

UNESCO/ Japan Asia Pacific Environmental Education Research Seminar 2004 Report of the Expert Workshop

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I. Introduction

The Seventh UNESCO/ Japan Asia Pacific Environmental Education Seminar was held in Kesennuma, Japan, on 11 to 14 February 2004. It was organized by the Miyagi University of Education and the Japanese National Commission for UNESCO, within the framework of the 7th Programming Cycle (2002 - 2007) of the Asia Pacific Programme of Educational Innovation for Development (APEID), Asia and Pacific Regional Bureau for Education, UNESCO Bangkok, and in collaboration with Kesennuma City and the Asia / Pacific Cultural Centre for UNESCO (ACCU). An open forum held on 11 February 2004, had international participants as speakers, and the audience composed of local people and their government and school leaders. The participants had a chance to visit the Omoso Elementary School, a model school for "Education for Sustainable Development" on 12 February 2004. The Expert's workshops and roundtables were organized on 13 and 14 February 2004. The deliberations were focused on the in-service teacher training in Environmental Education and some suggested actions for the celebration of the International Decade for Education for Sustainable Development (IDEDS, 2005-2015).

There were 40 participants from 13 countries, namely, Afghanistan, Cambodia, China, India, Japan, Laos, Malaysia, Nepal, New Zealand, Philippines, Thailand, Vietnam, and USA. Some international organizations were also represented, namely: United Nations University (UNU), UNU-Institute for Advanced Studies (UNU-IAS), Institute for Global Environmental Strategies (IGES), and Asia / Pacific Cultural Centre for UNESCO (ACCU), and UNESCO APEID, Bangkok.

The expert workshops consisted of two parts. Part I was focused on in-service teacher training for the implementation of Environmental Education in the Asia Pacific Region, while Part II discussed and prioritized the actions and means for the implementation of Environmental Education for the DESD.

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The discussion on in-service teacher training in the field of Environmental Education was preceded by presentations for direction setting and case studies, presented by resource persons and selected participants. The roundtables were organized as face to face and interactive workshops conducted to actively involve the participants in sharing and exchanging their views on in-service teacher training and some actions to be implemented in preparation for the celebration of the International Decade on ESD.

II. Objectives of the Expert Workshop

The main objectives of the Workshop were:

1. to analyze current situation of in-service teacher training for Environmental Education in the region, and
2. to discuss and prioritize actions for the implementation of the IDESD.

Specifically, the workshop was organized to share and analyse the current status of in-service teacher training in the field of Environmental Education and come up with an analytical framework; and to discuss and prioritize the actions for Environmental Education as one of the preparatory work for the implementation of the IDESD.

The Workshop provided the opportunities for information sharing and discussion on a common concern - the effective implementation of in-service teacher training for Environmental Education, and to facilitate the building of a stronger network among environmental educators and policy makers in the Asia Pacific Region.

III. Agenda of the Expert Workshop

The agenda of the workshop were as follows:

1. Opening Ceremony
2. Direction Setting Presentations
3. Case Study Presentations
4. Analysis of current status of In-service Teacher Training in the field of Environmental Education:
Constraints and Countermeasures of In-service Teacher Education or the Implementation of Environmental Education and Recommended Actions of In-service Teacher Education for the Implementation of Environmental Education
5. Prioritized actions and means of implementation of Environmental Education for the International Decade of ESD
6. School Visit
7. Closing

The annotated agenda and detailed schedule of work is in Annex 1.

IV. Presentations for Direction Setting and Case Studies

(1) Presentations for Direction-Setting

Four presentations set the tone of the meeting. One, on the APEID actions on Environment Education and Education for Sustainable Development by Mrs. Lucille Gregorio Programme Specialist; two, on the Japanese current teacher training activities for environmental education by Prof. Kimiko Kozawa of Tokyo Gakugei University, an Associated Centre of APEID; three, on the research findings of the study on Environmental Education at the tertiary level in the Asia-Pacific Region by Dr. Masahisa Sato of the Institute for Global Environmental Strategies (IGES); and four, on lessons learnt from the past UNESCO/Japan Seminars on Environmental Education by Prof. Eiichiro Harako, the coordinator of the seminars organized by Tokyo Gakugei University.

Paper 1: APEID actions on Environment Education and Education for Sustainable Development
by Mrs. Lucille Gregorio Programme Specialist, APEID, UNESCO Bangkok

The paper provided the experts meeting with the background, short history and institutional framework and management of UNESCO-APEID. The programme areas in the 7th APEID Programme Cycle (2002 - 2007) were also mentioned. Some future actions were proposed based on experiences learned from implementing previous activities. For the implementation of the International Decade of ESD, some key lessons from past UNESCO activities were enumerated as follows: (1) ESD as an emerging but dynamic concept; (2) basic education providing the foundation for all future education endeavours; (3) the need to refocus many existing education policies, and practices to build the concepts, skills, motivation and commitment needed for sustainable development; (4) education as the key to rural transformation which is essential to ensuring the economic, cultural and ecological vitality of rural areas and communities; (5) life long learning, appropriate technical and vocational education, higher education and teacher education as vital ingredients of capacity building for a sustainable future. As action agenda, the importance of inter-linkages (policy linkages, governance to improve coordination between implementation bodies), individual capacity building (teachers who are the key to learning and promoting quality of education), institutional capacity building (professional development process, planning & strategies, management, networking and decision making) were proposed. The presentation also stressed that to respond to the challenges, UNESCO-APEID have given priority to community empowerment, teacher training and material development projects in its Main Line of Action - considering that UNESCO is not a funding agency, but could provide catalytic and advisory role in educational innovation for development, especially through APEID.

Paper 2: Japanese Current Teacher Training Activities for Environmental Education
by Prof. Kimiko Kozawa, Tokyo Gakugei University, Japan

Issues were presented on Environmental Education for sustainability and its implication to teacher training. Based on lessons learnt from the Japanese experiences, one statement of the Japanese government was cited, which stressed that Environmental Education in the 21st century should be regarded as "education and learning for the realization of the sustainable society" rather than as "education and learning for the environment". The presentation also mentioned that it is important to understand the different cultures of societies, and to promote attitudes which are acceptable based on the

context of particular situations. After the current status of Environmental Education in Japan was presented, and some points to be considered for further development of Environmental Education and teacher training were proposed: (1) connection between teachers' teaching experiences and Environmental Education practices; (2) in-service teacher training for developing environmental knowledge and skills, and the planning and implementation skills; (3) development of "open school for community" which enables teachers to be more active, the curriculum locally oriented, and communities more involved; (4) understanding the goal and concepts of Environmental Education as well as identifying learners' interest and needs; (5) consideration of policy influences for the promotion of Environmental Education; (6) special support by the educational board by taking part in in-service teacher training courses; (7) infusion of Environmental Education into all subjects, and (8) provision of opportunities for the professional development of in-service teachers and educators.

