cultivate the knowledge, values and skills needed to address energy and water stewardship - from local to global scales - in school and at home.	Schools review their use of energy and water and establish policies for reducing this through good management and the deployment of appropriate technologies.	Schools use their communications, services, contracts and partnerships to promote awareness of sustainable energy and water among their stakeholders.	By 2020 we would like all schools to be models of energy efficiency and renewable energy, showcasing wind, solar and bio-fuel sources in their communities, and maximising their use of rainwater and wastewater resources.

Figure 3: A National Framework for UK Sustainable Schools (DfES, 2006)

<sup>34</sup> DfES, 2006, Sustainable Schools for Pupils, Communities and the Environment; delivering UK Sustainable Development Strategy; London, UK. See in detail From: <http://www.dfes.gov.uk/consultations/downloadableDocs/Consultation%20Paper%20Final.pdf>





Some cases with the concept of “**Whole School Approaches**” can also be seen, for example, in Germany case of ESD School, i.e. Transfer 21 is providing “**Catalogue of Criteria**” which include: (1) Learning culture; (2) Learning groups; (3) Competencies; (4) School culture; (5) Opening of schools to the outside world; (6) School management; (7) School programme; (8) Resources; (9) Staff development, for ESD Schools (Transfer-21 Programme, 2007)<sup>35</sup>. In case of Austria, “**Quality Criteria for ESD Schools, Guidelines to enhance the Quality of ESD**”<sup>36</sup> was published in 2005, in cooperation with the international network “Environment and School Initiatives (ENSI)”. A set of criteria for the improvement of school’s capacity for sustainability is shown for the quality development of school systems in communities (Table 5).

**Table 5: A set of Criteria for the improvement of School’s Capacity for Sustainability**

Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organization	Quality criteria regarding the school’s external relations
1. Area of teaching learning approach 2. Area of visible outcomes a school and in local community 3. Area of perspectives for the future 4. Area of a ‘culture of complexity’ 5. Area of critical thinking and the language of possibility 6. Area of value clarification and development 7. Area of action-based perspective 8. Area of participation 9. Area of subject matter	10. Area of school policy and planning 11. Area of school climate 12. Area of school management 13. Area of reflection and evaluation of ESD initiatives at school level	14. Area of community cooperation 15. Area of networking and partnerships

Siren Breiting, Michela Mayer and Finn Mogensen, 2005

#### 4-4. Competencies for ESD Teachers –Case of CSCT Project (2008)

For the development of ESD in Schools, “**CSCT (Curriculum, Sustainable Development, Competencies, Teacher Training) project**” was developed in response to the call for the UNECE Ministers of the Environment in 2003, in order to include ESD in curricula from pre-school to higher and adult education. The CSCT project (Comenius-2 project) is an attempt to meet the call of the UNECE ministers of the Environment for offering curriculum models to teacher training institutions which are searching for attainable possibilities to integrate ESD into their curricula. The members

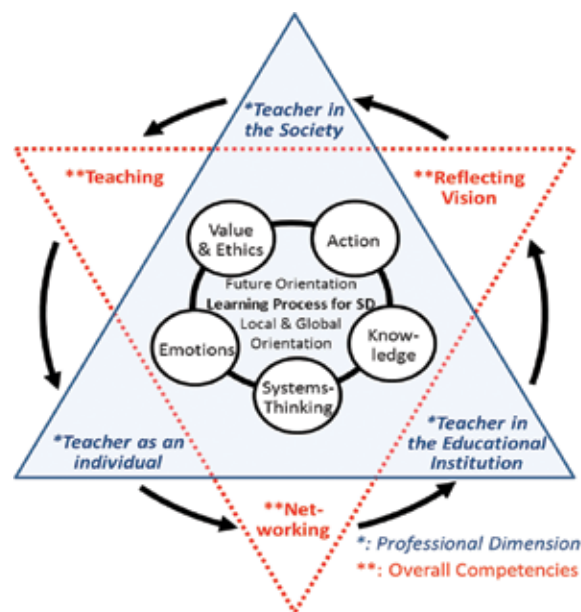
<sup>35</sup> Transfer-21 Programme’s ‘Quality and Competences’ working group, 2007, Developing Quality at “ESD Schools”, Quality Areas, Principles & Criteria, Germany.

<sup>36</sup> Soren Breiting, Michela Mayer and Finn Mogensen, 2005, “Quality Criteria for ESD-Schools” Guidelines to enhance the quality of Education for Sustainable Development, Austrian Federal Ministry of Education, Science and Culture, Dept. V/11c, Environmental Education Affairs

of ENSI (Environment and School Initiatives)<sup>37</sup>, ENSI family 15 members from 8 different countries, responded to the call by the hold of Comenius-2 contact seminar (2-3,Sept, 2003). CSCT shows dynamic model for ESD competences teacher education, with the (1) **five domains of competences**, i.e. values and ethics, emotions, systems thinking, knowledge and action; and (2) **three overall competences**, i.e. teaching, reflecting / visioning, and networking. On the implications of the Figure 4, it is stated as,

*We have no move beyond the idea of the teacher as an instructor. We rather have to envisage teachers as individuals who are in a dynamic relationship with their students, their colleagues and the wider society. It is within this dynamic relationships that we create the conditions that enable genuine learning to develop and progress in ESD. This means that teachers are no longer simply the communicators of knowledge, but members of an institution, which has a collective focus on the way all its members learn and develop, and all of those people are involved in the dynamics of a society that is seeking to confront the issues of sustainability. For all these levels teachers need specific competences, which are explained with the five domains. In addition to these overall competencies are needed.*

It is expected that the results of this project, together with the results of the SEED project and the ENSI publication on the reflective practice in teacher education, contribute to the integration of ESD in mainstream curricula of both compulsory and teacher education.



**Figure 4: CSCT Framework – Dynamic Model for ESD Competences Teacher Education (Sleurs,ed. 2008)<sup>38</sup>**

<sup>37</sup> International organization, ENSI (Environment and School Initiatives) developed Comenius 3 project SEED, which aimed at identifying the implicit and explicit criteria inspired by values of Environmental Education, as used to guide, support or award Eco-Schools involved in incorporating principles and actions for sustainability in whole school plans. ENSI published some materials related to Environmental Education and ESD, e.g. (1) **“A Comparative Study on Eco-School Development Process”** (Mogensen and Mayer, 2005); (2) **“Quality Criteria for ESD Schools: Guidelines to enhance the Quality of ESD”** (Breiting, S., Mayer, M. & Mogensen, F.2005); (3) **“Reflective Practice in Teacher Education”** (Kyburz-Graber, Hart, P., Posch, P. & Robottom, I. Eds, 2006)

<sup>38</sup> Sleurs, W., ed. 2008, Competencies for ESD (Education for Sustainable Development) Teachers. A framework to integrate ESD in the Curriculum of Teacher Training Institutes, Comenius2.1 Project 118277-CP-1-2004-BE-Comenius-C2.1, Brussels, Belgium

## 5. CONCLUSION

For the development of framework for ESD national curriculum, the authors stress, in particular, are of great importance: (1) Positioning of three realms of Sustainability; (2) SD Key Concepts; (3) Needs (Educational, Environmental, Social, Cultural, Economical); and Social Relevance; (4) Policy Linkages; (5) Guiding Principles & Perspectives for Implementation; (6) Doorways / Introductory Topics; (7) Curriculum contents, objectives, competencies, subject linkages; (8) Campus Design; (9) Community Linkages; (10) School Management; (11) Evaluation (Table 6). Further, for the promotion of ESD in school, pre-service / in-service teacher training is critical. Currently, teachers tend to be trained in each area of subject, therefore, it is needed to develop such interdisciplinary training programmes with systematic structures for teachers, who will be able to teach in the condition of This sentence is incomplete...

**Table 6: Key Points to be considered for the Development of Framework of National Curriculum**

- Positioning of three realms of Sustainability, SD Key Concepts
- Needs (Educational, Environmental, Social, Cultural, Economical) and Social Relevance
- Policy Linkages and Justification
- Guiding Principles, Perspectives for Implementation
- Doorways / Introductory Topics – Sustainability Issues
- Curriculum – (Teaching & Learning), SD Elements for Learning (Knowledge, Issues, Skills, Perspectives, Values, Transformation), Competence based Curriculum, Inter-Subject Linkages
- Campus (Value and Thinking), School Management – Whole School Approach,
- Community Linkages (Partnership)
- Quality Criteria Setting and Evaluation – Self-Evaluation by implementers, In Schools, for School (e.g. by Local Authorities), practical cases

**APPENDIX-1: Examples on Critical Elements for SD in Learning**

Region, Country	Key Concepts, Elements on ESD	Key Principles	Key Characteristics / Skills and Attitudes on ESD
Baltic Sea	<p><b>[Sustainable Development]:</b> The Connection between human needs and nature’s capacity, The Connection between the needs of the poor and the rich (problems of intra –generational equity), The Connection between the needs of the present and those of the future generations (problems of inter-generational equity) (Baltic21, 1996)<sup>39</sup></p>	<p>Envisioning a better Future; Systemic Thinking; Critical (reflective) thinking; Participation in Decision Making; Networks and Partnerships for Change. (Rohweder, L., et al. (Eds) 2008,)<sup>40</sup></p>	<p><b>[SD Elements for Learning]:</b> (1) Context (Integration, Spatiality, Time Perspective); (2) Mental Aspects (Value Clarification, Systemic Thinking, Critical Reflection, Motivation Building); (3) Activities (Partnership, Cooperation &amp; Communication, Participation)( Rohweder, L., et al. (Eds) 2008,)<sup>41</sup></p>
UK	<p><b>[Key Concepts of SD]:</b> Interdependence, Citizenship and stewardship, Needs and rights of future generations, Diversity, Quality of life, equity and justice, Carrying capacity, Uncertainty and precaution in action(Defra, 1998-2003)<sup>42</sup></p>	<p><b>[Commitment to Care]:</b> care for oneself, for each other (across cultures; distances and generations); for the environment itself (far and near).  <b>[Sustainability Themes]:</b> Food &amp; Drinks; Energy and Water; Travel &amp; Traffic; Purchasing &amp; Waste; Buildings and Grounds; Inclusion and Participation; Global Dimension  <b>[Integrated Approach]:</b> Teaching Provision and Learning (Curriculum); Values and Ways of Thinking (Campus); Engagement of Local People and Partners (Community).(Teachernet, 2010)<sup>43</sup></p>	
Germany	<p><b>[Sustainable Development]:</b> Interdependence (Transfer-21, 2007)  <b>[Sustainable Development]:</b></p>	<p><b>[Principles of ESD]:</b> ESD is relevant for everyone; ESD is an ongoing; continuous process and promotes acceptance of processes of societal</p>	<p>change; [Sub-Competencies of Gestaltungskompetenz]:Competence in foresighted thinking, Competence in interdisciplinary works, interdisciplinary learning, Competence in cosmopolitan</p>

<sup>39</sup> Baltic 21, 2006, <http://www.baltic21.org/?a,216>

<sup>40</sup> Rohweder, L., Virtanen, A. (Eds) 2008, Learning for Sustainable Future, Innovative Solutions from the Baltic Sea Region, Baltic University Press.

<sup>41</sup> Rohweder, L., Virtanen, A. (Eds) 2008, Learning for Sustainable Future, Innovative Solutions from the Baltic Sea Region, Baltic University Press.

<sup>42</sup> Defra, 1998-2003, Key Sustainable Development Concepts, Sustainable Development Education Panel, Defra, UK.

<sup>43</sup> See in detail from <http://www.teachernet.gov.uk/sustainable-schools/index.cfm>

	Reticulation ( <i>Retinitat</i> ) (RSU, 1994) <sup>44</sup>	ESD is a cross-sect oral task that has an integrative function; ESD is aimed at improving the contexts in which people live; ESD creates new opportunities for individuals, society and economic life; ESD promotes global responsibility (German Commission for UNESCO, 2005) <sup>45</sup>	perception, transcultural understanding and cooperation, Learning participatory skills, Competence in planning and implementation skills, The Capacity of empathy, compassion and solidarity, Competence in self-motivation and in motivating others, Competence in distanced reflection on individual and cultural models (Haan, G., 2006,) <sup>46</sup> . <b>[Part-competencies of Gestaltungskompetenz<sup>46</sup>]:</b> Gather knowledge with an openness to the world and integrating new perspectives, Think and act in a forward-looking manner, Acquire knowledge and act in an interdisciplinary manner, Ability to plan and act together with others, Ability to participate in decision-making processes, Ability to motivate others to get active, Ability to reflect upon one's own principles and those of others, Ability to plan and act autonomously, Ability to show empathy and solidarity with the disadvantaged, Ability to motivate oneself to get active (Transfer-21 Programme, 2007) <sup>48</sup>
Japan	<b>[Environmental Perspectives]:</b> Cycles, Diversity, Ecosystems, Symbiosis, Limitation, Conservation (NIER, 2007) <b>[SD Perspectives]:</b> Interdependence, Diversity, Limitation, Fairness, Responsibility, Collaboration (NIER, 2010) <sup>49</sup>	<b>[Guiding Principles for EE]</b> (1) aim to create sustainable society; (2) collaborate with schools, families, communities, etc.; (3) be creative with content and methodology appropriate to individual development level; (4) start with actual community conditions; and (5) pay attention to aspects of consumer life.(NIER, 2007) <sup>50</sup>	<b>[Skills and Attitudes to be emphasized for EE]:</b> Problem-solving, Planning, Deduction, Utilizing Information, Consensus Building, Fair Judgment, Proactive Participation & Self-realization (NIER, 2007) <b>[Skills and Attitudes to be emphasized for ESD]:</b> Critical Thinking and Judgment, Future Forecasting and Planning, Multiple & Holistic Thinking, Communication, Collaborative

<sup>44</sup> RSU, 1994, Umweltgutachten 1994, Für eine dauerhaft – umweltgerechte Entwicklung, 380S, Drucksache 12/6995 des Deutschen Bundestages, Bonn

<sup>45</sup> German Commission for UNESCO, 2005, National Plan of Action for Germany, United Nations Decade of Education for Sustainable Development 2005-2014, German Commission for UNESCO.

<sup>46</sup> Haan, G., 2006, The BLK '21' programme in Germany: a 'Gestaltungskompetenz' – based model for Education for Sustainable Development, Environmental Education Research, 12-1, pp.19-32.

<sup>47</sup> "Gestaltungskompetenz" means "shaping competence"

<sup>48</sup> Transfer-21 Programme's 'Quality and Competences' working group, 2007, Guide, Education for Sustainable Development Secondary Level, Justifications, Competences, Learning Opportunities, Germany.

<sup>49</sup> NIER, 2010, ESD in Schools, Mid-Term Report, National Institute of Educational Policy Research, NIER, Tokyo, JAPAN.