Paper 3: Research Findings of the study on Environmental Education at the tertiary level in the Asia-Pacific Region
by Dr. Masahisa Sato, Research Associate, Institute for Global Environmental Strategies (IGES)

Presented were some research findings from the study on 'Environmental Education at the Tertiary Level and Teacher Education in the Asia-Pacific Region. The research elucidates the sub-regional diversity in terms of the introduction of Environmental Education programmes in higher education, curriculum topics and inter-institutional co-operation. Trow's theory (1974) was found to explain the diversity of educational targets, delivery styles, and inter-institutional co-operation and networking among Environmental Education Centres and Environmental Information Centres. There are some exceptions found in the delivery styles and institutional networking at the elite phase. These findings indicate that it is important to consider sub-regionality and higher education development phases in producing region-wide policies.

Paper 4: Lessons Learnt from the past UNESCO/Japan Seminars on Environmental Education by Prof. Eiichiro Harako,
Associate Professor, Tokyo Gakugei University.

The presentation pointed out the necessity to consider carefully the real problems and constraints, of countries in the region and how these problems can be solved for the effective implementation of in-service teacher education, and other activities. Some of the problems are related to policies, while others are related to programmes. The Asia Pacific region is very diverse - yet there are commonalities in developing environmental education, for a strengthened regional networking and cooperation.

(2) Case-study Presentations

Four case studies were presented. One, by Prof. Takaaki Koganezawa from a Japanese experience of implementing environmental education in a primary school; two, Ms. Jennie Lane from the USA, presenting an analytical review of current environmental education for in-service teacher training; three, Mr. Athapol Anunthavorasakul from Thailand presenting a case on pre-service and in-service teacher training for Environmental Education in the University setting, and four, Mr. Amba Jamir from India, giving the NGO perspective on teacher training in environmental education.

Case Study 1: Prof. Takaaki Koganezawa, Professor of Miyagi University of Education (Japan), presented some teacher training activities on environmental education in Miyagi prefecture. These included features of Environmental Education

in Omore Primary School, the subjects of teacher training in Environmental Education, the ways of resolving the subjects, support systems for teachers provided by the Miyagi University of Education, and other supports provided by the university. The importance of involving local people and local stakeholders (local NGOs, media, locally-based companies, local governments, museums, universities) and organizing teamwork were stressed. It was also suggested that higher education institutions should take active roles in providing information, sending experts, jointly developing educational materials, developing network, and providing opportunities for the re-training for teachers.

Case Study 2: Ms. Jennie Lane, Director of the Wisconsin Centre for Environmental Education, University of Wisconsin School of Steven Point (UWSP), presented an analytical view of current Environmental Education in the United States, and some cases on in-service teacher training. She talked about environmental education projects such as: Learning, Experience and Activities in Forestry (LEAF), Wisconsin K-12 Energy Education Programme (KEEP). Specifically, KEEP was introduced as one of professional development programmes which includes energy courses (face to face, on-line, some special topics), workshops and conferences - Energy Fair. In addition, in-service training programme by the University of Wisconsin for qualified teacher / educators and / or resource managers was also mentioned. The course logistics included: implementing the UWSP extension/ credit outreach; providing one credit course; setting 16 hours of contact time; supporting by tuition waiver and stipend; and marketing and evaluation. The delivery approaches employed the activity guide developed with teachers / educators and were provided to in-service teachers / educators via the extension course.

Case Study 3: Mr. Athapol Anunthavorasakul, Lecturer at Chulalongkorn University, Thailand, presented some programmes and activities on pre-service and in-service teacher training for Environmental Education in his institution. It was introduced in the undergraduate pre-service programmes and related activities have been implemented in the areas of humanities, social science, and science. In-service teacher training have been organized by the university, in cooperation with the Ministry of Education, Department of Environmental Quality Promotion (DEQP), Teacher Education Institutes and other Educational Institutes, with special attention to the storyline approach, community based learning, and whole school approach.

Case Study 4: Mr. Amba Jamir, Director of an NGO, "the Missing Link, Society for Environment and Communication" in India, stressed the importance of identification of appropriate "teachers", before discussing the issues. They maybe university graduates, committed practitioners, job-seeking individuals; or responsible leaders who are shaping the future of the nation. The presentation also stressed that individuals promoting non-formal education as well as teachers in formal education need to be highly recognized as facilitative teachers. There are issues to be considered: (1) linking lessons learnt from social experiences such as livelihood and food security, market impact and globalization; and (2) linking global issues to local issues such as deforestation and biodiversity, cultural heritage and traditions, indigenous knowledge and ownership of resources, as key points when promoting in-service teacher training for ESD.

V. Roundtables for Active Interaction

Roundtable 1: Analysis of In-service Teacher Training for the implementation of Environmental Education

Framework

The participants were divided into five groups based on the sub-region they represent. Each group discussed constraints and countermeasures for the implementation of in-service teacher training in Environmental Education. Recommendations for further improvement of in-service teacher training were also identified. The analytical framework with four components proposed include: (a) support systems; (b) institutional capacities; (c) in-service teachers' capacities; and (d) programme / curriculum contents. Figure 1 shows the analytical framework and the components for each component.

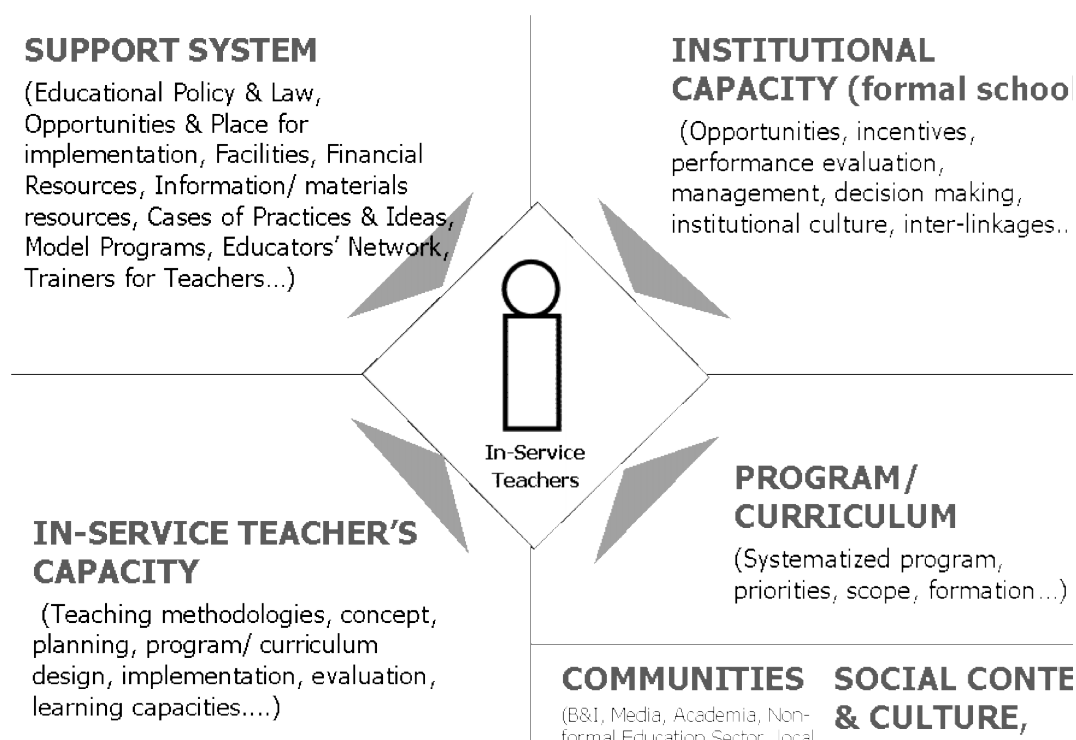


Figure 1: Analytical Framework on In-service Teacher Education

The main items covered by the presentation on in-service teacher training for Environmental Education were based on above figure. The group reports are attached as Annex 3.

Constraints

The constraints of in-service teacher training for Environmental Education, common to the countries of the region are:

(1) Support systems

- lack of adequate policies
- lack of facilities
- lack of financial resources
- lack of information & material resources
- lack and/or weak network of educators
- lack of trainers of environmental education teachers

(2) Institutional Capacities

- unclear institutional vision and mission
- lack of incentives and recognition
- unsystematic/lack of monitoring and evaluation
- faulty or lack of decision making process,
- weak institutional culture
- weak or lack of inter-linkages

(3) In-service Teachers' Capacities

- Conventional/traditional teaching methodologies

(4) Programme / Curriculum Contents

- lack of scope and formation
- limited programme content
- lack of examples of practical programmes,
- irrelevance to "real life"
- unsystematic programming,
- lack of priorities

The above-mentioned constraints are very similar to the general in-service teacher training in many countries of the region. In the area of "programme / curriculum contents", the irrelevance to real life could be explained by the countries 'importing' Environmental Education materials and approaches following programmes from western countries.

Roundtable 2: Prioritized actions of Environmental Education for the International Decade on ESD

The participants were again divided into four groups to discuss the designated topics. The main items covering the implementation of Environmental Education were: (1) overarching efforts; (2) project implementation process; (3) national level recommendations; (4) institutional efforts; (5) approach based recommendations; and (6) topic based recommendations. After the discussion of the designated topic in each of the four groups, a representative from each group reported back the group outputs in the plenary session. In order to synthesize points recommended, group reports were integrated into one table by each item. The highlights of presentation are as shown in Annex 4 A (Regional Recommendations) and Annex 4 B (Recommendations for National Implementation).

Regional Level Priority Actions

- Institutional coordination,
- Organization of a series of workshops
- Information and experience exchange
- Setting / linking regional centres of excellence,
- Mobilization of technical & financial resources,
- Partnership between government & donor Agencies
- Partnership between different agencies & practitioners and networking

National Level Priority Actions

- Formulation of national action plans and political negotiations
- Institutionalization, development of innovative curriculum, teaching and learning materials, and strategies

It is also shown in Annex 4 that further actions for DESD is needed at the regional, national, local and institutional efforts following project management cycle, e.g. designing stage, planning stage, implementation stage, evaluation stage, and the approaches to be employed for the implementation, e.g. open communication structure, collective decision making, inter-linkages, participation, joint implementation and dialogue. In considering the actions for DESD, the approaches need to be carefully considered as a tool of knowledge and skill acquisition (not as the transformation), the behaviour change, reformation of learning style and decision making, and social structure reformation, rather than the topics which might not be as important as the nature of environmental issues are so inter-related.

VI. Recommendations

1. General Recommendations for Regional Actions

- Institutional coordination to avoid overlapping efforts
- Organize a series of regular seminars / workshop for exchange of experiences
- Creation of an on-line exchange of information and experiences
- Setting / Linking Regional Centres of Excellence, by promote regional centres of excellence, developing links with existing educational institutes / centres of excellence, and the regional clearinghouse
- Mobilization of Technical & Financial Resources
- Partnership between government and donors in implementing national action plans
- Co-ordinating activities between different agencies and practitioners
- Creating an effective mechanism for setting-up new networks or maintaining and strengthening existing networks for,
 - a. sharing ideas and innovations in EE / ESD throughout the decade 2005/2015
 - b. educational institutes, schools and communities through EE (focused on community-based learning and

research)

- c. multi-level forum including educators, teachers, community representatives, NGOs and government representatives.

2. Recommendations for the Project Implementation Process

Category 1: Design and Planning Stage

(1) Concept and Approach for ESD

- Emphasize the International Decade for ESD as a "Peoples Decade" not just a "UN/UNESCO Decade"
- Clarify the distinction between EE and ESD
- Avoid SD jargon and message fatigue
- Identify organic "on the ground" ESD initiatives which "capture the representation of diverse audiences"
- Find the "missing link" in the planning stage
- Envision uncertainties
- Revisit histories and learn from the past
- Arouse the "refilling" of the Decade
- Establish a focus at the regional & country level to co-ordinate Programmes on ESD
- Learn from what already exists (stock taking)
- Stock taking activities should include not only EE but also ESD
- Build capacity for Member countries
- "Meet people where they are" to understand and build relationships

(2) Needs Assessment

- Each sub-regional, regional and country level about ESD implementation. How can we help each other?
- Country / community consultations
- Consult widely to build partnerships

(3) Marketing

- Identify possible key agents to implement DESD
- Review the current capacity / situation
- Assess the strengths and weaknesses of ESD

(4) Regional Strategy and Implementation Plans

- Formulate Regional and Sub-Regional strategies
- Conduct Country / community consultations
- Develop and set a common agenda & strategies for ESD at the regional level

(5) Research

- What research is available in EE / ESD that identifies teaching & learning for change?

Category 2: Implementation and Follow-up Stage

(1) Capacity Building, Education & Literacy Promotion

- Promote distant on-line learning through the Global Virtual University (GVU)
- Promote Type II Initiatives, Asia-Pacific Initiatives
- Establish a good knowledge base through the Toolkit project

(2) Literacy promotion and Material Production

- Regional book production on certain topics.