<sup>50</sup> NIER, 2007, Teacher's Guide for Environmental Education (Elementary School Edition), Curriculum Research Centre, National Institute for Educational Policy Research of Japan.

			with the Others, Respect of Interrelationship, Respecting Responsibility (NIER, 2010)
<b>New Zealand</b>	<b>[Key Concepts Underlying EE]:</b> Interdependence, Sustainability, Biodiversity, Personal and Social Responsibility for Action (Min.of Edu., 1999) <sup>51</sup>	<b>[Key Principles of Efs]:</b> A Strong Value base, Critical Thinking & Reflective Learning, Future-focused, Participation, Learning for Life, Learning across boundaries, Transformative (PCE, 2004) <sup>52</sup> <b>[Context or Topic]:</b> Insects, The Bush, Birds, Endangered animals, Water, Waterways, Rivers, The water cycle, Waste, Litter, Rubbish, Recycling, Shopping, Christmas, Transportation, Fair trade (Min.of Edu.) <sup>53</sup>	<b>[Essential Skills for EE]:</b> Communication Skills, Numeracy Skills, Information Skills, Problem-solving Skills, Self-Management & Competitive Skills, Social & Co-operative Skills, Physical Skills, Work & Study Skills (Min.of Edu., 1999) <sup>54</sup> <b>[Essential Skills for Efs]:</b> Systems Change (Cooperative Learning, Inquiry based Learning, Experiential Learning, Innovative and Creative Thinking, Sharing Ideas, Reflective Practice, and Critical Thinking), and Systems Redesign (Min.of Edu.,2009) <sup>55</sup>
<b>Australia</b>	relationship between issues such as poverty, health, education, security, human rights, economic development, and environmental concerns such as climate change, natural resource management and water and energy consumption (Commonwealth of Australia, 2007) <sup>56</sup>	<b>[Guiding Principle]:</b> (1) Seeking to develop a school culture committed to the principles of sustainable development; (2) Seeking to go beyond awareness raising to action learning and integration with school curricula; (3) Encouraging the involvement of the whole school; (4) Encouraging the involvement of a school's local community and a shift in the broader community towards more sustainable practices and processes; (5) Seeking to develop relationships with other areas that impact on the organization and management of a school; (6) Being founded on a sound basis of theory and practice in schools and school [Key	<b>Components for ESD]:</b> Futures thinking, the Importance of Good Process (including transparency and identifying foreseeable costs and benefits), Building Capacity for Individual and Organizational change, Critical Thinking and Reflection; Innovation; Mentoring and Facilitation, Genuine Participation in Decision Making, the formation of Partnerships for Change; and Lifelong Learning (Commonwealth of Australia, 2007) <sup>58</sup> .

<sup>51</sup> Ministry of Education, 1999, Guideline for Environmental Education in New Zealand Schools, Ministry of Education.

<sup>52</sup> PCE, 2004, See Change, Parliamentary Commissioner for the Environment (PCE).

<sup>53</sup> See in detail from <http://efs.tki.org.nz/Efs-in-the-curriculum/What-is-education-for-sustainability/Efs-Swirl>.

<sup>54</sup> Ministry of Education, 1999, Guideline for Environmental Education in New Zealand Schools, Ministry of Education.

<sup>55</sup> Ministry of Education, 2009, Education for Sustainability (Efs) Strategy, New Zealand National Coordination Team.

<sup>56</sup> Commonwealth of Australia, 2007, Caring for Our Future, The Australian Government Strategy for the United Nations Decade of Education for Sustainable Development, 2005-2014., Australian Government, Department of the Environment and Heritage.

<sup>58</sup> Commonwealth of Australia, 2007, Caring for Our Future, The Australian Government Strategy for the United Nations Decade of Education for Sustainable Development, 2005-2014., Australian Government, Department of the Environment and Heritage.

		<p>systems, quality teaching and learning, and environmental education for sustainability; (7) Encouraging schools to achieve measurable social, environmental, educational and financial outcomes. (AuSSI, 2010)<sup>57</sup></p> <p><b>[Activity Area]:</b> Energy, Waste, Water, Biodiversity, Climate change, Transport, Health and wellbeing, Spirituality and values, Indigenous knowledge, Teaching and learning, Community, Sustainable purchasing (AuSSI, 2010)</p>	
--	--	--	--

<sup>57</sup> See in detail from <http://www.environment.gov.au/education/aussi/what-is-aussi/vision.html>



## Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs,



UNESCO Meeting "Reorienting Teacher Education to Address Sustainability", 8-10, December 2010, Jakarta, INDONESIA

**Masahisa SATO**

m-sato@tcu.ac.jp, masahisasato@hotmail.com

Tokyo City University

8-10 Dec 2010

1

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## Case Analysis: Japan

### Background

#### Environmental Needs

"Environmentally Responsible Citizens"

"Law for Enhancing Motivation on Environmental Conservation and Promoting of Environmental Education" (2003)

#### Educational Needs

"Zest for Living"

"Basic Promotional Plan for Education" (2006) and Revision of "Courses of Study" (2008)

#### "Sustainability"

-(EE) (1) cycles; (2) diversity; (3) ecosystems; (4) symbiosis; (5) limitation; (6) conservation

-(ESD) (1) interdependence; (2) diversity; (3) limitation; (4) fairness;

(5) responsibility; (6) collaboration.

#### Schools Level Implementation

- "Periods of Integrated Study"

- various educational programmes are being taught in line with the principles of sustainability. (Cross Curriculum)

2

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA





## Case Analysis: Japan

### Environmental Education (EE) Guidelines in Schools



#### Guiding principles for the implementation of EE:

(1) aim to create sustainable society; (2) collaborate with schools, families, communities, etc.; (3) be creative with content and methodology appropriate to individual development level; (4) start with actual community conditions; and (5) pay attention to aspects of consumer life.

#### Objectives of EE in elementary school

(1) foster receptivity towards nature; (2) foster environmental perspectives and thinking; and (3) foster ability to take action concerning the environment.

#### Skills and attitudes emphasized by EE:

(1) problem discovery; (2) planning; (3) deduction; (4) utilizing information; (5) consensus building; (6) fair judgment; and (7) proactive participation and self-realization.

#### Environmental perspectives:

(1) cycles; (2) diversity; (3) ecosystems; (4) symbiosis; (5) limitation; and (6) conservation.

NIER, 2007, Teacher's Guide for Environmental Education (Elementary School Edition), Curriculum Research Centre, National Institute for Educational Policy Research of Japan. Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA

3



## Case Analysis: Japan

### ESD Research Meeting, "ESD in Schools"



#### Six perspectives for the creation of sustainable society,

(1) interdependence; (2) diversity; (3) limitation; (4) fairness; (5) responsibility; and (6) collaboration.

#### Skills and attitudes emphasized by ESD

(1) critical thinking and judgment; (2) future forecasting and planning; (3) multiple & holistic thinking; (4) communication; (5) collaborative with the others; (6) respect of interrelationship; and (7) respecting responsibility.

#### As some points to be considered,

(1) interrelationship among subjects; (2) interrelationship among people and people; and (3) inter-relation between ability and attitude.

NIER, 2010, ESD in Schools, Mid-Term Report, NIER, Tokyo, JAPAN.

4

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## Case Analysis: Japan

### In-service Teacher Training in the Context of EE by National Centre for Teacher Development (NCTD)



Japan - Issue Based Training Programme  
for In-service Teachers  
(Environmental Education), Myokou, 2009



Japan - Overseas Training Programme  
for In-service Teachers  
(Environmental Education), New Zealand,  
and UK 2010

5

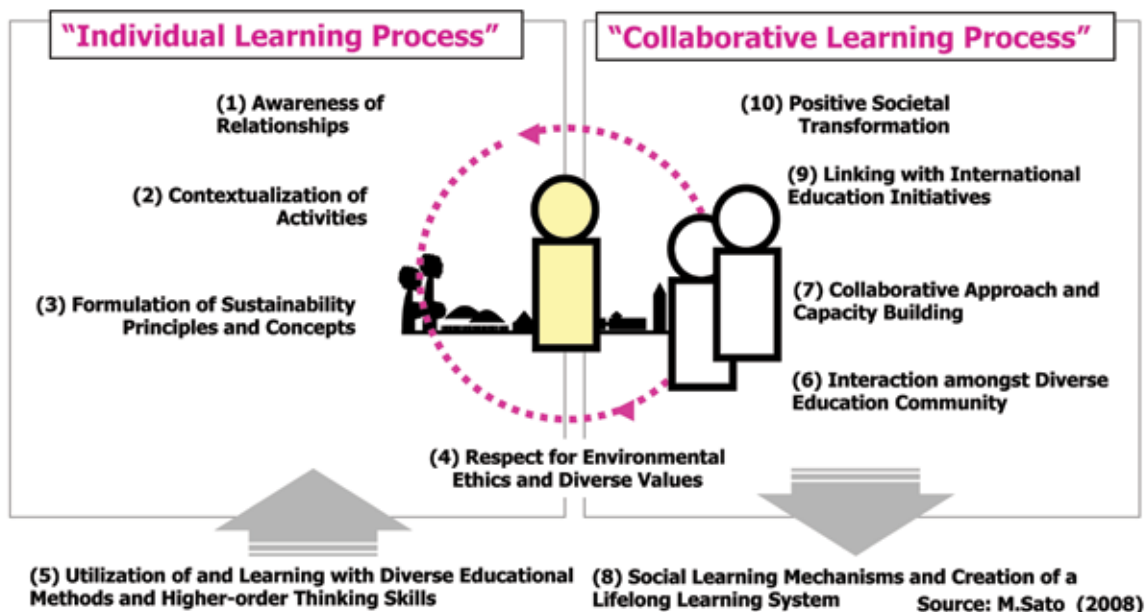
Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



Based

## ESD Conceptual Views on ESD related Cases in Some Countries

### Repetition between "Learning Process" and "Collaborative Process"



Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA

# Shaping Competencies for ESD Schools Linked with OECD Key Competencies

## Case Analysis: Germany

**Breakdown and Classification of part-competences of Gestaltungskompetenz (Shaping Competencies) <sup>[1]</sup>**  
**– Germany-Transfer-21 Programme, 2007**

Classical competence terms	Competence categories in line with OECD (2005)	Part-competences of Gestaltungskompetenz
<b>Subject and Methodological Competence</b>	Interactive use of media and methods (tools) ● Ability to use language, symbols and text interactively ● Ability to use knowledge and information interactively ● Ability to use technologies interactively	T.1 Gather knowledge with an openness to the world and integrating new perspectives T.2 Think and act in a forward-looking manner T.3 Acquire knowledge and act in an interdisciplinary manner
<b>Social Competence</b>	Interacting in socially heterogeneous groups ● Ability to maintain good and durable relationships with others ● Ability to cooperate ● Ability to overcome and resolve problems	G.1 Ability to plan and act together with others G.2 Ability to participate in decision-making processes G.3 Ability to motivate others to get active
<b>Personal Competence</b>	Acting autonomously ● Ability to act within the wider context ● Ability to form and implement a life plan and personal projects ● Awareness of rights, interests, boundaries and requirements	E.1 Ability to reflect upon one's own principles and those of others E.2 Ability to plan and act autonomously E.3 Ability to show empathy and solidarity with the disadvantaged E.4 Ability to motivate oneself to get active

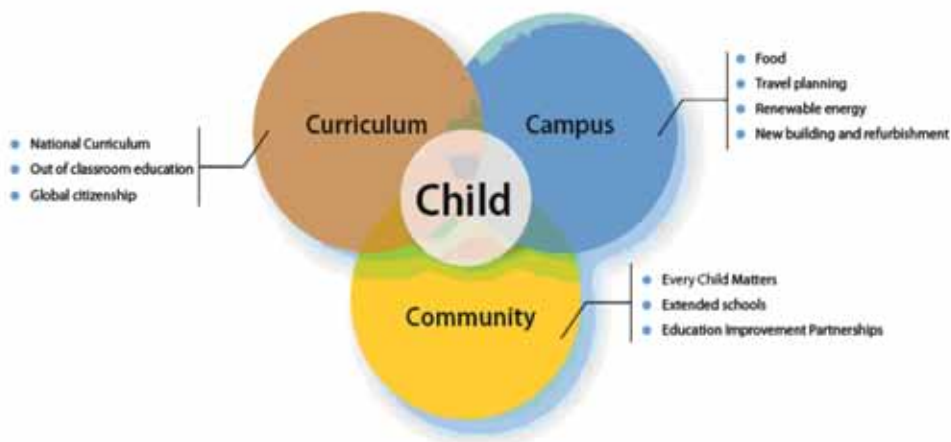
<sup>[1]</sup> Transfer-21 Programme, 2007, Guide, Education for Sustainable Development at Secondary Level, Justification, Competence Learning Opportunities 7

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, 8-10, December 2010, Jakarta, INDONESIA

# Impetus for "Sustainable Schools" 3Cs (Curriculum, Campus, Community)

## Case Analysis: UK

Figure 1: Current impetus for sustainable schools



DFES, 2006, Sustainable Schools for Pupils, Communities and the Environment; delivering UK Sustainable Development Strategy; London, UK. See in detail From: <http://www.dfes.gov.uk/consultations/downloadableDocs/Consultation%20Paper%20Final.pdf> 8

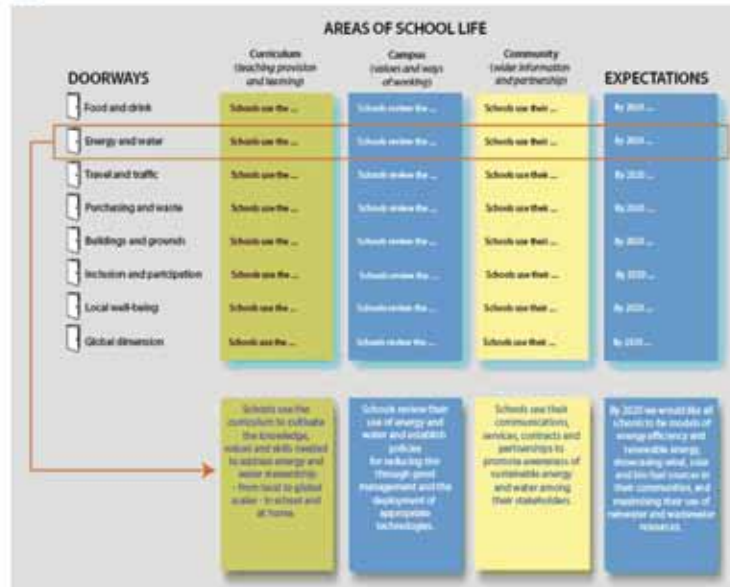
Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, 8-10, December 2010, Jakarta, INDONESIA



## "Sustainable Schools" Links between 3Cs and Doorways

### Case Analysis: UK

Figure 2: A national framework for sustainable schools



DFES, 2006, Sustainable Schools for Pupils, Communities and the Environment; delivering UK Sustainable Development Strategy; London, UK. See in detail From: <http://www.dfes.gov.uk/consultations/downloadableDocs/Consultation%20Paper%20Final.pdf>

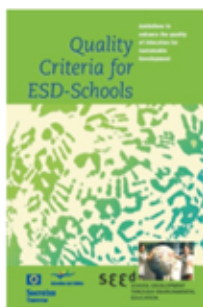
Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## ESD Schools Whole School Approach

### Case Analysis: Comenius-C2

A set of Criteria for the improvement of School's Capacity for Sustainability



Quality criteria regarding the quality of teaching and learning processes	Quality criteria regarding school policy and organization	Quality criteria regarding the school's external relations
<ol style="list-style-type: none"> <li>1. Area of teaching learning approach</li> <li>2. Area of visible outcomes a school and in local community</li> <li>3. Area of perspectives for the future</li> <li>4. Area of a 'culture of complexity'</li> <li>5. Area of critical thinking and the language of possibility</li> <li>6. Area of value clarification and development</li> <li>7. Area of action-based perspective</li> <li>8. Area of participation</li> <li>9. Area of subject matter</li> </ol>	<ol style="list-style-type: none"> <li>10. Area of school policy and planning</li> <li>11. Area of school climate</li> <li>12. Area of school management</li> <li>13. Area of reflection and evaluation of ESD initiatives at school level</li> </ol>	<ol style="list-style-type: none"> <li>14. Area of community cooperation</li> <li>15. Area of networking and partnerships</li> </ol>

Siren Breiting, Michela Mayer and Finn Mogensen, 2005

10

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## ESD Competencies For Teacher Education

### Case Analysis: Comenius-C2

CSCT Framework – Dynamic Model for ESD Competences Teacher Education (Sleurs, ed. 2008)



Sleurs, W., ed. 2008, Competencies for ESD (Education for Sustainable Development) Teachers. A framework to integrate ESD in the Curriculum of Teacher Training Institutes, Comenius2.1 Project 118277-CP-1-2004-BE-Comeniues-C2.1, Brussels, Belgium 11

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## ESD Practical Examples Incorporation ESD views to Subjects and inter-Subject Linkages in Schools

### Case Analysis: Japan



#### "A Guide to Developing and Using ESD Materials, *ESD Kyouzai Katsuyou Gaido*"

to be responsive to school principals and teachers in charge of particular grades and subject areas who might have questions such as "What is ESD?" "How should we promote ESD?" and "How is ESD connected with the educational activities that we are currently pursuing in the school and my own educational practices?" (ACCU, 2008).

importance of incorporating ESD views into existing content of subjects and of promoting inter-subject relationship.