(3) Accumulation of Lessons from Experiences

- Use grassroots successes to advance systemic changes
- Need to develop a strong network of sharing ideas & innovations in EE / ESD
- Through-out the decade 2005/2015, identify 'best practices' and lessons learnt

(4) Public Relations and Outreach

- Popularize DESD
- Publicity and awareness campaign for DESD
- Spread the ESD message as widely as possible
- Need for acceptance at the public level. There is a need for a public forum

(5) Evaluation and Assessment

- Develop and share examples of evaluation and assessment

3. Recommendations for National Implementation

- Development of National Action Plans
- Conduct political negotiations by sensitizing politicians and policy makers to the vitality of ESD (to muster their support)
- Institutionalization, by making Education for Sustainable Development a foundation course in all teacher training programmes, and organization of short courses and materials on ESD for the reorientation of teacher educators in colleges and universities, and promote ESD as a course of education
- Identify teaching and learning strategies, methods and programmes that focus on change

<p>If education is to be the agent of change, then we need to adopt teaching and learning strategies that focus on change, help learners, and reflect our attitudes and values</p>
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- Curriculum and Materials Development - reviewing the present curriculum, making ESD as an overarching

theme, developing Curriculum tools for ESD especially during the decade, sensitizing curriculum developers how to integrate ESD into learning curricula at different levels, and providing toolkits for different target groups

4. Recommendations for Institutional Efforts

(1) Ways of Implementation

- Setting-up a Coordinating Body, national level (meeting 2/3 times per year), and regional level (meeting once per year), membership comprising representatives of schools, communities and NGOs. Core groups could be set-up, and regular consultations conducted
- Opening Communication Structure, to evaluate and discuss issues and promoting ESD messages and models that work
- Organizing public relations and outreach activities
- National commitment to maintain the network
- Setting - up national/sub-regional networks or centers for ESD and linking to other networks, also strengthening existing networks
- Promoting regional centres of excellence
- Setting up a monitoring system to monitor progress of ESD projects, to identify obstacles and characteristics of success

(2) Research

- On ESD / EE teaching and learning, networking and coordination
- Action and Documentary research
- Project Implementation: Pilot projects (focusing on ESD); Strengthening of networks and partnerships; Regional launch, country launch, local launch of the Decade, and donor-supported projects

(3) Information Exchange by On-line Basis

- Setting up on-line exchanges at educational institutes

(4) Database

- Sharing practices that work

(5) Partnership

- Promoting bilateral / multilateral national efforts for co-operative activities
- Bringing together different ESD partners to transfer ideas and activities to countries where ESD initiatives are not working

(6) Regular Regional Workshops and Seminars

- Holding regional / sub-regional workshops & seminars for needs assessment and sharing ideas
- Collecting and sharing feedbacks on the network by regular seminars / workshops for a step-wise approach

- Holding workshops and training in for different venues, especially in countries with effective models or examples for the promotion of ESD
- Inviting representatives to share information and develop networks on ESD

(7) Regional Planning Workshops for scenario building and planning for uncertainties

(8) Regular evaluation workshops

(9) Regional Media Workshops, to identify and utilize media tools, promote media awareness information and involvement of stakeholders

5. Recommendations for Topic-Oriented Efforts

(1) Book and Material Production

- Development of different materials and guides for different audiences (policy, private, NGO, community, etc.)
- Preparation of low-cost / low technology awareness materials
- Provision of basic tools (materials, guidebooks...) for developing countries (to create a knowledge base)

(2) Curriculum Development

- Regional workshop on development and matrix for incorporating EE into existing curricula / teacher training

(3) Regional Training Workshop

- Regional workshops on teacher training for adapting curriculum and materials to local needs

Annex 1: Annotated Agenda and Schedule of the Expert Workshop

1. Opening Ceremony
2. Direction-setting Presentations
 - An Orientation to APEID and ESD by Ms. Lucille C. Gregorio, UNESCO BKK
 - Challenges for Future Environmental Education & Its Teacher Training. by Prof. Kimiko Kozawa, Tokyo Gakugei University
 - Environmental Education at the Tertiary Level in the Asia-Pacific Region, with a focus on Teacher Training. by Dr. Masahisa Sato (IGES)
 - Revisiting 'Teacher education which promotes Environmental Education - What should it be like' by Prof. Eiichiro Harako, Tokyo Gakugei University
- (1) Case-study Presentations
 - Teacher Training in Environment Education: Case Study of Orose Elementary School by Prof. Takaaki Koganezawa, Miyagi University of Education
 - Environmental Education in Wisconsin: A Teacher Education Approach by Ms. Jennie Lane, University of Wisconsin, USA
 - Teacher training for EE and ESD in Thailand: Pre-service and In-service, by Athapol Anunthavorasakul, Chulalongkorn University, Bangkok
 - Learning Together: Teaching "for a Sustainable Future" by Mr. Amba Jamir, NGO representative, The Missing Link, Society for Environment and Communication, India
- (2) Roundtable 1: Analysis of Current Status of In-service Teacher Training in Environmental Education
 - Group Work: Constraints and Countermeasures of In-service Teacher Education for the Implementation of Environmental Education
 - Group Work: Recommended Actions of In-service Teacher Education for the Implementation of Environmental Education
- (3) Roundtable 2: Prioritized Actions and Means of Implementation of Environmental Education for the International Decade of ESD
 - Group Work: Prioritized Actions and Means of Implementation of Environmental Education for the International Decade of ESD

Schedule of Expert Workshop

13th February 2004

0900	PLENARY SESSION: Direction-setting Presentations
0900-0920	● An Orientation to APEID and ESD. Lucille C. Gregorio (UNESCO BKK)
0920-0930	<Discussion>
0930-0950	● Challenges for Future Environmental Education & Its Teacher Training. Kimiko Kozawa (Tokyo Gakugei Univ.)
0950-1000	<Discussion>
1000-1020	● Environmental Education at the Tertiary Level in the Asia-Pacific Region, with a focus on Teacher Training. Masahisa Sato (IGES)
1020-1030	<Discussion>
1030-1050	● Revisiting 'Teacher education which promotes Environmental Education - What should it be like'. Presentation by Eiichiro Harako (Tokyo Gakugei Univ.)
1050-1100	<Discussion>
1110	IN-SERVICE TEACHER EDUCATION: Case-study Presentations
1110-1130	● Teacher Training in EE: Case Study of Omore Elementary School (tentative). Takaaki Koganezawa (Miyagi Univ. of Education)
1130-1150	● Environmental Education in Wisconsin: A Teacher Education Approach. Jennie Lane (The Univ. of Wisconsin)
1150-1210	● Teacher training for EE and ESD in Thailand: Pre-service and In-service. Athapol Anunthavorasakul (Chulalongkorn University)
1210-1230	● Presentation by Amba Jamir (The Missing Link, Society for Environment and Communication)
1330	GROUP WORKSHOPS on In-service Teacher Education (Part I)
1330-1345	<Introduction>
1345-1445	● Group Workshop: Constraints of In-service Teacher Training in EE
1455-1555	● Group Workshop: Countermeasures of In-service Teacher Training in EE
1610-1720	● Group Workshop: Recommendations for Best Practices of In-service Teacher Training in EE
1720-1800	PLENARY SESSION: Group Presentation

14th February 2004

0900-0910	<Introduction>
0910	GROUP WORKSHOP on UNDESD (Part II)
0910-1040	● Group Workshop: Recommendations for Prioritized Actions for the Implementation of UNDESD in the Asia-Pacific Region
1040-1100	PLENARY SESSION: Group Presentation
	<Break>
1120-1130	SUMMARY SESSION
1130	<Closing remarks: Kazuyuki Mikami (Miyagi Univ. of Education)>
1130-1230	<Seminar Evaluation>
1330	● Bus Excursion to Izunuma Wetland (from Hotel Kanyo 1F)

Annex 2: Composition of the groups

South Asia:	India**, Afghanistan*, Nepal, UNU (Chowdhury), IGES (Bhandari), Takeda (assistant)
Southeast Asia (1)	Philippines**, Thailand*, Malaysia, UNU (Suzuki), Miyagi Univ. (Mizota), Taka (assistant)
Southeast Asia (2)	Cambodia**, Vietnam*, Laos, UNESCO (Gregorio), Miyagi Univ (Mikami), Kamii & Tamura (assistant)
Northeast Asia	UNU(Fadeeva)**, IGES(Sato)*, Japan (Harako), Japan (Kozawa), China, Miyagi Univ(Koganezawa), Japan (Oikawa), Y. Shouji (assistant)
Pacific	New Zealand**, UNU(Babikwa)*, USA, UNESCO(Elias), Miyagi Univ. (Saitou), Tottori Univ. (Kates), K.Shouji (assistant)

** : Chair of Sub-regional sessions / * : Sub-regional Anchor Person

Annex 3: Sub-regional Group Reports

Constraints and Countermeasures of In-service Teacher Education for the Implementation of Environmental Education

South Asia

A. Constraints

CONSTRAINTS (South Asia)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Lack of Adequate Policies]</p> <ul style="list-style-type: none"> ● Lack of adequate policy ● Poor policy implementation ● Poor political will <p>[Lack of Facilities]</p> <ul style="list-style-type: none"> ● Lack of infrastructure <p>[Lack of Human Resources]</p> <ul style="list-style-type: none"> ● Lack of skilled resource persons / professionals / expertise <p>[Lack of Information & Material Resources]</p> <ul style="list-style-type: none"> ● Poor resource needs ● Lack of resources (teaching materials) <p>[Lack of Financial Resources]</p>	<p>[Lack of Incentives]</p> <ul style="list-style-type: none"> ● Low salary / wages ● No (lack of) team spirit in training institutions <p>[Lack of Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● No consistent evaluation mechanism for teachers <p>[Lack of Decision Making]</p> <ul style="list-style-type: none"> ● No involvement in policy formulation <p>[Lack of Practical Training Programmes]</p> <ul style="list-style-type: none"> ● Lack of basic training
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME, CURRICULUM</u>
<p>[Conventional Teaching Methodologies]</p> <ul style="list-style-type: none"> ● Talk and chalk method still rules ● Textbook-based and examination-oriented ● Top down Programmes / curriculum design <p>[Action – Knowledge Gap]</p> <ul style="list-style-type: none"> ● Gap between teacher knowledge and content <p>[Low Capacity of Curriculum / Programme Design]</p> <ul style="list-style-type: none"> ● Poor capacity to design curriculum / programme <p>[Low Esteem]</p> <ul style="list-style-type: none"> ● Low esteem / status for teaching profession. 	<p>[Lack of Scope & Formation]</p> <ul style="list-style-type: none"> ● Lack of EE component ● Not holistic (enough!) (too much subject content and methodology) ● Formal / non-formal ‘marriage’ <p>[Limited Programme content]</p> <p>[Lack of examples of practical Programmes]</p> <p>[Irrelevance to “Real life”]</p> <p>[Systematized Programme]</p> <ul style="list-style-type: none"> ● Top down approach ● Lack of participation by stake holders (in curriculum / programme) <p>[Lack of Priorities]</p> <ul style="list-style-type: none"> ● Teacher training is a low priority <p>[Lack of Scope & Formation]</p>

B. Countermeasures

COUNTERMEASURES (South Asia)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Setting Adequate Policies]</p> <ul style="list-style-type: none"> ● Formulation of national plans / policy for teacher training; ● National consultations, Advocacy, SAARC <p>[Financial Resources]</p> <ul style="list-style-type: none"> ● Resource (finance) ● Common pool / fund from Education Ministry and from other allied ministries <p>[Shared item with “Institutional capacity”]</p> <ul style="list-style-type: none"> ● Judicial activism <p>Note: Issues to be thought about;</p> <ul style="list-style-type: none"> ● Development of integrated training curriculum (National level / state) ● Inter-sectional linkages (cooperation) for teacher training ● Regional resource centres for teacher training & ESD (RCE) 	<p>[Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● Evaluation framework that involves peers, community members and others <p>[Decision Making]</p> <ul style="list-style-type: none"> ● Involve teachers in policy formulation and consultations <p>[Inter-linkages]</p> <ul style="list-style-type: none"> ● Co-ordination between different ‘stages’ of education (horizontal and lateral)
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME , CURRICULUM</u>
<ul style="list-style-type: none"> ● Due recognition for the teaching profession in terms of salary / shelter / support ● Improve and provide periodic training ● Update teacher training curricula in tune with UNDESD 	<ul style="list-style-type: none"> ● Bottom up approach (needs-based) ● Sharing of EE teacher training curricula from other countries

Southeast Asia (Group 1)

A. Constraints

CONSTRAINTS (South-East Asia (1))	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Lack of Adequate Policies]</p> <ul style="list-style-type: none"> ● EE curriculum framework available but circulation is limited. (Philippines). ● No master plan or directed unit to support teacher training for EE. (Thailand). ● Policy exists, but implementations are limited. ● EE training is NOT a priority. <p>[Lack of Facilities]</p> <ul style="list-style-type: none"> ● No directed Centre / Unit to manage or operate teacher training for EE (Thailand). ● Absence of a focal point or person in main government agencies promoting EE (Philippines). <p>[Lack of Financial Resources]</p> <ul style="list-style-type: none"> ● Lack of financial resources (UNU). ● Lack of financial support (MUE). 	<p>[Unclear Institutional Vision / Mission]</p> <ul style="list-style-type: none"> ● Lack of awareness of importance of EE (ESD) (UNU). ● Institutional mission. Awareness of management (UNU). <p>[Lack of Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● There are many interesting innovations and teaching tools but we lack a promotion and monitoring system to support EE implementation (Thailand). ● Monitoring evaluation scheme not present (Philippines). ● Evaluation of criteria for school teachers (UNU). <p>[Lack of Guidelines to Operationalise the</p>