ACCU, 2008, A Guide to Developing and Using ESD Materials, ACCU.  
[http://www.unesco-school.jp/index.php?action=pages\\_view\\_main&page\\_id=500](http://www.unesco-school.jp/index.php?action=pages_view_main&page_id=500)

Sleurs, W., ed. 2008, Competencies for ESD (Education for Sustainable Development) Teachers. A framework to integrate ESD in the Curriculum of Teacher Training Institutes, Comenius2.1 Project 118277-CP-1-2004-BE-Comeniues-C2.1, Brussels, Belgium 12

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## Key Points to be Considered

### **Key Points to be considered for the Development of Framework of National Curriculum**

---

- Positioning of three realms of Sustainability, SD Key Concepts
  - Needs (Educational, Environmental, Social, Cultural, Economical) and Social Relevance
  - Policy Linkages and Justification
  - Guiding Principles, Perspectives for Implementation
  - Doorways / Introductory Topics – Sustainability Issues
  - Curriculum – (Teaching & Learning), SD Elements for Learning (Knowledge, Issues, Skills, Perspectives, Values, Transformation), Competence based Curriculum, Inter-Subject Linkages
  - Campus (Value and Thinking), School Management – Whole School Approach,
  - Community Linkages (Partnership)
  - Quality Criteria Setting and Evaluation – Self-Evaluation by implementers, In Schools, for School (e.g. by Local Authorities), practical cases
- 

13

Masahisa SATO 2010, Development of Framework for ESD National Curriculum centered on contents reflecting national / indigenous education / environmental needs, , 8-10, December 2010, Jakarta, INDONESIA



## **SESSION 3**

WRAP UP DAY 1 AND CLOSURE

## *Session*

### SUMMARY 3

---

**Chairman:** Mee Young Choi, ESD Team Leader/Programme Specialist in Education

Dr. Choi wrapped up Day 1 by giving an overview of the training workshop. This Training Workshop on *“Developing Capacities of Teacher Education Institutions of Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor Leste in Reorienting Teacher Education to Address Sustainability”* was held on 8 – 10 December 2010 in Jakarta, Indonesia with the support of the Government of Japan under the UNESCO-Japanese Funds-in-Trust Project. The training was organised in cooperation with the National Commissions for UNESCO, Teacher Education Institutions (TEIs) and Ministries of Education responsible for Teacher Education in the UNESCO Office Jakarta’s five cluster countries.

The opening session of the Reorienting TEIs-ESD Training Workshop was chaired by Dr. Choi, herself. She opened this session by introducing in general the extra-budgetary project and its specific title and sub-theme of the Training workshop on **“Education for Sustainable Development for Changing the Climate of Teacher Education to Address Sustainability”**, and the main issues to be addressed. She further introduced the resource persons of each session with their topics of presentation. Subsequently, after the brief introduction Dr. Choi welcomed the Director-General of Higher Education, represented by Mr. Supriadi Rustad, Director of Human Resource Affairs, Directorate-General of Higher Education, Ministry of National Education of the Republic of Indonesia to deliver an Opening Remark. In this session, Dr. Choi was asked by Prof. Hubert Gijzen, Director and Representative of the UNESCO Office, Jakarta to present his welcoming remarks on his behalf. Prof. Gijzen was able to present and share his views during the closing session of the training workshop.

The overall session of the training workshop was divided into seven sessions. These included the sessions for key-note addresses, paper and powerpoint presentations, brief country reports from the representatives of the five cluster countries of UNESCO Office, Jakarta: Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste; and conclusive session. The main paper and powerpoint presentations entitled **Global, Regional and National Strategy on Education for Sustainable Development (ESD); ESD Curriculum Development and national ESD Activities; and, ESD Curriculum Development** were presented. The main objective of the training was to assist Teacher Education Institutions (TEIs) and representatives of the Ministries of Education (MoEs) responsible for teacher education from Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste in developing their own ESD country guidelines to reorient teacher education to address sustainability.

A back-to-back discussion was also devoted to discuss the publication of a handbook entitled *“Changing the climate of teacher education to address sustainability putting transformative education into practice”*. This discussion mainly involved the resource persons, as the authors of this book. The resource persons were able to develop a template for the handbook. The draft version of this handbook will also be presented by the resource persons in the June 2011 meeting. The handbook will expectedly be published in 2011.





**SESSION 4**

ESD CURRICULUM DEVELOPMENT

## *Session*

### **SUMMARY 4**

---

**Chairman:** Mee Young Choi, UNESCO Office, Jakarta

- **Teaching pedagogy development in ESD: *What do we need to reflect on an ESD national guidelines development in consideration of teaching pedagogy?***

Presented by: Prof. Annette Gough, RMIT University, Australia

- **UNESCO Jakarta Office Guidance group discussions for the preparation of a sub-regional national ESD country guideline**

Presented by: Mee Young Choi, Dr., ESD Team Leader/Programme Specialist in ESD

Prof. Annette Gough emphasised the importance of how we teach, rather than what we teach. Teacher education has been recognised as essential to achieve goals in environmental education and ESD for over 35 years. There is a need for all teachers to understand the importance of teaching environmental education and also to include environmental science and environmental education in curriculum for pre-service teachers and in-service training. If we think about environmental education as education for, in and about the environment; education for the environment is often missing. Programmes do not address the attitudes, values and actions which are essential parts of environmental education and ESD. Environmental education was often offered as an elective because someone was passionate about it and not because of its importance. It was usually taught at the end of the teacher training programme. Environmental education is not pushed by the education ministry but rather by environmental agencies. Environmental education struggles to be recognised in the curriculum along with literary and numeracy. However, if it is introduced and mainstreamed across the educational programme as a whole system approach, it is likely to have success. The challenges of environmental education are that the curriculum does not mandate environmental education to be part of the curriculum (except in Japan); there are no teacher certification guidelines which incorporate sustainability; absence of teacher educators are knowledgeable about ESD; not enough funding or support; absence of policies to support the programmes; absence of climate or the culture within universities and TEI to support education to address sustainability. There is the link between ESD, the UN Decade for Literacy, EFA, and the MDGS, that provide us with a way forward. Changing pedagogical approach is a challenge, it is not easy, but is essential. In conclusion, good environmental education and good education for sustainability is just good education. If you want to transform society and not reproduce the disasters we currently have; then we really need good education, which means good ESD.

Dr. Choi led the discussions in preparing for the national ESD country guidelines. This group discussions session was divided based on each participating country within the cluster attended this training workshop. There were in general five sub-group discussions (Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor Leste).

# Appropriate Pedagogy for Education for Sustainability in Teacher Education

**Prof. Annette Gough**

Head, School of Education, School of Education  
RMIT University, Melbourne, Australia

## Introduction

In this paper I will be discussing the background to the importance of teacher education in achieving the goals of education for sustainability, examples of progress to date in incorporating education for sustainability into teacher education, and unpacking the meaning of ESD-related pedagogies for teacher education institutions who need to be developing teachers competencies in socially transformation pedagogy and curriculum development as part of their ESD national guideline development (UNESCO, 2007a, 2007b).

The context for this paper is the example of Teacher Education given in the UNESCO Bangkok document *Asia-Pacific Guidelines for the Development of National ESD Indicators* for monitoring and assessing progress during the United Nations Decade of ESD in the Asia-Pacific Region (UNESCO Bangkok 2007a, 2007b) – see Table 1. The paper is also seen as complementary to the *Framework for Science, Technology, Engineering and Mathematics Education in the Context of Education for Sustainable Development in Universities in Asia and the Pacific* I have recently developed for the UNESCO Jakarta Office (Gough, 2010).

	Indicator Type	Function	Indicator Example
Status	Baseline	To identify the status of the overall ESD picture	% of new teachers currently receiving pre-service training in ESD
	Context	To identify the existence of ESD support systems	National education policy exists that requires pre-service teacher education courses to provide training in ESD
Facilitative	Process	To identify the existence of ESD processes and activities	All pre-service teacher education courses provide training on ESD-related content and pedagogy
	Learning	To promote learning and reflection on ESD	Lessons learned in the process of training pre-service teachers in ESD are captured
Effect	Output	To assess outputs such as tools and learning resources, and the immediate results of an activity	% of new teachers certified as having received pre-service training in ESD
	Outcome	To assess outcomes related to changes or improvements that result from ESD efforts	% of new teachers using ESD-related content and pedagogy in the classroom
	Impact	To assess impacts that result from ESD efforts	Learners use sustainable practices in daily life
	Performance	To assess the change in the status of the overall ESD picture in a region or country	Increase in the number of new teachers receiving pre-service training

(Tilbury & Janousek, 2006)

**Table 1: Indicator Types Using Teacher Education as an Example (Source: UNESCO Bangkok, 2007b, p.4).**

## Background

Teacher education has long been identified as a major target audience for environmental education. For example, The Belgrade Charter (1975) and recommendations 17 and 18 from the 1977 Tbilisi Intergovernmental Conference on Environmental Education (UNESCO, 1978) specifically refer to pre-service teacher education and in-service teacher education and call for teacher education to include environmental education.

These early recommendations were framed around the belief that all teachers need “to understand the importance of environmental emphasis in their teaching” and so “environmental sciences and environmental education [need to] be included in curricula for pre-service teacher education” and that “the necessary steps [are taken] to make in-service training of teachers in environmental education available for all who need it” (UNESCO, 1978, pp.35-36). Within this context, environmental education was seen as preparing “the individual for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values” (UNESCO, 1978, p.24).

Teacher educators who were conscious of and engaged with the environmental education movement responded to these calls for environmental education in teacher education through a range of individual and group projects for both pre-service and in-service teacher education. Many of these initiatives had a curriculum focus on increasing teachers’ awareness of environmental issues and environmental content knowledge, but a few were concerned with pedagogy and recognition of the need for changing worldviews.

## Early Initiatives

At an international level, in the 1980s the UNESCO-UNEP International Environmental Education Programme (IEEP) commissioned and published the thirty volumes of its Environmental Education Series (the “Green Books”) to support various aspects of teacher education. These include pre-service or in-service teacher training modules and programs (11 of the 30 volumes), education modules for classroom use (7), guides and approaches to various aspects of environmental education (9), and trend paper or surveys (3).

National projects for incorporating environmental education into teacher education have been developed and implemented in a number of countries at both pre-service and in-service education levels. The *Australian Teaching for a Sustainable World*, subtitled “A New Agenda in Teacher Education” (Fien, 1995) was designed as a pre-service teacher education project, but the modules could also be used in in-service teacher education contexts. Interestingly, this project was funded by the Australian development assistance agency, AIDAB, and the modules attempted to integrate environment and development issues, which makes them an early example of materials consistent with the current Education for Sustainable Development agenda. Also in the early 1990s, there was a European Union initiative on environmental education within pre-service teacher education programmes which addressed pedagogical, assessment, implementation, curriculum and school aspects of what makes an “environmentally educated teacher” (Brinkman and Scott, 1996).

At the individual teachers’ college or university level there were also numerous initiatives to incorporate environmental education curriculum content and pedagogy issues into teacher education programs. For example, at Deakin University in Australia, environmental education was a popular elective program from the late 1970s into the 1990s – but it was never part of the core teacher education program (Gough, 1998). From the findings of the survey conducted by Ferreira, Ryan and Tilbury (2007) this was not atypical.

Environmental education research literature of the 1990s provides a recurring testimony to the lack of success in introducing coherent or consistent programmes of environmental education into teacher education courses, despite many efforts (Gough, 1998). Reviews of environmental education in teacher education from around this time tended to find that

- All universities offered some form of EE at some stage in their pre-service teacher education programmes
- Not all programs are implemented in a manner consistent with the EE literature
- EE is often offered as an elective and is frequently only included in a course because of a lecturer's individual efforts
- EE is sometimes not offered until the final year of a teacher education programme
- There are substantial number of teachers who enter the teaching profession without any formal training in EE
- Where EE is taught as an integrated subject it is most likely associated with science or social studies subjects.

The calls for teacher education to include environmental education were heeded by those who were engaged with the area, but for others, the calls fell on deaf ears because environmental education was seen as a political priority rather than an educational one. The calls for its inclusion came from government level meetings and from activists outside of education – often environment groups and government environmental agencies – rather than from within education bureaucracies. As such, it was seen as yet another outside pressure for inclusion of an area into an already overcrowded curriculum – along with such things as driver education, sex education, multicultural education, and so on – and as such did not carry any requirement to comply.

The range of options for the inclusion of ESD in teacher education programs that can be found in practice include:

- Struggling to be recognised as core curriculum alongside literacy and numeracy in early childhood and primary teacher education programs,
- Being offered as an elective, which results in a few teachers specialising in ESD,
- Being mainstreamed across the teacher education program so that a genuine 'whole-of-system' approach to ESD can be developed, or
- A combination of the above (adapted from Ferreira, Ryan and Tilbury, 2006, p.13).
- The extent to which any teacher education institution takes up one or all of these options is usually within the control of the institution.

### **New Directions**

In 2005, after much international consultation, UNESCO published *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability* (Hopkins and McKeown, 2005). Unlike the earlier UNESCO-UNEP International Environmental Education Programme (IIEP) series, these Guidelines recognised the importance of teacher education institutions developing "their own thematic guidelines based on descriptions and ideals of sustainability" (Hopkins and McKeown, 2005, p.15). To provide some guidance, Hopkins and McKeown (2005, p.16) proposed nine criteria (seven positive and two negative) for creating and evaluating new ESD projects:

- ESD is locally relevant and culturally appropriate
- ESD is based on local needs, perceptions, and conditions, but recognises fulfilling local needs often has global effects and consequences.
- ESD engages formal, non-formal, and informal education.
- ESD is a life-long endeavour.
- ESD accommodates the evolving nature of the concept of sustainability.
- ESD addresses content, context, pedagogy, global issues, and local priorities.
- ESD deals with the well being of all three realms of sustainability – environment, society, and economy.
- ESD is not imported from another cultural, economic or geographic region.
- ESD is not "one size fits all", but must be created to account for regional differences.

The *Guidelines* document also recognises that “addressing ESD will require student teachers to think about their profession differently and learn skills that perhaps, teachers in previous eras did not learn or use” as well as understanding the interrelatedness of the environment, society, and economy and having this interrelatedness “evident in their teaching and their lives as community members” (UNESCO, 2005, p.43). However, by having the guidelines so broad there is the risk that teacher educators, and those who determine the content of teacher education programs, could well continue to overlook ESD because the agenda has become much more complicated and they do not know what to do, so they continue to operate in ignorance until required to act.

Nevertheless, two recent Australian initiatives have taken up the challenge posed by the UNESCO *Guidelines* (see Ferreira, 2008 and Gooch et al, 2008). Other initiatives have been implemented in Canada (Beckford, 2008) and Jamaica (Down, 2006).

Firstly, the Australian Government, through its Department of the Environment, Water, Heritage and the Arts, funded the “Mainstreaming Education for Sustainability within Teacher Education in Australia” research project. This project piloted a model for whole-of-system change as recommended in Ferreira, Ryan and Tilbury (2006). According to Ferreira (2008),

The model is a combined whole-of-system and action-research approach that seeks to engage key actors and decision-makers across teacher education systems in a process of learning and change. The model recommends that key agents of change within the teacher education system adopt a participatory action research approach to mainstream Education for Sustainability (EfS) within and across a whole pre-service teacher education system.

The pilot study was implemented teacher education institutions in Queensland and the Northern Territory in 2008. This pilot has allowed for problematising how systems thinking can influence and enable change within and across a whole system, and for lessons to be learnt about the potential and limitations of an action-research process in deeply engaging change agents of in a process of mainstreaming a change within a system. Findings from the pilot study indicate that ESD can be mainstreamed within teacher education by:

- capacity building within the teacher education community by
  - o developing competencies in education for sustainability;
  - o establishing more effective interactions between decision-makers and other stakeholders;
  - o establishing a community of inquiry for participants; and
  - o developing an appreciation of whole-school approaches to sustainability
- engaging with policy developers to:
  - enable a realignment of current policies; and
  - make changes to accreditation processes within education departments, teacher registration authorities and curriculum bodies;
- thinking broadly about the teacher education, so that all stakeholders are engaged in the change process; and
- improving networks across the teacher educator systems by: identifying and supporting key agents of change within the sector and by developing new, and utilising existing, partnerships between schools, teacher education institutions and government agencies in the area of education for sustainability and whole-school approaches.

These documents are consistent in recognising the need to develop teachers’ competencies in education for sustainability and the need for developments to be locally relevant.

## **A “Third Way”<sup>59</sup> pedagogy for education for sustainability in teacher education**

For three decades environmental education literature has asserted that it ‘should adopt a critical approach to encourage careful awareness of the various factors involved in the situation’ (UNESCO 1980, p.27). According to such literature, environmental education should also involve learners in planning their learning experiences, ‘utilize diverse learning environments and a broad array of educational approaches to teaching/learning’ and ‘focus on current and potential environmental situations’ (UNESCO 1978, p.27).

These characteristics of environmental education, in particular the emphasis on adopting a critical approach and focusing on current and potential situations, suggest a common ground between environmental education and socially critical pedagogy as described by Kemmis et al. (1983) and more recently as transformative education (Wals, 2006) or problem-based learning (Zandvliet, 2007; Dahlgren & Öberg, 2001).

Socially transformative environmental education is intended to provide students with a map of the existing culture and society and a map of what a better society might be like (Kemmis, 1986, p.19). Such an approach concerns itself with a critical understanding of, and an informed commitment to, the improvement of society, and, like environmental education, it seeks to empower students to participate in a democratic transformation of society.

Kemmis, Cole and Suggett (1983, p.9) argue for education which engages society, social structures and social issues immediately, rather than merely preparing students for later participation. They believe that education “must engage social issues and give students experience in working on them — experience in critical reflection, social negotiation and the organisation of action”. While there is an emphasis on immediacy in action and reflection, socially transformative education also seeks to locate and interpret current culture within an historical context : “We need to learn or re-learn what our bureaucratic culture has hidden from us — that we are not only the products of history but also the makers of history” (Kemmis, 1986, p.13).

A socially transformative approach contrasts with vocational and liberal progressive approaches in a number of dimensions (see Table 2), and it has significant implications for the pedagogy adopted in schools and for the content of the curriculum.

A socially transformative education has characteristic views of knowledge, the role of teachers and learners, broad curriculum organisation, school-community liaison, and the role of consultants:

- knowledge is seen as constructed through social interaction and thus as historically, culturally, politically and economically located; it has its meaning in actions of projects whose significance is in specific historical, political and economic contexts.
- a learning role for students is in using available knowledge through interaction with others in socially-significant tasks of critique or collaborative work.
- a proper role for the teacher is as project organiser and resource person, organising critical and collaborative activities in negotiation with students and community, demanding joint values of autonomy and social responsibility.
- differentiation of subjects and use of time is seen as being based on negotiation between community, teachers and students about the whole curriculum as a ‘project’.
- schools are seen as taking initiatives in the community as well as ‘on behalf of the community’ within the school, with reciprocal interaction as the preferred goal rather than procedural ‘liaison’.

---

<sup>59</sup> According to Clinton (1999), ‘Third Way’ “is a way that requires governments to empower “people with tools and conditions necessary for individuals, families, communities and nations to make the most of their human potential”. In the context of this paper I am interpreting this as TEIs empowering teachers to achieve the goals of education for sustainability.

- outsiders, where they are called in for consultancy tasks, are seen as contributors to a collaborative school- and community-based process; they are resources. (Kemmis, Cole & Suggett, 1983, pp.11-14).

**Table 2: Orientations to the curriculum and pedagogy (after Kemmis, Cole & Suggett, 1983)**

<i>Orientation to the curriculum</i>	<i>Vocational/Neo-classical</i>	<i>Liberal Progressive</i>	<i>Socially Transformative</i>
<b>View of knowledge</b>	objective	subjective	dialectical
<b>Desired student outcomes</b>	finding one's place in society	the 'educated' person	a critical and constructive co-participant in the life and work of society
<b>Learning theory</b>	behaviourism, deficit models of the learner	constructivist-interactionist, models of the learner as building cognitive structures through interaction	social constructivist-interactionist model of the learner as reconstructing in his/her own knowledge a social reality that is socially constructed and subject to reconstruction through historical and political processes
<b>Teacher-student relationship</b>	teacher is in authority, uses directive pedagogy	teacher is a leader with recognised knowledge and concern for student growth	teacher is a coordinator with an emancipatory aim, involves students in negotiation about common tasks
<b>Broad curriculum organisation</b>	rigid subject differentiation and timetabling	weak subject differentiation and timetabling	differentiation of subjects and use of time based on negotiation about the whole curriculum as 'project'
<i>Orientation to the curriculum</i>	<i>Vocational/Neo-classical</i>	<i>Liberal Progressive</i>	<i>Socially Transformative</i>
<b>Society</b>	school prepares and selects students for participation in society which is taken for granted as a structured system of inequalities, school has role in maintaining, reproducing and legitimating social, economic, political structures and divisions by preparing students to compete successfully for opportunities	school prepares students to participate in the reconstruction of society, school is seen as civilising for all	school and society reflect one another, school may help in overcoming social inequities and preparing students for participation in social, political and economic activities, with a stress on socially, morally and politically justifiable conflict resolution



Teachers working within the framework of a socially transformative pedagogy attempt to provide learning experiences that give students an historical and critical perspective on society, and give them opportunities to engage in activities that are consistent with building a responsive democratic society. These learning experiences are negotiated with the students, other staff and the wider school community.

Learning is seen as a cooperative process and students are seen as agents for producing working knowledge through interaction with others in socially significant tasks. Such tasks include collaborative community projects which are a response to community concerns and which engage students in collaborative reflection and learning from direct experience. In a socially transformative school teachers teach less often by didactic approaches such as telling and testing and more often by encouraging inquiry, critical reflection and action. They work with students on topics that the students believe to be important and through tasks they find rewarding and significant (Greenall Gough & Robottom, 1993).

Many of these aspects of a socially transformative approach for integrating sustainability have been elaborated by Wals (2006). He emphasises the importance of direct experiences with and in depth study of a real world phenomenon, exposing learners to different ways of knowing and valuing through self-confrontation, encouraging social interaction between learners, and the development of action and action competence as an integral part of the learning process. These are very different approaches and strategies compared with the passive learning and teaching that is characteristic of vocational and liberal progressive approaches.

Others have also argued for education as a process of personal and social development (transformation) as distinct from a top-down transmission of selected knowledge, skills and values, and for such education to be within a holistic, as distinct from fragmented, world-view. For example, Huckle (1991) argued for a socially transformative pedagogy for environmental education which seeks to empower students so that they can democratically transform society, as the most suitable approach for environmental education in schools. He sees it as having the following characteristics:

- learning is active and experiential;
- classroom dialogue introduces elements of critical theory and encourages pupils to think critically;
- pupils begin to see themselves, their histories and futures, in new ways. They develop a sense of their own power to shape their lives;
- values education develops comprehension of the sources of beliefs and values, how they are transmitted, and the interests they support;
- pupils reflect on the structural and ideological forces that influence and restrict their lives and on democratic alternatives;
- pupils are taught how to act democratically with others to build a new social order.

Such an approach would enable students to pursue the ecological and other content of environmental problems, and engage the problems, in a much more satisfactory and meaningful context than the present knowledge based curriculum. In a socially transformative pedagogy, students, teachers, parents and the wider community can all be involved in the practice of just, participatory and collaborative decision making, as noted above.

### **Socially transformative strategies<sup>60</sup>**

The challenge for teacher education is to ensure that teachers can provide a wide range of effective learning experiences that promote and support education for sustainability.

---

<sup>60</sup>This section is based on the manuscript I developed with Brian Sharpley which was published by DEH (2005) as *Educating for a Sustainable Future: A National Statement on Environmental Education for Schools*.

Some teaching strategies are more appropriate than others, depending on the needs of the student. Appropriate strategies display two broad characteristics – they place the student at the centre of the learning, and they are highly interactive within and beyond the classroom. This change to being a facilitator rather than an information provider is potentially a significant change for many teachers and teacher educators. Some important strategies supportive of education for sustainability are described below.

*Experiential learning:* Sometimes called ‘learning by doing’ or ‘hands-on’, experiential learning engages students in constructing knowledge, skills and values from direct experience and in contexts that are personally relevant to them. Such experiences are supported by feedback, reflection, critical analysis and the application of the ideas and skills to new situations. Experiential learning takes many forms, ranging from scientific predict-observe-explain situations to drama and creative art activities. Experiences outside the classroom are also important. These can include visits to environmental education centres, national and state parks, farms, zoos, museums, beaches and many other sites.

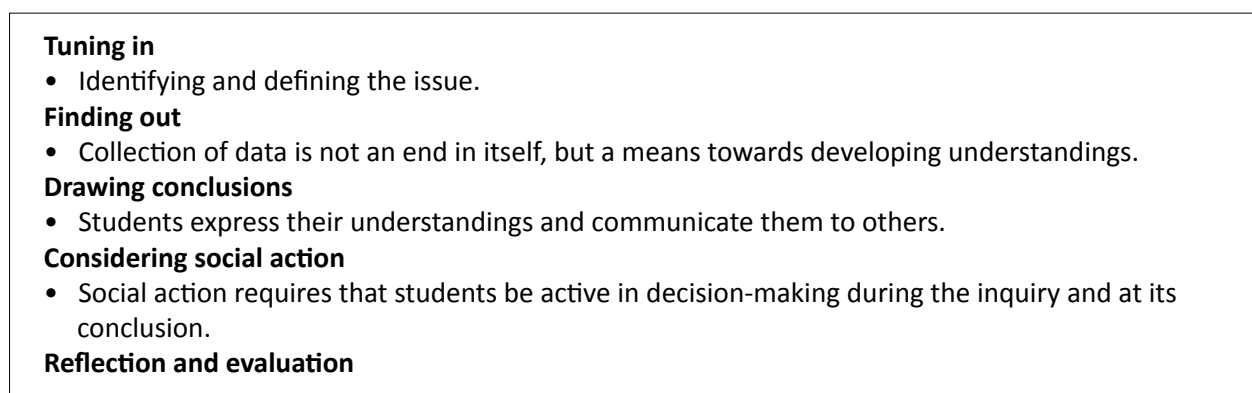
*Values clarification and analysis:* Dealing with controversial issues in a balanced and sensitive manner is one of the greatest challenges for teachers. Values clarification is an approach that encourages students to analyse their own thoughts and feeling about an environmental issue, while values analysis encourages students to think about and analyse a range of people’s viewpoints in relation to their own. Students can be encouraged and enabled to explore concepts of spirituality and sacredness of place and the stewardship of finite resources.

*Creative thinking:* A range of techniques is available that encourage students to explore environmental issues, generate possibilities, and look for possible answers or solutions. We need to provide opportunities for divergent, multidimensional thinking in addition to the more convergent reductionist approaches favoured in the sciences. Developing students’ creative thinking skills helps them develop a vision for a sustainable future.

*Future problem solving* is a strategy for helping students develop skills for analysing an environmental problem. Working through a step by step process can help them decide, from a futures perspective, what can be done about the problem.

*Storytelling:* An entertaining and interesting narrative can be used as a gateway for students of all ages to explore education for sustainability concepts, attitudes and skills. Stories can come from different sources, including the full range of electronic media. Storytelling is also important in indigenous knowledge, and can be a strategy for understanding and exploring other ways of knowing.

**Figure 1: The socially transformative inquiry learning process**



*Inquiry learning:* Inquiry learning encourages students to respond to their own concern or curiosity and to investigate and act on an environmental issue. Students are encouraged to think through and solve problems associated with that issue. They are responsible for collecting and analysing data in order to

reach their own conclusions and to decide on appropriate courses of action (see Figure 1).

*Science in the community:* Collecting scientific data from the local environment is a common activity in many schools. A wide range of data can be collected from the local environment, including data on soil, air, water, energy, solar radiation, transport and biodiversity. Such activities have the potential to link scientific ideas with community concern and activity, and provide opportunities for students to actively participate in local issues. Projects such as Waterwatch and the like provide frameworks and forums to extend local activities to the national and global arenas.

## Conclusion

Achieving the goals of education for sustainability requires a very different approach to learning and teaching from that currently practiced in most schools and teacher education institutions. This is not a new observation – it has been signalled since the UNESCO meetings on environmental education of the 1970s. However, with the United Nations Decade of Education for Sustainable Development (2005-2014) bringing together of the Millennium Development Goal (MDG) process, the Education for All (EFA) movement and the United Nations Literacy Decade (UNLD) – there is a stronger connection with socially transformative education and the importance of universal literacy and social equity. Changing the pedagogical approaches in teacher education is a challenge, but it is one TEIs can no longer ignore.