<ul style="list-style-type: none"> ● Limited financial resources and annual allocation (Malaysia). <p>[Lack of Educators' Network]</p> <ul style="list-style-type: none"> ● School – community linkage limited. (Philippines). ● Networks between schools and educational universities are limited (MUE). ● In some provinces, teacher networks have been formed but play a small role in promoting teacher training for EE (Thailand). ● EE network exists but membership is limited to a few Teacher Education Institutes / Universities / Schools (Philippines). <p>[Lack of Teachers' Trainers]</p> <ul style="list-style-type: none"> ● EE network exists but membership is limited to a few Teacher Education Institutes / Universities / Schools (Philippines). <p>[Lack of Coordination]</p> <ul style="list-style-type: none"> ● Lack of coordination between lead agencies promoting EE. 	<p>Vision / Mission]</p> <ul style="list-style-type: none"> ● No “specific” documents to empower school administrators to infuse EE in the teaching / learning process (Malaysia).
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CONSTRAINTS (South-east Asia (1))	
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME, CURRICULUM</u>
<p>[Frequency / Mode of Training]</p> <ul style="list-style-type: none"> ● Training not institutionalized (Philippines). ● Lack of manpower to conduct in-service training (Malaysia). <p>[Limited Training Providers]</p> <ul style="list-style-type: none"> ● Limited number of EE teacher trainers. Most trainers are in NGOs (Thailand). <p>[Less Content of Training]</p> <ul style="list-style-type: none"> ● Lack of experience in infusing EE in the teaching/learning process (Malaysia). ● Most teachers still have limited ideas of how to integrate EE into the school curriculum. Creating! Creating! (Thailand) ● Misconceptions about integration of EE into curriculum and instruction (Thailand). ● Lack of knowledge and experience in EE (MUE). ● Insufficient access to information by ordinary school teachers (UNU). <p>[Pedagogical Beliefs]</p> <ul style="list-style-type: none"> ● Field activities limit knowledge acquisition. ● Expanding teacher training for EE in each subject. Teachers believe that EE should be infused only in science and social studies (Thailand). <p>[Less Incentives / Opportunities]</p> <ul style="list-style-type: none"> ● Teachers are forced to attend in-service training (Malaysia). ● Training opportunities limited, and training activities are not free (Philippines). ● Insufficient training opportunities (UNU). 	<p>[Lack of Scope & Formation]</p> <ul style="list-style-type: none"> ● Curriculum overloaded EE integration not practiced as mandated (Philippines). ● No specific curriculum for in-service training.(not needs-based) (Malaysia). <p>[Lack of Needs Assessment]</p> <ul style="list-style-type: none"> ● Lack of community based research. <p>[Lack of Curriculum Development Team]</p> <ul style="list-style-type: none"> ● Lack of involvement among people in society (Malaysia). ● Minimal involvement of sectors, national companies (Malaysia). <p>[Lack of Articulation across Sectors]</p> <ul style="list-style-type: none"> ● Curriculum of in-service training focused on knowledge acquisition, limited real life problem-solving skills (Philippines). ● Lack of coordination among different levels of education (UNU).

B. Countermeasures

COUNTERMEASURES (South-east Asia (1))	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Setting Adequate Policies]</p> <ul style="list-style-type: none"> ● Prepare National (ESD) Action Plans (national-regional-local). ● Prepare an ESD plan/Programme monitoring system (national-regional-local). <p>[Educator's Network]</p> <ul style="list-style-type: none"> ● Identify regional centres of excellence (RCE) <p>[Coordination]</p> <ul style="list-style-type: none"> ● Establish a national coordinating body for ESD (Philippines). <p>[Building Facilities]</p> <ul style="list-style-type: none"> ● Identify regional centres of excellence (RCE) <p>[Human Resources]</p> <ul style="list-style-type: none"> ● Identify regional centres of excellence (RCE) <p>[Information & Material Resources]</p> <ul style="list-style-type: none"> ● Identify regional centres of excellence (RCE) <p>[Financial Resources]</p> <ul style="list-style-type: none"> ● Mobilization of financial support from different sources. 	<p>[Institutional Vision / Mission]</p> <ul style="list-style-type: none"> ● Clear vision / mission statement. <p>[Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● Change of criteria evaluation.
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME , CURRICULUM</u>
<ul style="list-style-type: none"> ● Integrate EE Training into existing INSET. ● Involve professional teacher organizations. ● Mobilize financial support from different sources. 	<ul style="list-style-type: none"> ● MOE (Ministry of Education) should try to promote EE through each subject teachers' organization (Thailand). ● Strengthen EE networks not only among teachers but also school administrators, NGOs, community representatives. How are they involved in teacher training for EE? (Thailand) ● National curriculum focuses on integration so related sectors should try to help teachers by using EE as an integration unit (Thailand). ● More resources for teachers. ● Collaboration across grade levels. ● Mobilize financial support from different sources.

C. Recommendations

RECOMMENDATIONS FOR BEST PRACTICE & INNOVATION (South-east Asia (1))	
<ul style="list-style-type: none"> ● Collaboration of schools and their communities. ● Teachers as researchers, community as eco-researchers. ● EE should be part of examinations. 	<ul style="list-style-type: none"> ● Focus on Core Messages. ● Whole –school approach. ● Sharing practices that work.

Southeast Asia (Group 2)

A. Constraints

CONSTRAINTS (South East Asia (2))	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Lack of Adequate Policies]</p> <ul style="list-style-type: none"> ● Lack of national policy for EE ● Ineffective / inefficient implementation of EE policies. ● Management of natural resources limited due to population growth, modernization ideas. <p>[Lack of Coordination]</p> <ul style="list-style-type: none"> ● Lack of participatory approach involving stakeholders in EE programming. ● Lack of co-operation / coordination between primary and secondary school levels. <p>[Lack of Facilities]</p> <ul style="list-style-type: none"> ● Lack of physical facilities for EE training (central / provisional / rural). ● Shortage of infrastructure (transportation / school buildings) for promoting EE in schools. <p>[Lack of Financial Resources]</p> <ul style="list-style-type: none"> ● Unite financial for EE (Cambodia) <p>[Lack of Human Resources]</p> <ul style="list-style-type: none"> ● Unite technical for EE (Cambodia) <p>[Lack of Information & Material Resources]</p> <ul style="list-style-type: none"> ● Lack of / insufficient EE materials for teachers and students. 	<p>[Unclear Institutional Vision / Mission]</p> <ul style="list-style-type: none"> ● Schools should have an institutional mission. ● Lack of institutional mission. <p>[Lack of Incentives]</p> <ul style="list-style-type: none"> ● Lack of insufficient economic rewards and incentives to do effective EE work in schools. <p>[Lack of Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● School should have monitoring measures. ● Lack of monitoring system. <p>[Institutional Culture]</p> <ul style="list-style-type: none"> ● Economic pressure creates different points of view between school and community.
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME, CURRICULUM</u>
<p>[Lack of Teacher Trainers]</p> <ul style="list-style-type: none"> ● Lack of teacher trainers in EE promotion. <p>[Over flood subjects to be Implemented]</p> <ul style="list-style-type: none"> ● Too many subjects for teachers to integrate (Cambodia). <p>[Lack of Curriculum Development Team]</p> <ul style="list-style-type: none"> ● Lack of support from school administrators / principals / other personnel. <p>* In-service teachers are not free of charge. * In-service teachers don't know what EE / ESD is. * Teaching and learning style * Teachers are forced to take other training.</p>	<p>[Lack of examples of practical Programmes]</p> <ul style="list-style-type: none"> ● Lack of EE training for teachers. ● Lack of programmes for EE teacher training. <p>[Irrelevance to "Real life"]</p> <ul style="list-style-type: none"> ● Limitations for local action due to centralized curriculum planning. ● Lack of community based. ● Limited knowledge for implementing imported curricula. ● Curriculum imported from developed countries, so locals can't fit to own needs. <p>[Systematized Programme]</p> <ul style="list-style-type: none"> ● Lack of curricula on EE.