## References

- Beckford, Clinton (2008). Re-orienting environmental education in teacher education programs in Ontario. *Journal of Teaching and Learning*, 5(1), 55-66.
- The Belgrade Charter Framework for Environmental Education (1975). In Greenall, Annette & Womersley, Jon (Eds.) (1977) *Development of Environmental Education in Australia: Key Issues* (pp.77-82). Canberra: Curriculum Development Centre.
- Brinkman, Fred G. & Scott, William A.H. (1996). Reviewing a European Union Initiative on Environmental Education within Programmes of Pre-service Teacher Education. *Environmental Education Research*, 2(1), 5-16.
- Clinton, William J. (1999). Remarks at the dinner for the conference on Progressive Governance for the 21<sup>st</sup> century in Florence, Italy. November 20, 1999. In George Negus (2001) *The World from Italy: Football, Food and Politics* (p.199). HarperCollins.
- Dahlgren, Madeleine Abrandt & Öberg, Gunilla (2001). Questioning to learn and learning to question: Structure and function of problem-based learning scenarios in environmental science education. *Higher Education*, 41, 263–282.
- Department of the Environment and Heritage (DEH) (2005) *Educating for a Sustainable Future: A National Statement on Environmental Education for Schools*. Carlton South, Victoria: Curriculum Corporation. Accessed at [www.environment.gov.au/education/publications/pubs/sustainable-future.pdf](http://www.environment.gov.au/education/publications/pubs/sustainable-future.pdf)
- Down, Lorna (2006). Addressing the challenges of mainstreaming education for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 7(4), 390-399.
- Ferreira, Jo-Anne (2008). Mainstreaming Education for Sustainability within Teacher Education in Australia. Abstract for symposium to be presented at the annual conference of the Australian Association for Research in Education, Brisbane, Queensland, 30 November - 4 December (FER08414).
- Ferreira, Jo-Anne; Ryan, Lisa & Tilbury, Daniella (2006). *Whole-school approaches to sustainability: A review of models for professional development in pre-service teacher education*. Sydney: Australian

Research Institute in Education for Sustainability for the Australian Government Department of the Environment and Heritage. Accessed at [www.aries.mq.edu.au/pdf/TeacherEduDec06.pdf](http://www.aries.mq.edu.au/pdf/TeacherEduDec06.pdf).

- Ferreira, Jo-Anne; Ryan, Lisa & Tilbury, Daniella (2007). Mainstreaming education for sustainable development in initial teacher education in Australia: a review of existing professional development models. *Journal of Education for Teaching*, 33(2), 225-239.
- Fien, John (1995). Teaching for a Sustainable World: the Environmental and Development Education Project for Teacher Education. *Environmental Education Research*, 1(1), 21-33.
- Gooch, Margaret; Rigano, Donna; Hickey, Ruth & Fien, John (2008). How do primary pre-service teachers in a regional Australian university plan for teaching, learning and acting in environmentally responsible ways? *Environmental Education Research*, 14(2), 175-186.
- Gough, Annette (1998). Researching environmental education in teacher education: Initiating and sustaining student interest. *International Research in Geographical and Environmental Education*, 7(3), 260-264.
- Gough, Annette (2010). *Framework for Science, Technology, Engineering and Mathematics Education in the Context of Education for Sustainable Development in Universities in Asia and the Pacific*. Draft prepared for UNESCO Office, Jakarta, October.
- Greenall Gough, Annette & Robottom, Ian (1993). Towards a socially critical environmental education: Water quality studies in a coastal school. *Journal of Curriculum Studies*, 25(4), 301-316.
- Hopkins, Charles & McKeown, Rosalyn (2005). *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability*. Education for Sustainable Development in Action Technical Paper No2. Paris: UNESCO. Accessed at <http://unesdoc.unesco.org/images/0014/001433/143370e.pdf>.
- Huckle, John (1991). Education for Sustainability: Assessing Pathways to the Future. *Australian Journal of Environmental Education*, 7, p.43-62.
- Kemmis, Stephen; Cole, Peter & Suggett, Dahle (1983). *Orientations to curriculum and transition: Towards the socially critical school*. Melbourne: Victorian Institute of Secondary Education.
- Kemmis, Stephen (1986). Mapping Utopia: Towards a socially critical curriculum. *Interaction*, 14(5), 11-30.
- UNESCO (1978). *Intergovernmental Conference on Environmental Education: Tbilisi (USSR), 14-26 October 1977. Final Report*. Paris: UNESCO.
- UNESCO (1980). *Environmental education in the light of the Tbilisi Conference*. Paris: UNESCO.
- UNESCO Bangkok (2007a). *Asia-Pacific Guidelines for the Development of National ESD Indicators*. Bangkok: UNESCO Bangkok.
- UNESCO Bangkok (2007b). *Monitoring and assessing progress during the UNDESD in the Asia-Pacific Region: A quick guide to developing national ESD indicators*. Bangkok: UNESCO Bangkok.
- Wals, Arjen (2006). The end of ESD... the beginning of transformative learning – emphasizing the E in ESD. In M. Cantell (Ed.), *Seminar on Education for Sustainable Development, Helsinki, 15 February 2006* (pp.41-58). Helsinki: Finnish National Commission for UNESCO.
- Zandvliet, David (2007). Learning Environments for Environmental Education. Paper presented at the Australian Association for Research in Education annual conference, Fremantle, WA, November (ZAN07609).

# Appropriate Pedagogy for Education for Sustainability in Teacher Education: A “Third Way”?

Annette Gough

School of Education

[www.rmit.edu.au](http://www.rmit.edu.au)



Not what we teach but HOW we teach

ESD = different content = Teach differently  
for students to learn differently

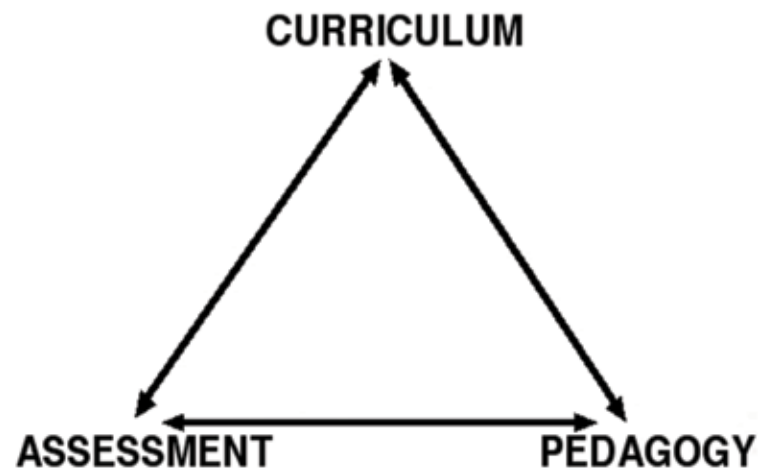
## Outline of presentation

- Context for this presentation
- Background to the importance of teacher education in achieving the goals of education for sustainability
- Unpacking the meaning of ESD-related socially transformative pedagogies for teacher education
- Example of progress to date in incorporating education for sustainability into teacher education

## Context for this presentation

- *Asia-Pacific Guidelines for the Development of National ESD Indicators* for monitoring and assessing progress during the United Nations Decade of ESD in the Asia-Pacific Region (UNESCO Bangkok 2007a, 2007b)
- *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability*. (Hopkins & McKeown, 2005 for UNESCO Paris).
- *Framework for Science, Technology, Engineering and Mathematics Education in the Context of Education for Sustainable Development in Universities in Asia and the Pacific* (Gough, 2010 for the UNESCO Jakarta Office).

## Context for this presentation



## Indicator Types for Teacher Education

	Indicator Type	Function	Indicator Example
Status	Baseline	To identify the status of the overall ESD picture	% of new teachers currently receiving pre-service training in ESD
	Context	To identify the existence of ESD support systems	National education policy exists that requires pre-service teacher education courses to provide training in ESD
Facilitative	Process	To identify the existence of ESD processes and activities	All pre-service teacher education courses provide training on ESD-related content and pedagogy
	Learning	To promote learning and reflection on ESD	Lessons learned in the process of training pre-service teachers in ESD are captured
Effect	Output	To assess outputs such as tools and learning resources, and the immediate results of an activity	% of new teachers certified as having received pre-service training in ESD
	Outcome	To assess outcomes related to changes or improvements that result from ESD efforts	% of new teachers using ESD-related content and pedagogy in the classroom
	Impact	To assess impacts that result from ESD efforts	Learners use sustainable practices in daily life
	Performance	To assess the change in the status of the overall ESD picture in a region or country	Increase in the number of new teachers receiving pre-service training

(Tilbury & Janousek, 2006)

## Role of teacher education

- The Belgrade Charter (1975) and recommendations from the 1977 Tbilisi Intergovernmental Conference on Environmental Education (UNESCO, 1978) specifically refer to pre-service teacher education and in-service teacher education and call for teacher education to include environmental education.
- These early recommendations were framed around the belief that all teachers need “to understand the importance of environmental emphasis in their teaching” and so “environmental sciences and environmental education [need to] be included in curricula for pre-service teacher education” and that “the necessary steps [are taken] to make in-service training of teachers in environmental education available for all who need it” (UNESCO, 1978).

## Effectiveness of early initiatives in pre-service teacher education

- All universities offered some form of EE at some stage in their pre-service teacher education programmes
- Not all programs are implemented in a manner consistent with the EE literature
- EE is often offered as an elective but frequently only included in a course because of a lecturer’s individual efforts
- EE is sometimes not offered until the final year of a teacher education programme
- There are substantial number of teachers who enter the teaching profession without any formal training in EE
- Where EE is taught as an integrated subject it is most likely associated with science or social studies subjects.



## Understanding these responses from teacher education institutions

- Environmental education was seen as a political priority not an educational one
- Calls for the inclusion of EE in teacher education came from outside education
- EE was seen as yet another pressure on an already overcrowded curriculum
- EE policy and statements almost invariably came from environment agencies not education authorities

## Including ESD in teacher education

The range of options for the inclusion of ESD in teacher education programs found in practice include:

- Struggling to be recognised as core curriculum alongside literacy and numeracy in early childhood and primary teacher education programs,
- Being offered as an elective, which results in a few teachers specialising in ESD,
- Being mainstreamed across the teacher education program so that a genuine 'whole-of-system' approach to ESD can be developed, or
- A combination of the above.

It is usually up to the institution as to which option is adopted.

## Challenges to re-orienting teacher education

- Official curriculum rarely mandates sustainability.
- Teacher certification guidelines do not mention sustainability.
- Lack of or inadequately trained professionals who are knowledgeable about ESD.
- Lack of or inadequate funding and material resources.
- Lack of or inadequate national, provincial and local policy to support ESD.
- Lack of or inadequate institutional climate that supports the creativity, innovation, and risk-taking necessary to support transformative efforts to re-orient education to address sustainability.
- Lack of or inadequate reward for institutions or faculty members who undertake ESD programs.

## Re-orienting teacher education: UNESCO (2005) criteria for new ESD projects

- ESD is locally relevant and culturally appropriate
- ESD is based on local needs, perceptions, and conditions, but recognises fulfilling local needs often has global effects and consequences.
- ESD engages formal, non-formal, and informal education.
- ESD is a life-long endeavour.
- ESD accommodates the evolving nature of the concept of sustainability.
- ESD addresses content, context, pedagogy, global issues, and local priorities.

## Re-orienting teacher education continued

- ESD deals with the well being of all three realms of sustainability – environment, society, and economy.
- ESD is not imported from another cultural, economic or geographic region.
- ESD is not “one size fits all”, but must be created to account for regional differences.

***Addressing ESD will require student teachers to think about their profession differently and learn skills that perhaps, teachers in previous eras did not learn or use as well as understanding the interrelatedness of the environment, society, and economy and having this interrelatedness evident in their teaching and their lives as community members*** (UNESCO, 2005)

## A “Third Way” pedagogy: empowering teachers to achieve the goals of ESD

- For three decades environmental education literature has asserted that it “should adopt a critical approach to encourage careful awareness of the various factors involved in the situation” (UNESCO 1980, p.27).
- These characteristics of environmental education, in particular the emphasis on adopting a critical approach and focusing on current and potential situations, suggest a common ground between environmental education and **socially critical pedagogy, inquiry learning**, and more recently as **transformative education, place-based learning** or **problem-based learning**.
- All of these approaches are well researched and documented with examples and templates to help teachers.

## A “Third Way” ESD pedagogy for teacher education

- Socially transformative environmental education is intended to provide students with a map of the existing culture and society and a map of what a more sustainable society might be like.
- Such an approach concerns itself with a critical understanding of, and an informed commitment to, the improvement of society, and, like environmental education, it seeks to empower students to participate in a democratic transformation of society.

## Starting the “Third Way” pedagogy

- Experiential learning
- Values clarification and analysis
- Creative thinking
- Future problem solving
- Storytelling
- Inquiry learning
- Place-based learning
- Problem-based learning
- Science in the community

## The socially transformative inquiry learning process

- **Tuning in**
  - Identifying and defining the issue.
- **Finding out**
  - Collection of data is not an end in itself, but a means towards developing understandings.
- **Drawing conclusions**
  - Students express their understandings and communicate them to others.
- **Considering social action**
  - Social action requires that students be active in decision-making during the inquiry and at its conclusion.
- **Reflection and evaluation**

## A socially transformative approach

- Education “must engage social issues and give students experience in working on them — experience in critical reflection, social negotiation and the organisation of action”, rather than merely preparing students for later participation.
- While there is an emphasis on immediacy in action and reflection, socially transformative education also seeks to locate and interpret current culture within an historical context: “we are not only the products of history but also the makers of history” (Kemmis, 1986).
- A socially transformative approach contrasts with vocational and liberal progressive approaches in a number of dimensions.
- It has significant implications for the pedagogy adopted in schools and for the content of the curriculum.

## Socially transformative education

– refer to Table 2 in paper

- A socially transformative education has characteristic views of knowledge, the role of teachers and learners, broad curriculum organisation, school-community liaison, and the role of consultants:
  - knowledge is seen as constructed through social interaction and thus as historically, culturally, politically and economically located; it has its meaning in actions of projects whose significance is in specific historical, political and economic contexts.
  - a learning role for students is in using available knowledge through interaction with others in socially-significant tasks of critique or collaborative work.

## Socially transformative education *continued*

- a proper role for the teacher is as project organiser and resource person, organising critical and collaborative activities in negotiation with students and community, demanding joint values of autonomy and social responsibility.
- differentiation of subjects and use of time is seen as being based on negotiation between community, teachers and students about the whole curriculum as a 'project'.
- schools are seen as taking initiatives in the community as well as 'on behalf of the community' within the school, with reciprocal interaction as the preferred goal rather than procedural 'liaison'.
- outsiders, where they are called in for consultancy tasks, are seen as contributors to a collaborative school- and community-based process; they are resources.

## Socially transformative pedagogy

- Teachers working within the framework of this pedagogy attempt to provide learning experiences that give students an historical and critical perspective on society.
- Teachers give students opportunities to engage in activities that are consistent with building a responsive democratic society. These learning experiences are negotiated with the students, other staff and the wider school community.
- Teachers teach less often by didactic approaches (such as telling and testing) and more often by encouraging inquiry, critical reflection and action.
- They work with students on topics that the students believe to be important and through tasks they find rewarding and significant.
- **Teacher education needs to model such approaches as well as teach about them.**

## Socially transformative strategies

- A socially transformative approach for integrating sustainability emphasises the importance of
  - direct experiences with and in depth study of a real world phenomenon,
  - exposing learners to different ways of knowing and valuing through self-confrontation,
  - encouraging social interaction between learners, and
  - the development of action and action competence as an integral part of the learning process.
- Such an approach would enable students to pursue the ecological and other content of environmental problems, and engage the problems, in a much more satisfactory and meaningful context than the present knowledge based curriculum.
- It is a very different from the passive learning and teaching that is characteristic of vocational and liberal progressive approaches.

## *An example: Mainstreaming Education for Sustainability within Teacher Education*

- This project piloted a model for whole-of-system change:

*The model is a combined whole-of-system and action-research approach that seeks to engage key actors and decision-makers across teacher education systems in a process of learning and change.*

*The model recommends that key agents of change within the teacher education system adopt a participatory action research approach to mainstream Education for Sustainability (EfS) within and across a whole pre-service teacher education system.*

## *Mainstreaming Education for Sustainability within Teacher Education pilot project*

Initial findings indicate that ESD can be mainstreamed within teacher education by:

- capacity building within the teacher education community by
  - developing competencies in education for sustainability;
  - establishing more effective interactions between decision-makers and other stakeholders;
  - establishing a community of inquiry for participants; and
  - developing an appreciation of whole-school approaches to sustainability



## Pilot project findings *continued*

- engaging with policy developers to:
  - enable a realignment of current policies; and
  - make changes to accreditation processes within education departments, teacher registration authorities and curriculum bodies;
- thinking broadly about the teacher education, so that all stakeholders are engaged in the change process; and
- improving networks across the teacher educator systems by:
  - identifying and supporting key agents of change within the sector, and by
  - developing new, and utilising existing, partnerships between schools, teacher education institutions and government agencies in the area of education for sustainability and whole-school approaches.

## Challenges for teacher education

- The major challenge for teacher education is to ensure that teachers can provide a wide range of effective learning experiences that promote and support education for sustainability.
- Some teaching strategies are more appropriate than others, depending on the needs of the student.
- Appropriate strategies display two broad characteristics – they place the student at the centre of the learning, and they are highly interactive within and beyond the classroom.
- This change to being a facilitator rather than an information provider is potentially a significant challenge for many teachers and teacher educators.

## Conclusion

- Achieving the goals of education for sustainability requires a very different approach to learning and teaching from that currently practiced in most schools and teacher education institutions.
- This is not a new observation – it has been signalled since the 1970s.
- However, the UN Decade for ESD provides a stronger connection with socially transformative education and the importance of universal literacy and social equity.
- Changing the pedagogical approaches in teacher education is a challenge, but it is one TEIs can no longer ignore.
- The challenge is to change current pedagogies and adopt socially transformative approaches.

Good ESD is good education  
(for social transformation – it is not  
transfer of knowledge for social  
reproduction)

Thank you!

[annette.gough@rmit.edu.au](mailto:annette.gough@rmit.edu.au)



## **SESSION 5**

GROUP DISCUSSIONS ON ESD  
COUNTRY GUIDELINES & HANDBOOK

## *Session* **SUMMARY 5**

---

This group discussion session was divided based on each participating country within the cluster who attended the training workshop. There were in general five sub-group discussions (Brunei Darussalam, Indonesia, Malaysia, Philippines and Timor-Leste).

This session provided the opportunity for the resource persons to conduct a discussion about the initiative of developing an ESD handbook. The back-to-back discussions on the publication of this handbook were productive.

The handbook will be produced as part of the supporting documents for the ESD country guidelines. UNESCO will support the publication of this handbook. It was agreed by all resource persons that this handbook will be completed voluntarily by the end of 2011.

A table on Guidelines and actions towards reorienting teacher education to address sustainability (see **Table 1** below) was shared to guide the discussions for this session.

The outcomes from this session include:

- The identification of the contractor for the guidelines; establishment of a contract in support of the development of the ESD country guidelines by each participating country (**Table 2**);
- A template of ESD National/Country Guidelines for the handbook was produced as a guideline for the further development of the handbook (**Table 3**);
- A template for the handbook “Changing the climate of teacher education to address sustainability putting transformative education into practice.” (**Table 4**);
- Guidelines for the handbook (**Table 5**).

**TABLE 1. Guidelines and actions towards reorienting teachers' education to address sustainability**

From UNESCO (2007). *Monitoring and assessing progress during the UNDESD in the Asia-Pacific Region: A quick guide to developing national ESD indicators*. Bangkok: UNESCO Bangkok, 16 pp

Indicator	Function	Target groups	Actions
Baseline	To identify the status of the overall ESD picture	<ol style="list-style-type: none"> <li>Three categories for ESD teachers education:               <ol style="list-style-type: none"> <li>Education of all teacher educators</li> <li>Pre-service</li> <li>In-service</li> </ol> </li> <li>Six types of teachers:               <ol style="list-style-type: none"> <li>Early childhood</li> <li>Primary</li> <li>Secondary</li> <li>TVET</li> <li>University</li> <li>Community</li> </ol> </li> </ol>	To establish a baseline of the current level of inclusion of ESD
Context	To identify the existence of ESD support systems	<ol style="list-style-type: none"> <li>Governing body:</li> <li>Ministry of Education Accrediting bodies linked with TEIs</li> <li>Supporting bodies:</li> <li>Other ministries providing support regarding curriculum</li> </ol>	<ol style="list-style-type: none"> <li>To ensure that national education policies exist that requires teacher education in ESD</li> <li>To ensure that appropriate support (policy, funding, human resources, material support) is provided to TEIs</li> </ol>
Process	To identify the existence of ESD processes and activities	<ol style="list-style-type: none"> <li>Governing &amp; supporting bodies (e.g. providing check list, monitoring tools, indicators)</li> <li>TEIs (e.g. developing and using check list, monitoring tools, indicators)</li> </ol>	To ensure that ESD goals are a key aspect of decision-making processes and activities focusing on 8 ESD priorities
Learning	To promote learning and reflection on ESD	<ol style="list-style-type: none"> <li>TEIs</li> <li>Three categories for ESD teachers education:               <ol style="list-style-type: none"> <li>Education of all teacher educators</li> <li>Pre-service</li> <li>In-service</li> </ol> </li> <li>Six types of teachers:               <ol style="list-style-type: none"> <li>Early childhood</li> <li>Primary</li> <li>Secondary</li> <li>TVET</li> <li>University</li> <li>Community</li> </ol> </li> </ol>	To ensure that transformative and interdisciplinary learning is incorporated into all programs for the target groups
Output	To assess outputs such as tools	<ol style="list-style-type: none"> <li>Ministry of Education</li> <li>Accrediting bodies linked with TEIs</li> </ol>	<ol style="list-style-type: none"> <li>Revision of national curriculum reflecting ESD</li> <li>ESD related certification (e.g. teachers)</li> <li>ESD/ESD-related instructional tools</li> <li>ESD network for TEIs</li> <li>ESD Website</li> </ol>
Outcome	To assess outcomes related to changes or improvements that result from ESD effort	<ol style="list-style-type: none"> <li>Ministry of Education</li> <li>Ministry of Environment</li> <li>Six types of teachers               <ol style="list-style-type: none"> <li>Early childhood</li> <li>Primary</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>ESD related recognition (e.g. school &amp; community awards)</li> <li>Teachers introducing ESD related curriculum and pedagogy through their practice</li> </ol>

		c) Secondary d) TVET e) University f) Community	
Impact	To assess impacts that result from ESD efforts	Six types of teachers a) Early childhood b) Primary c) Secondary d) TVET e) University f) Community	Learners practice a sustainable lifestyle based on knowledge, skills, awareness, attitude, values, behaviours consistent with the 8 ESD themes
Performance	To assess the change in the status of the overall ESD picture in a region or country	1. Governing body: Ministry of Education Accrediting bodies linked with TEIs 2. Supporting bodies: Other ministries providing support regarding curriculum	1. ESD is mainstream in education policies, strategies and TEIs practices 2. ESD has national status with inter-ministerial collaboration

NB: UNESCO.(2007). Monitoring and assessing progress during the UNDESD in the Asia-Pacific Region: A quick guide to developing national ESD indicators. Bangkok: UNESCO Bangkok, 16 pp.

**TABLE 2. Identification of the contractor**

Country	Contractor	Working Group Members			
			Name	Position	E-mail
Brunei Darussalam	Name: Dr Romaizah Salleh  Position: DEAN of SHBIE E-mail: romaizah.salleh@ubd.edu.bn Tel: 6738773131	1	Desmond Tan Chia Chun	Lecturer in Sultan Hassanal Bolkiah Institute of Education	desmond.tan@ubd.edu.bn
		2	Dr Hanapi Mohammad	Lecturer, Sultan Hassanal Bolkiah Institute of Education	hanapi.mohamad@ubd.edu.bn
		3	Dr Irene P-A Cheung	Senior Lecturer, Sultan Hassanal Bolkiah Institute of Education	irene.cheung@ubd.edu.bn
Indonesia	Name: Dr. Hendarman Anwar Position: Director of the Center for Educational Policy Research and Innovation, Ministry of national Education Email: Hendarman_Anwar@yahoo.com Tel: 6221 573 6365	1	Dr. A. Chaedar Alwasilah	Professor of UPI Bandung	chaedar_alwasilah@upi.edu, chaedar@bdg.centrin.net.id
		2	Nanik Suwaryani, PhD	Researcher, MONE	suwaryani@yahoo.com
		3	Mr. Parus	Head of Evaluation of Environmental Education, Min. Of Environment Affairs	plh_parus@yahoo.com
		4	Ms. Ratna T. Sinaga	Head of Education, Indonesian National Commission , MONE	ertsinaga@yahoo.com

Country	Contractor	Working Group Members			
			Name	Position	E-mail
		5	Ms. Susi R. Sadikin,	Head od division of Environmental Education Community	srs@menlh.go.id
		6	Mr. Philip Suprastowo	Researcher, MONE	philip.suprastowo@yahoo.com
<b>Malaysia</b>	Name: Datuk Dr. Haili Dolhan	1	Tn. Hj. Mohd. Said (Key Person)	Director, TEI, Temenggung Ibrahim Campus, Johor Bahru	saidhasran@yahoo.com.my
	Position: Rector, TEI, MOE, Malaysia	2	Dr. Nagalingam Karuppiah (Key Person)	Principal Chief As-sitant Director, TEI, MOE, Malaysia	nagalingam.karuppiah@moe.gov.my
	E-mail:	3	Marina Haji A. Majid (Key Person)	Lecturer, TEI, Temenggung Ibrahim Campus, Johor Bahru	rin55ipti@yahoo.com
<b>Philippines</b>	Dr. Patricia B. Licuanan Chairman, Commission on Higher Education chair.ched@gov.ph Tel: (632) 441 1260	1	Paz I. Lucido, PhD - key person	Chair, TPTE, CHED	pazilucido@yahoo.com
		2	Lydia Liwanag, PhD	Vice President, PNU	lydliwanag@yahoo.com
		3	Amor Q de Torres, PhD	President, PAFTE	Amorde_torres@yahoo.co.uk
<b>Timor Leste</b>	Name: Apolinario Magno, MBA Position: Director General-ME E-mail: apolimagno@gmail.com Tel: +670 3339661/ +670-304150	1	Mr. Antoninho Pires	Director INFPC-ME	antoninhopires@hotmail.com
		2	Mr. Joao Soares	Staff INFPC-ME	laluna_212@yahoo.com

**TABLE 3. Template of ESD National/Country Guidelines**

**National ESD Guideline in (Country Name Here e.g. Indonesia)  
for Changing the Climate of Teacher Education to Address Sustainability:  
Putting transformative education into practice**

	<b>Chapters</b>	<b>Common Contents</b>	<b>National Contents</b>	<b>Recommendations/ chapter purpose</b>
1	Introduction	* Definition and goals of ESD and UNDES D at global and regional level	* Understanding of ESD and UNDES D at national level	To establish a national coordinating committee
2	National status of ESD		* Within national policy and strategies, law, acts etc. * Within national education system linked with national curriculum	To establish ESD national policies and strategies
3	Goals and focus of this national ESD guideline for reorienting teacher education to address sustainability		* Reorienting TEIs to address sustainability - To reorient all school levels - To reorient teacher Educators	To review and evaluate the existing curriculum
4	Collaboration and Supports		* Main and supporting bodies (e.g. including local, national and international, government and NGOs) * 3 categories of Education - 6 types of teachers * Funding sources	To establish a network for nurturing ESD
5	Promoting teaching, learning and reflection in ESD		Adopting different curriculum pedagogy and assessment approaches within different country context (for transformative education)	To identify teacher's educators competencies for ESD
6	Expected outputs		1. Revision of national curriculum reflecting ESD 2. ESD related certification (e.g. teachers) 3. ESD/ESD-related instructional tools 4. ESD network for TEIs 5. ESD Website	1. ESD related recognition (e.g. school & community awards) 2. Teachers introducing ESD related curriculum and pedagogy through their practice
7	Monitoring and Evaluation		5W & 1H to monitor and evaluate	To ensure appropriate monitoring and evaluation are developed



**TABLE 4. Template for the handbook**

**“Changing the climate of teacher education to address sustainability  
“putting transformative education into practice.”**

**Condition:**

- Select practice(s) reflecting “transformative education” in TEIs from UNESCO member countries in UNESCO Jakarta Cluster office
- Topic of the practical examples: “Climate Change”, linked to ESD key Themes<sup>61</sup>

**TEMPLATE FILE- Practices TEIs, “Climate Change” as example**

**I. Attribution**

- Country:
- Title:
- Author (s):
- Name of ImplementingTEI:
- Categories for ESD Teacher Education: (1)Education of all teacher educators; (2) Pre-Service; (3) In-Service
- Target Types of Teachers: (1) Early Childhood; (2) Primary; (3) Secondary; (4) TVET; (5) University; (6) Community

**II. ESD Practice in TEIs, Climate Change as an Example**

- Introduction (Sub-regional context, e.g. EFA & MDGs)
- Programme Presentation (incl: pedagogical approaches, key principles, Implementation process, etc.)
- Optional - Effects, Results and Impacts
- Optional - Constrains and Difficulties
- Innovative Aspects as “Transformative Education”
- Perspectives

**III. Contact Address**

- Name
- Address
- E-mail address

<sup>61</sup> (1) gender equality; (2) health promotion; (3) peace and human security; (4) environment – water, climate change, biodiversity, disaster prevention; (5) rural development; (6) sustainable urbanization; (7) sustainable consumption; (8) cultural diversity

**TABLE 5. Guidelines for the handbook “Changing the climate of teacher education to address sustainability putting transformative education into practice.”**

**Target group:** *Teacher educators of all school levels teachers*

**Table of contents**

**Preface**

**Executive summary**

**WHY?: Chapter 1 (Dr. Mee Young Choi & Mr. Sangkyoo Kang)**

**What is ESD and why do we need it?**

- Introduction
- Historical background
- International/regional commitments (including Mid term review report, Bonn Declaration)
- 8 specific ESD themes

**WHERE?: Chapter 2 (Prof. Annette Gough & Prof. Masahisa Sato)**

**What do we expect from TEIs in advancing ESD?**

- From Belgrade to the UNDESD recommendations
- Roles and responsibilities of TEIs (i.e. pre service and in service)

**WHAT? : Chapter 3 (Prof. Annette Gough & Prof. Masahisa Sato)**

**What educational approach is needed for a sustainable society?**

- Towards transformative education, a new world vision
- Changing the purpose of education
- A new philosophy for education

**HOW?: Chapter 4 (Prof. Annette Gough & Prof. Masahisa Sato)**

**“Third Way Pedagogy” for ESD**

**Chapter 5 (Prof. Masahisa Sato)**

**Key concepts and competencies for ESD**

(2 sources: Competencies for ESD teachers – Comenius 2 & Competences framework, as from p.14, Prof. Annette Gough)

**WHO? HOW?: Chapter 6 (Dr. Mee Young Choi)**

**Putting transformative education into practice, climate change as an example**

- Sub-regional context (including EFA & MDGs issues)

**Chapter 7**

**Implications and recommendations for the future**

**Appendices**



**SESSION 6**

GROUP REPORTS ON OUTLINES  
FOR WSD COUNTRY GUIDELINES

## *Session* **SUMMARY 6**

---

During this session, each participating country within the five cluster countries of UNESCO Office, Jakarta presented a brief report on their ESD country guidelines. Representatives from the cluster countries provided positive, constructive feedback and recommendations towards the development of the ESD country guidelines draft, with a particular focus on TEIs.