B. Counter measures

COUNTERMEASURES (South East Asia (2))	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Setting Adequate Policies]</p> <ul style="list-style-type: none"> ● Develop a national action plan on EE with provision of technical / financial resources. ● Include EE in national EFA action plans. <p>[Coordination]</p> <ul style="list-style-type: none"> ● Establish a national mechanism to undertake coordination role in EE. ● Strengthen the involvement of stakeholders in EE programming. <p>[Information & Material Resources]</p> <ul style="list-style-type: none"> ● Provision of technical and financial assistance.(Cambodia) <p>[Financial Resources]</p> <ul style="list-style-type: none"> ● Provision of technical and financial assistance.(Cambodia) ● Donor / international organization support. <p>[Teachers' Trainers]</p> <ul style="list-style-type: none"> ● Provision of technical and financial assistance.(Cambodia) <p>[Educators' Network]</p> <ul style="list-style-type: none"> ● Linkage with institutions providing training. (H.E, NGO's, int'l organizations) ● Donor / international organization support. <p>[Facilities]</p> <ul style="list-style-type: none"> ● Negotiate with donors to provide training facilities. (JICA) <p>*Schools should have support from other sectors such as finance, intellectual, etc. *Implementation of action plan has some constraints. *National mechanism faces problems in terms of consent. *Develop training for principals, school administration on EE.</p>	<p>[Decision Making]</p> <ul style="list-style-type: none"> ● Local community support / contributions. <p>[Inter-linkages]</p> <ul style="list-style-type: none"> ● Partnerships are better than relying on donors.
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME , CURRICULUM</u>
<ul style="list-style-type: none"> ● Organize regular professional development for EE trainers Programme. ● Organize and conduct environmental seminars for teachers / trainers (Cambodia). ● Develop teacher training curricula at school level for EE (Laos). <p>*Decentralize: integrate EE programmes to regions and locally. *Introduce past experiences on EE disasters to developing countries to their EE Programmes. *Encourage NGOs to contribute activities in providing in-service teacher's capacity. *Introduce successful approaches to in-service teachers.</p>	<ul style="list-style-type: none"> ● Set up centres for EE. (national , regional , local) ● Develop / upgrade / update EE TT Programmes. ● Core / educational / institution link to teacher's in-service training ● Incorporate EE components into existing curricula and materials examination. ● Develop a series of EE materials. ● Existing teacher upgrade training courses. <p>*Recognize / integrate indigenous knowledge in non-formal education Programmes</p>

C. Recommendations

RECOMMENDATIONS FOR BEST PRACTICE & INNOVATION (Southeast East Asia (2))	
<ul style="list-style-type: none"> ● National project on EE (2000-2005), UNDP-DANPA Project on EE 1997-2004, 2004-2007. ● Develop a matrix for incorporating EE into existing curricula / teacher training. ● Develop teacher guidebooks on “Designing EE models”. ● Schoolteachers should design and implement EE models and incorporate into their teaching. ● Inter-ministerial steering committee for EE to develop national Programmes (Cambodia). ● Formation of local associations by NGOs and religious groups for EE in the community (Cambodia). 	<ul style="list-style-type: none"> ● Self-learning on EE encouraged / motivated by job opportunities (Cambodia). ● Partnership between Min of Science, Technology, Environment + MOE in implementing national action plan (Laos). ● Special events to promote environment awareness (e.g. Eco-clubs, Greening). ● Provision of scholarships / incentives for students going to Universities of Education / Teacher Training Colleges (Vietnam / Laos / Cambodia). ● Incentives for extra teaching locally. ● Additional support for female teachers in rural / remote areas. ● Incentives provided for regular teachers assigned to difficult situations and remote areas as well as for contract teachers. ● Flexible curriculum for minority children based on local needs (Laos).

Northeast Asia

A. Constraints

CONSTRAINTS (North-East Asia)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Lack of Information & Material Resources]</p> <ul style="list-style-type: none"> ● Lack of Information on EE (as teaching material) (Japan). <p>[Lack of Adequate Policies]</p> <ul style="list-style-type: none"> ● No quality control of EE (Russia). ● Japan doesn't have a systematic EE Programme (Japan). <p>[Lack of Facilities]</p> <p>[Lack of Financial Resources]</p> <ul style="list-style-type: none"> ● No specification of funding at the national level (financial allocation) ● Lack of budget to do EE Programmes (Japan). <p>[Lack of Educators' Network]</p> <ul style="list-style-type: none"> ● Institutions don't know how to support schools. ● Schools aren't able to find institutions to support them. ● Institutions wonder what contents to contribute to school (Japan). <p>[Lack of Coordination]</p> <ul style="list-style-type: none"> ● Lack of connection and support between schools, universities and other institutes (Japan). ● Universities and NGOs don't know much about "school" and “school 	<p>[Lack of Incentives]</p> <ul style="list-style-type: none"> ● Few incentives for in-service teachers because low priority in schools (Japan). <p>[Lack of Inter-linkages]</p> <ul style="list-style-type: none"> ● Existence of conditions which constrain originality of teachers in class (e.g. principal, college, parents) (Japan). ● It is difficult for Japanese schools to give consent for management. <p>[No time to design / research / develop EE Programmes]</p> <ul style="list-style-type: none"> ● No time for research (Japan). ● Lack of time to study EE by oneself. ● Teachers can't afford to do "Integrated Studies" classes (Japan). ● Teachers have no time to discuss curriculum design with other teachers at school or with