Each participating country was able to present its country report on ESD and provided an outline for its country guidelines. Each country was also able to identify and recommend a Chairperson for the Working Group on the ESD Country Guidelines from each respective country. The Chairman will also be a Focal Point for the development of the ESD country guidelines.

The presentations from each country were shown in the following order: Brunei Darussalam, Indonesia, Malaysia, the Philippines and Timor-Leste.

## **Report 1: Brunei Darussalam**

Presented by: Dr. Hanapi Mohammad & Mr. Desmond Tan Chia Chun

### **ESD Country Report**

Why do we need ESD?

- United Nations (2009), Brunei has one of the highest amounts of carbon dioxide emissions in the world (15.5 metric tons per person). Ranked 15th out of 209

International Energy Agency (2007)

- Brunei uses the equivalent of 7,062 kg of oil per person; Singapore, 6,932; Malaysia, 2,418; Indonesia, 814; Philippines, 538; Thailand, 1557

Asian Development Bank (2004)

- An average of 450 litres are used per person per day
- Average for Asian countries, 168 litres

Waste (Ministry of Development)

- In 2006, Brunei produced 1.4kg of waste per person per year; Malaysia, 1.3 KG; Singapore, 0.9; Thailand, 1.7 KG

### **Outline for ESD Country Guidelines**

#### **CHAPTER 1: Identifying the status of ESD in Brunei**

- No central agency
- ESD is not clearly stated in the school curriculum
- ESD is offered as an elective for pre-service teachers
- A lot of students still have no knowledge about global warming which indicated it is still not being taught in schools which should be a concern for schools, teachers and other stakeholders (Tan-D, Irene Cheong, Norhani: 2010)
- There are a number of teachers who enter the teaching profession without any formal training in ESD

#### **CHAPTER 2: Re-orienting existing education programmes**

- Empowering formal and non-formal education sectors through strategic programmes (Department of Environment, Parks and Recreation, Ministry of Development)
- Establish a conservation module into the school curriculum from pre-school to higher education (Ministry of Education: STEP Centre, Department of Schools, Department of Technical Education, Non-Government School Section and Curriculum Development Department)
- Integrating environmental issues into the religious curriculum from primary 1–6 and all arabic schools (Ministry of Religious Affairs: Department of Mosque Affairs and Department of Religious Education)
- Integrating ESD as one of the main components of the programme (Universiti Brunei Darussalam)
- Integrating the best environmental practices as part of their CSR (NGO, Private Sector: Banks, Energy Companies, Major Retailers)
- Flexibility in time allocation for sustainable development programmes in school (Ministry of Education)
- Does ESD exist in Brunei
- In short, YES.
- Many agencies have carried out activities and projects which have elements of ESD in them whether they are aware of it or not.
- The problem is that there is no integration, no focus or directions or common goals to which one can say that sustainability has been successfully achieved.

### **CHAPTER 3: Re-orienting teacher education**

#### **PRESERVICE TEACHERS**

- Currently we have four strands of Masters of Teaching (No longer offering undergraduate teacher certification and training)
- Early Childhood, Primary, Secondary and VTE (Vocational Technical Education)
- Propose integration of ESD in modules (Introduction to ESD, Early Childhood – and ‘Science’ in Early Childhood)

#### **INSERVICE TEACHERS**

- Propose Masters of Education (M.ed) include a module on ESD and Leadership in ESD.
- Currently, Universiti Brunei Darussalam is conducting teacher capacity workshops for leadership nationwide. We want school leaders to be aware of ESD and prepare activities and community work at ‘school’.

#### **TEACHER EDUCATORS**

- Propose Capacity Building Workshops for Teacher Educators in ESD.

### **CHAPTER 4: Learning**

- To promote learning and reflection on ESD
- SPN – 21 focuses on Problem Based Learning, Project Based Learning, Developmental Appropriate Practice in order to develop life skills.
- Develop highly skilled human resource

### **CHAPTER 5: Output**

- Energy (Alternative Energy)
- Food Security
- Environment Conservation
- Health

#### **OUTCOME**

- To assess outcomes
- Introducing Green School Projects and Awards

### **CHAPTER 6: Impact**

- Developing a Monitoring and Evaluation Framework and System

### **CHAPTER 7: Performance**

- Number of ESD related Activities in Schools
- Number of new teachers receiving training in ESD

## Report 2: Indonesia

### Guidelines and actions towards reorienting teachers education to address sustainability

Presented by: Dr. Chaedar Alwasilah, Dr. Nanik Suwaryani, Mr. Parus, Ms. Cyti Daniela

#### Baseline

- A Ministry of Education programme on EE (integrated into in the curriculum system) was carried out in basic and secondary schools organised by the DG of Primary and Secondary Education from 1984-2007.
- A number of teachers were trained on EE between 1989 up to 2007.
- Ministry of Education: In-service Vocational Teacher Training Center in Malang 1998 – 2000 and other six centers had a training programme on EE for vocational school teachers. Swiss Contact assisted for the first two years.
- Ministry of Environment initiated Adiwiyata program. Currently the number Adiwiyata schools are 139 (2006/07 – current time) Teacher training has been conducted in the form of socialisation.
- MONE (DG of Primary and Secondary Education) – 2003-2007 as many as 470 schools involved in Sekolah Berbudaya Lingkungan (Green Schools). An in-service training on green school was organized for a number of teachers.
- Another program was an academic writing competition among teachers.
- At the higher education level, some Teacher's Colleges (IKIP – LPTK) established Centers of Environmental Studies/CES (i.e. Jakarta Teacher Training College in 1979). In 2010 there are 101 CES.

#### Context

- Policy of EE was agreed in 2004 by the MONE, MORA, MOHA and MOEnv.: EE should be implemented in formal, non-formal and informal education.
- Policy on ESD is implicitly and explicitly stated in both Long-term and mid-term National Development Plans and the MONE Strategic Plan 2010-2014.
- MOU between MONE and MOE. – 1996, 2005 and 2010 on EE.
- The policy on school level curriculum (KTSP) addresses many issues related to ESD. However, TEIs have not included school curriculum development in their programs.

#### Process

- It is felt necessary to establish a working group representing MONE, MORA, MOHA and MOE to develop an action plan for promoting ESD through teacher education especially TEIs. It should be clear who should do what and how the mechanism of collaboration should be organised.
- It should be included in the action plan guidelines, curriculum and textbook writing so that the ideas of ESD can be accessed and implemented by the existing 2.7 million teachers.

#### Learning

- Identifying core curriculum for a different level of education (formal and non formal) and different programmes.
- Incorporating ESD concept into several possible subject matters.
- Develop ESD guidelines for teaching and learning for teachers, teacher training and textbook writing.

#### Outputs

- Revision and new design of curriculum of TEIs.
- ESD based-textbooks
- ESD learning materials

#### Outcomes

- Revised school curriculum
- Teachers incorporate ESD concepts in their teaching
- Teachers used ESD based teaching material

#### Impact

Learners practice a sustainable lifestyle based on knowledge, skills, awareness, attitude, values and behaviors which are consistent with the 8 ESD themes.

#### Performance

- ESD is mainstream in education policies, strategies and TEIs practices
- ESD has national status with inter-ministerial collaboration

### Report 3: Malaysia Guidelines for ESD

Presented by: Tn. Hj. Mohd. Said bin Hasran, Dr. Nagalingam Karuppiah, Cik Marina Hj. A. Majid

#### Guideline for reorienting teacher education to address sustainability In TEIs of Malaysia

ESD in Malaysia: Any form of education , formal and informal that promotes socio-economic and environmental development which can meet the needs of the present without compromising the well being of the future generation and environment (adapted from SEAMEO-RECSAM, Malaysia)

#### Action plan towards reorienting teacher education to address sustainability

Indicator Type	Function	Target Group	Action
Baseline	Status of the overall ESD in Malaysian TEI	<ul style="list-style-type: none"> <li>• Teacher educators at TEI</li> <li>• Pre-service &amp; In-service teachers</li> <li>• Community</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness on ESD parameters (DESD,2005-2014):               <ol style="list-style-type: none"> <li>1. Gender equality</li> <li>2. Health promotion</li> <li>3. Peace &amp; Human Security</li> <li>4. Environment</li> <li>5. Rural development</li> <li>6. Sustainable urbanisation</li> <li>7. Sustainable consumption</li> <li>8. Cultural diversity</li> </ol> </li> </ul>
Context	ESD support system for TEI	Support from various ministries: <ol style="list-style-type: none"> <li>1. Ministry of Education, Ministry of Science &amp; Technology, Ministry of Natural Resources &amp; Environment, Ministry of Housing &amp; Local Government, RECSAM, local public universities</li> <li>2. NGO (CAP, World Wild Fund, etc)</li> <li>3. UNESCO</li> </ol>	<ol style="list-style-type: none"> <li>1. Policy               <ul style="list-style-type: none"> <li>• Teacher Education Policy for ESD inclusion</li> <li>• Guidelines for EE in Malaysian Schools (CDC, 1999)</li> <li>• Langkawi Declaration by Commonwealth Heads of Gov. Conf, 1989)</li> <li>• Vision 2020 - thrust 4 &amp; 5</li> <li>• MS ISO 9001:2008</li> </ul> </li> <li>2. Support               <ul style="list-style-type: none"> <li>• Formation of coordination committee headed by TEI Malaysia</li> <li>• MOU between ministries</li> <li>• Financial allocation</li> <li>• Resources (human &amp; material)</li> </ul> </li> </ol>
Process	Current & future ESD processes & activities at TEI	<ul style="list-style-type: none"> <li>• Contextual and integrated approach for ESD for teacher educators</li> <li>• Curriculum review for post-graduate and bachelor of education degree programs</li> <li>• Refresher course, immersion for in-service teachers</li> </ul>	<ul style="list-style-type: none"> <li>• Curriculum review involving TEI and the various supporting bodies</li> <li>• Collaborative projects with countries that have successfully developed ESD</li> </ul>



Learning	Promote Teaching , Learning and Reflection in TEI	<ul style="list-style-type: none"> <li>• Campus community : teacher educator, pre &amp; in-service teachers, support staff</li> <li>• External community: local community, parents, alumni, school community</li> </ul>	<ul style="list-style-type: none"> <li>• Constructivist pedagogy for the self, campus &amp; the society</li> <li>• social transformative approach [school cleanliness competition, village cleanliness, landscape competition govt. premises, Clean toilet competition]</li> </ul>
Output	Identification of evaluation tools to measure culturalisation of ESD	<ol style="list-style-type: none"> <li>1. TEI</li> <li>2. Relevant cooperating ministries</li> </ol>	<ul style="list-style-type: none"> <li>• Programme evaluation</li> <li>• Curriculum review</li> <li>• Review of existing tools for feedback on initial teacher competency of ESD</li> </ul>
Outcome	To identify improvements due to ESD efforts	<ul style="list-style-type: none"> <li>• TEI</li> <li>• Cooperating Ministries</li> </ul> <p>for:</p> <p>Beginning teachers In-service teachers School students Community</p>	<ul style="list-style-type: none"> <li>• Developing tools to obtain feedback from the community, pre, and in-service teachers, beginning teachers</li> </ul>
Impact	Identifying impacts that result from ESD efforts at TEI	<ul style="list-style-type: none"> <li>• Campus community</li> <li>• External community</li> </ul>	<ul style="list-style-type: none"> <li>• Developing KPI for assessing impact of ESD</li> <li>• Tools for measuring the impact of the parameter in DESD in relation to Knowledge, skills , awareness, attitude, values, behaviors</li> </ul>
Performance	To identify change status of ESD in Malaysia	<ul style="list-style-type: none"> <li>• TEI</li> <li>• Joint Inter-Ministry Committee</li> </ul>	<ul style="list-style-type: none"> <li>• Based on the KPI developed, identify the performance standards achieved for ESD</li> <li>• Identify the national status for ESD through inter-ministry cooperation</li> <li>• Assessing and monitoring the extent of ESD integration inside and outside the institution (eg. Practicum, internship, etc)</li> </ul>

## **Report 4: Philippines**

### **ESD Philippines Guidelines for reorienting teacher education to address sustainability**

Presented by: Dr. Lydia Liwanag, Dr. Paz Lucido, Dr. Amor de Torres

#### **1. Introduction**

UNESCO Technical paper No. 2, 2005 underlined the needs to start developing the guidelines and recommendations for reorienting teacher training to address sustainability. There is a lack of adequate number of trained teacher educators who are aware of and knowledgeable about the importance of ESD. This has brought a setback in further developing the institutional climate that supports the creative innovation and risk-taking necessary for a transformative effort to reorient education to address sustainability.

#### **Context**

Due to its location, Philippines is very susceptible to natural disasters compared with other Asian countries (Yumul, 2010). By now, almost all academic disciplines agree that the coming of natural disasters cannot be stopped. Learning to live with disasters is critical, and preparedness is the only strategy possible. In order for the citizenry to be educated with ESD principles, teachers have to first be educated, thus a focus on Teacher Education is needed.

#### **2.1. ESD and UNDESD?**

What is ESD and why we need it? References: Mee Young Choi (UNESCO Jakarta), Masahisa Sato (Japan – UNESCO Jakarta), Chan Lean Leng (Malaysia – UNESCO Jakarta).

#### **2.2. ESD and Climate Change**

Reorienting Education to address climate change: includes skills, principles, perspectives and values; allow students to ask questions, solve problems. Think critically and work interdisciplinary (from Rosalyn McKeown).

Principles and perspectives which are to be woven in the curriculum include: practicing the precautionary principle; safeguarding the interests of today and future generations; the polluter should bear the cost of the pollution; equitable access to scientific information and developments.

Current global issues include: climate change, natural resources (water, energy, agriculture, biodiversity), rural development, sustainable urbanisation, disaster prevention and mitigation,

#### **2.3. Global and Regional Environmental Issues and Sustainability**

Global & Regional Environmental Issues:

- Natural heritage and resources: water, energy, agriculture, biodiversity
- Climate change
- Rural development
- Sustainable urbanisation
- Disaster prevention and mitigation

#### **2.4. ESD Strategy at Global & Regional levels**

- Social Transformative Strategies(ref. Annette Gough- UNESCO Jakarta)
- Holistic and Integrated Approach (National, Phil)

## **2.5 ESD National Strategy Development**

### 2.5.1 Governing Body for ESD – National level

Coordinating Council for ESD:

1. Department of Education (DepEd)
2. Commission on Higher Education (CHED) – Teacher Education Institutions (TEIs)
3. Technical Education and Skills Development (TESDA )
4. Local Government Units
5. Dept of Environment and Energy
6. NGOs

### 2.5.2 National Education Policies in ESD

### 2.5.3 Support (funding, human resources, materials development, monitoring and evaluation)

### 2.5.4 Teachers Training (pre-service and in-service on content and pedagogy of ESD)

## **2.6. National ESD Curriculum Development Linked with School Activities and ESD National**

### 2.6.1 Importance of cultural heritage and language of the community

### 2.6.2 Indigenous knowledge from the community

### 2.6.3 Linkage between global issues and local priorities

### 2.6.4 Support from the national and local gov't.

### 2.6.5 Teachers practices aligned with ESD concepts & strategies

## **2.7 Teaching Pedagogy Development in ESD**

### 2.7.1 Holistic approval in teaching 4 dimensions of sustainability: society, culture, economy, environment

### 2.7.2 Reorienting teachers on different ESD strategies

- a. Critical approach and experiential learning
- b. Inquiry learning
- c. Transformative education
- d. Community-based learning

### 2.7.3 Assessing the impact of teaching pedagogy

## **2.8. National ESD Curriculum Development Centred on Contents Reflecting**

National/Indigenous Education and Environmental Needs (from UNESCO-APNIEVE Phil. Pp. 20-21)

## **3. Conclusions**

Sustainable development assumes different aspects from society to society, culture to culture and region to region. To bring about real improvements in the lives of people, sustainable development must reconcile economic growth with social and cultural development and environmental protection. To bring about a balanced harmonious and sustainable development in the Asia Pacific, it is imperative to take a close look at the state and needs of the Region (UNESCO-APNIEVE Sourcebook, 2008).

**References:** UNESCO Jakarta papers (Dec 8-10, 2010) and UNESCO-APNIEVE Philippines Sourcebook, 2008

**Report 5: Timor-Leste**  
**ESD Philippines Guidelines for reorienting teacher education to address sustainability**

Presented by: Mr. Antoninho Pires and Mr. Joao Soares

Education is very important but the education system in Timor Leste poses a challenge. The Education sector in Timor-Leste will be undergoing a consolidation process and the decreed law of the basic education of the last nine years will be established in 2011. ESD will be integrated in Timor-Leste's special programme: Escola Nueva, a pedagogy for teacher training.

Timor-Leste will try to integrate ESD into its education curriculum through the Ministry of Education's regulation and policy, but support and corporation from representatives of UNESCO will be needed. Some of the areas that Timor-Leste need help with include: how to implementation ESD in private and public schools.

The group representatives thanked UNESCO for inviting them and also appreciate the other country's participation in this important meeting. It is hoped that the fruitful results from this meeting can be used as a reference to improve the quality of education and service for the people of the Democratic Republic of Timor-Leste.



**SESSION 7**

CLOSING AND FOLLOW-UPS

## *Session* **SUMMARY 7**

---

**Chairman:** Mee Young Choi, UNESCO Office, Jakarta

Dr. Choi summed up the outcomes of the two and a half day workshop and highlighted several important issues for follow-up actions. She also took the opportunity to inform participants about an important text for reference called “Monitoring and assessing progress during the UNDESD in the Asia-Pacific Region: A quick guide to developing national ESD indicators”, published by UNESCO Bangkok. The outcomes (refer to Session Summary 5 for relevant documents) include:

- Identification of the contractor for the guidelines; establishment of a contract in support of the development of the ESD country guidelines by each participating country;
- Template for the ESD National/Country Guidelines;
- Timeframe for the development and finalisation of the ESD country guidelines for each participating country;
- Publication and dissemination of the ESD country guidelines both in the printed format and through the UNESCO website; and
- Other activities related to the ESD documents.

A general template for the guidelines was made by training participants and resource persons. The template would still be required to be developed and elaborated further in accordance with the specific issues and needs of each participating country. All the representatives agreed to continue to work together with the UNESCO Office, Jakarta to finalize the draft of their ESD country guidelines upon their return to their home countries.

Dr. Choi expressed her gratitude to the representatives and training participants for the informative outcomes and recommendations, as well as their commitment to continue the development and finalisation of the ESD country documents at the end of the training workshop.

She also extended her appreciation to the resource persons for their valuable contribution to the training workshop and the initiative for making a handbook on “Changing the climate of teacher education to address sustainability putting transformative education into practice”. Templates and guidelines for the handbook were made by the resource persons during the workshop.

In closing, Dr. Choi thanked all the representatives and the UNESCO National Commissions from the five cluster countries of the UNESCO Office, Jakarta, opening session speakers and resource persons who attended this training workshop and made this training workshop possible. She took the chance to inform the participants about the next Reorienting TEIs-ESD meeting which was organised in June 2011, during which the final draft version of the ESD country guidelines prepared by each participating country within the five cluster countries will be discussed and presented. The ESD country guidelines of each respective country will be published and made available through the UNESCO website and accessible for the ESD networks. The ESD country guidelines will be the very first of its kind in the region.



## **APPENDIX**

### **CLOSING AND FOLLOW-UPS**

**Appendix 1. List of participants and resource persons**

Country	No	Name	Occupation	Contacts
<b>TRAINING PARTICIPANTS</b>				
<b>BRUNEI DARUSSALAM  (2)</b>	1.	<b>Desmond Tan Chia Chun, Mr.</b>	Lecturer, Humanities and Social Sciences Education	Sultan Hassanal Bolkiah Institute of Education Universiti Brunei Darussalam Jalan Tungku Ling, Gadong, BE1410, Brunei Darussalam Tel.: +673-2463001, ext.: 1812 Email: desmond.tan@ubd.edu.bn
	2.	<b>Hanapi Mohamad, Dr.</b>	Lecturer, Psychology and Human Development Studies, and Head of Educational Technology	Sultan Hassanal Bolkiah Institute of Education Universiti Brunei Darussalam Tungku Link Road BE1410 Brunei Darussalam Tel.: +673-8915607 Fax: + 673-2461138 Email: hanapi.mohamad@ ubd.edu.bn
<b>INDONESIA  (6)</b>	3	<b>Adeng Chaedar Alwasilah, Prof.</b>	Professor in Education	Indonesia University of Education Jalan Setiabudi 229 Bandung 40154, West Java, Indonesia Tel./fax: +62-22-2002443 Email: chaedar_alwasilah@upi.edu / chaedar@bdg.centrin.net.id
	4.	<b>Cyti Daniela Aruan, Ms.</b>	Government Officer	Indonesian National Commission For UNESCO Ministry of National Education Building C, 17th floor Jalan Jenderal Sudirman Jakarta 10270, Indonesia Tel.: +62-21-5711144, ext: 3640 Fax: +62-21-5733127 Email: nelchank@yahoo.com
	5.	<b>Dissa Naratania Hantra, Ms.</b>	Government Officer	Indonesian National Commis- sion For UNESCO Ministry of National Education Building C, 17th floor Jalan Jenderal Sudirman Jakarta 10270, Indonesia Tel./fax: +62-21-5733127 Mobile: +62-(0)85693451616 Email: dissahantra@gmail. com



Country	No	Name	Occupation	Contacts
	6.	<b>Nanik Suwaryani, PhD.</b>	Researcher	Research Centre for Educational Policy, Ministry of National Education Building E 19th floor Jalan Jenderal Sudirman, Senayan, Jakarta 10270 Indonesia Tel.: +62-21-5736365 Fax: +62-21-5741664 Email: suwaryani@yahoo.com
	7.	<b>Parus MSi</b>	Head of Evaluation of Environment Education Community	Ministry of Environment Building B, 5th floor Jalan D.I. Panjaitan Kav. 24 Kebon Nanas, Jakarta 13410 Indonesia Tel./fax: +62-21-8580087 Mobile: +62-(0)81350708282 Email: plh_parus@yahoo.com
	8.	<b>Susy R. Sadikin, SE, MSc.</b>	Head of Division of Environmental Education Community	Ministry of Environment Building B, 5th floor Jalan D.I. Panjaitan Kav 24 Kebon Nanas, Jakarta 13410 Indonesia Tel.: +62-21-8580087 Fax: +62-21-8580087 Email: srs@menlh.go.id and susyrs@yahoo.com
<b>MALAYSIA (3)</b>	9.	<b>Haji Mohd. Said Hasran, Mr.</b>	Director	Teacher Education Institute Institute of Teacher Education Temenggong Ibrahim Campus, 80350 Johor Bahru, Malaysia Tel.: +60-7-2364653 Fax: +60-7-2379736 Email: saidhasran@yahoo.com.my
	10.	<b>Marina Haji Abdul Majid, Mrs.</b>	Lecturer	Institute of Teacher Education Temenggong Ibrahim, Johor Bahru Jalan Datin Halimah 80350 Johor Bahru, Malaysia Tel.: +60-(0)7-2364653 Fax: +60-(0)7-2379736 email: rin55ipti@yahoo.com
	11.	<b>Nagalingam Karuppiah, Dr.</b>	Principal Assistant Director	Institute of Teacher Education Ministry of Education, Malaysia Level 1, Enterprise Building 3, Block 2200, Jalan Persiaran APEC, Cyber 8, 63000 Cyberjaya, Malaysia Tel.: +60-3-83126666 Fax: +60-3-83126665 Email: nagalingam.karuppiah@moe.gov.my / nagalingam60@yahoo.com

Country	No	Name	Occupation	Contacts
<b>PHILIPPINES</b>  <b>(3)</b>	12.	<b>Amor Quinto de Torres, Prof.</b>	Dean of College of Education, and President of the Philippine Association for Teacher Education	Capitol University Cagayan de Oro City Philippines Tel.: +63-88-22710996 Fax: +63-88-8561272 Email: amorde_torres@yahoo.co.uk
	13.	<b>Lydia B. Liwanag, Dr.</b>	Vice President for Academics/Language Education	Philippine Normal University Taft Avenue, Manila Philippines Tel./fax: +63-2-5270368 Email: lydliwanag@yahoo.com
	14.	<b>Paz I. Lucido, Prof.</b>	Chair of the Technical Panel on Teacher Education on Higher Education	Commission on Higher Education (CHED) C.P. Garcia Street UP Diliman, Quezon City Philippines Tel./fax: +63-2-7357072 Email: pazilucido@yahoo.com
<b>TIMOR LESTE</b>  <b>(2)</b>	15.	<b>Antoninho Pires, Dr.</b>	Director of INFPC-ME	INFPC, Ministry of Education of Timor Leste Balide, Dili, Timor Leste Tel.: +670-7304156 Email: antoninhopires@hotmail.com
	16.	<b>Joao Soares, Mr.</b>	Staff	INFPC, Ministry of Education of Timor Leste, Balide, Dili Timor Leste Tel.: +670-7340001 Email: lalma_212@yahoo.com

Country	No	Name	Occupation	Contacts
<b>RESOURCE PERSONS</b>				
<b>AUSTRALIA</b> <b>(1)</b>	17.	<b>Annette Elizabeth Gough, Prof.</b>	Head, School of Education	RMIT University, School of Education Bundoora West Campus Building 220, Level 4, Room #33 Plenty Road, Bundoora Victoria 3083, Australia RMIT University (220.4.33) PO. Box 71, Bundoora Victoria 3083 Tel.: +61-3-99256580 Fax: +61-3-99256639 Mobile +61 400 816 129 Email: annette.gough@rmit. edu.au
<b>INDONESIA</b> <b>(3)</b>	18.	<b>Ilyas Asaad, Mr.</b>	Deputy Minister	Environmental Communica- tion and Community Empowerment, Ministry of Environment Jalan D.I. Pandjaitan Kav. 24, Kebon Nanas, Jakarta Timur Tel./fax: +62-21-8580087 Email: ilyasasaad@yahoo.com
	19.	<b>Hendarman, Dr.</b>	Head	Research Centre for Education Policy and Innovation Ministry of National Education Gedung E, 12th fl., Jalan Jenderal Sudirman, Jakarta 12710, Indonesia Tel.: +62-21-5736365 Mobile: +62-815135622 Email: hendarmananwar@gmail.com
	20.	<b>Supriadi Rustad, MSi.</b>	Director	Directorate of Human Resource Affairs, Directorate- General of Higher Education Ministry of National Education Building D 5th floor Jalan Jenderal Sudirman Pintu Satu Senayan Jakarta 10270, Indonesia Tel.: +62-21-57946053 Fax: +62-21-57946052 Email: srustad@dikti.go.id
<b>JAPAN</b> <b>(1)</b>	21.	<b>Masahisa Sato, Assoc. Prof.</b>	Lecturer Environmental Education International Education Cooperation	Tokyo City University 3-3-1, Ushikubo-nishi, Tsuzuki-ku, Japan Tel.: +81-45-9102564 Fax: +81-45-9102605 Email: m-sato@tcu.ac.jp
<b>REPUBLIC OF KOREA</b> <b>(1)</b>	22.	<b>Sangkyoo Kang, Mr.</b>	Programme Specialist	Korean National Commission for UNESCO UNESCO House 50-14 Myoungdong, 2-ga, Chung-gu

Country	No	Name	Occupation	Contacts
				C.P.O. Box 64, 100-810 Seoul Republic of Korea Tel.: +82-2-7552685 Fax: +82-2-7557478 Email: skkang@unesco.or.kr
<b>UNESCO</b>				
<b>UNESCO (6)</b>	23.	<b>Hubert J. Gijzen, Prof.</b>	Director and Representative	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818 Fax: +62-21-72796489 Email: h.gijzen@unesco.org
	24.	<b>Mee Young Choi, Dr.</b>	Programme Specialist in Education	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818 Fax: +62-21-72796489 Email: my.choi@unesco.org
	25.	<b>Sarah Brikke, Ms.</b>	Intern	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818, ext: 892 Fax: +62-21-72796489 Email: s.brikke@unesco.org
	26.	<b>Nuzulia Untoro, Mrs.</b>	Programme Assistant	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818, ext: 831 Fax: +62-21-72796489 Email: n.untoro@unesco.org
	27.	<b>Enis Widjanarti, Ms.</b>	Programme Assistant For Education for Sustainable Development	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818, ext: 856 Fax: +62-21-72796489 Email: e.widjanarti@unesco.org
	28.	<b>Cipta Yama Tusanda, Mr.</b>	System and Informatic Assistant	UNESCO Office, Jakarta Jalan Galuh (II) No. 5, Kebayoran Baru Jakarta 12210, Indonesia Tel.: +62-21-7399818, ext: 823 Fax: +62-21-72796489 Email: cy.tusanda@unesco.org

## **UNESCO Office, Jakarta**

UNESCO House  
Jalan Galuh (II) No. 5  
Kebayoran Baru  
Jakarta 12110  
Indonesia

Tel. : +62-21-7399818  
Fax : +62-21-72796489  
Email : [jakarta@unesco.org](mailto:jakarta@unesco.org)  
[www.unesco.org/jakarta](http://www.unesco.org/jakarta)

**ISBN : 978-602-98372-5-4**



Printed in recycled paper