<p>children"(Japan)</p> <ul style="list-style-type: none"> ● Distance between specialists and teachers (Japan). ● Distance between professors, teachers and students (Japan). <p>[Low priorities and Status of EE]</p> <ul style="list-style-type: none"> ● Low priority on Environmental Education (Russia). ● Low status of EE / no social support ● China has a large population and it's difficult to put E.E. into effect so should carry out tests in some small countries (China). ● The system for EE is very limited. Not many people are interested in supporting EE (China). ● Most citizens are not conscious of the importance of EE (China). <p>[Examination System]</p> <ul style="list-style-type: none"> ● In school, both teachers and students focus on education for tests and the examinations (China). ● Problem of the content of examinations (Japan). 	<p>specialists (Japan).</p> <p>[Class size]</p> <ul style="list-style-type: none"> ● Class-size is too large for experimental learning (Japan). <p>*Schools don't know how to get institutional support (Japan).</p>
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CONSTRAINTS (North-East Asia)	
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME, CURRICULUM</u>
<p>[Lack of teacher leadership]</p> <ul style="list-style-type: none"> ● Too much reliance on textbooks (Japan). ● Too much reliance on expert views (Japan). <p>[Lack of learning ability]</p> <ul style="list-style-type: none"> ● Gaps between new knowledge and teacher's training (Russia) <p>[Lack of concepts, contents, ideas]</p> <ul style="list-style-type: none"> ● The main idea of EE in elementary school and middle school is not clear yet: focus + contents + concepts (China). ● Teachers don't know ESD concepts, so they can't design curricula. <p>[Lack of creative ability / possibility]</p> <ul style="list-style-type: none"> ● Power of teachers' supervision of EE is not strong (China). ● Teachers lack ability to build a creative learning (Japan). ● Teachers don't have the opportunity to organize programmes (Japan). ● Low quality of teachers for implementing EE in schools (China). <p>[Lack of EE Experience]</p> <ul style="list-style-type: none"> ● Lack of experience in E.E. for school teachers (Japan). <p>[Lack of Social Experience]</p>	<p>[Limited Programme content]</p> <ul style="list-style-type: none"> ● The contents of EE are not enough. Just stay at the basic line. We need to improve it (China). <p>[Lack of examples of practical Programmes]</p> <ul style="list-style-type: none"> ● Lack of examples of practical programmes on EE (Japan). <p>[Irrelevance to "Real life"]</p> <ul style="list-style-type: none"> ● EE taken outside of context of actions (Russia). ● The balance of EE is not good. It differs depending on different areas (China).

B. Counter Measures

COUNTERMEASURES (North-East Asia)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Educator's Network]</p> <ul style="list-style-type: none"> ● Linkage between universities and educational administrators to build a teacher learning system and support. <p>[Human Resources]</p> <ul style="list-style-type: none"> ● Fellowship with colleagues (Japan). ● Increase the number of "Tutors" in schools (Japan). 	<p>[Institutional Vision / Mission]</p> <ul style="list-style-type: none"> ● Engage teachers, decision makers and people in discussion about the future of EE. <p>[Decision Making]</p> <ul style="list-style-type: none"> ● Create an open communication

<p>[Facilities]</p> <ul style="list-style-type: none"> ● RCE (Regional Centres of Excellence) & Global learning space. <p>[Financial Resources]</p> <ul style="list-style-type: none"> ● More financial support for EE, careful money usage (China). <p>[Teachers' Trainers]</p> <ul style="list-style-type: none"> ● Create a teacher learning system for learning how to design and coordinate EE Programmes. <p>[Incentives]</p> <ul style="list-style-type: none"> ● Official recognition of achievements through "EE Awards" ● Introduce sabbaticals (half a year every 5 years) (Japan). ● Introduce a sabbatical system for teachers (Japan). ● Share social experiences during the sabbatical term. ● Try to reduce the burden of study for students, so students will have more time to focus on EE (China). <p>[Publicity]</p> <ul style="list-style-type: none"> ● Pay more attention to publicizing EE through media, PR. (China) ● Need for PR about good role models - persons like Socrates. <p>[Examination Reformation]</p> <ul style="list-style-type: none"> ● Change the content of examinations (Japan). 	<p>culture, public space (Japan).</p> <ul style="list-style-type: none"> ● Engage teachers, decision makers and people in discussion about the future of EE. <p>[Institutional Culture]</p> <ul style="list-style-type: none"> ● Create an open communication culture, public space (Japan). <p>[Inter-linkages]</p> <ul style="list-style-type: none"> ● Engage teachers, decision makers and people in discussion about the future of EE.
<p><u>IN-SERVICE TEACHER'S CAPACITY</u></p>	<p><u>PROGRAMME , CURRICULUM</u></p>
<p>[Leadership training]</p> <ul style="list-style-type: none"> ● Self-discipline on the teacher's part. ● Help teachers to become independent from the textbook. <p>[Higher Education Reformation]</p> <ul style="list-style-type: none"> ● Change the learning system in higher education from "what to know" to "how to learn" (Japan). <p>[Incentives]</p> <ul style="list-style-type: none"> ● Increase the salary of teachers (Japan). ● Incentives to complete Programmes of EE (Japan). 	<ul style="list-style-type: none"> ● Ask children! (Russia) ● Make a link between EE and stage /style /kind of development. ● Make better textbooks or other materials for EE in order to make it easier for students to study (China). ● To build a systematic EE curriculum, import from advanced countries (Japan). ● Discussion between teachers and students (Japan).

C. Recommendations

<u>RECOMMENDATIONS FOR BEST PRACTICE & INNOVATION (North-East Asia)</u>	
<ul style="list-style-type: none"> ● Community based and locally owned resource centres. ● Teacher training for adapting curricula to local needs. ● Integrate EE content into relevant subjects or develop EE as supplementary materials. ● Set up a national coordinating body 	<ul style="list-style-type: none"> ● Develop ESD as a core subject ● Update training curriculum and manual. ● Institutionalize teacher training. ● Due recognition of teaching profession in terms of salary, social status, respect. ● National consensus on training policy

Pacific States

A. Constraints

CONSTRAINTS (Pacific)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Lack of Adequate Policies]</p> <ul style="list-style-type: none"> ● Ministry of Education emphasizes “education for the future” but does not support “futures education” at all levels. ● Lack of policy at government level to guide EE or put it on the agenda. ● Lack of assessment standards for EE/ESD. ● EE guidelines exist for schools but are not mandatory. ● EE not being included in school curriculum. <p>[Lack of Financial Resources]</p> <ul style="list-style-type: none"> ● No money available for support , monitoring ● Financial support provides only for limited implementation of EE/ESD. ● EE budget being reduced or eliminated. ● Dependency on external funding of Programmes. ● Lack of funds to support teacher professional development. <p>[Lack of Information & Material Resources]</p> <ul style="list-style-type: none"> ● No information available to develop capacity to teach EE <p>[Lack of Coordination]</p> <ul style="list-style-type: none"> ● Delivery, communication of support is very difficult (includes linguistic aspect) <p>[Low priorities and Status of EE]</p> <ul style="list-style-type: none"> ● Environmental Education not included in state government educational institutions ● Lack of priority ● Competing priorities <p>[Examination System]</p> <ul style="list-style-type: none"> ● Overemphasis on examinations 	<p>[Lack of Management]</p> <ul style="list-style-type: none"> ● Lack of support for EE/ESD by institutional management teams. ● Professors and administrators are not environmentally literate.

CONSTRAINTS (Pacific)	
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME, CURRICULUM</u>
<p>[Conventional Teaching Methodologies]</p> <ul style="list-style-type: none"> ● Teachers don't understand EE/ESD. ● Learning style conflict between traditional note-taking and action-based learning approaches. ● Teachers over whelmed by curricular demands. ● Lack of time for in-depth curriculum planning for EE/ESD. ● Lack of money, training expertise available. ● Teachers don't see relevance of EE to their topic. ● In some instances, EE still narrowly defined. ● System of training teachers has emphasized traditional disciplines, so teachers are challenged when expected to teach integrated content. ● Social issues component of EE - EE could address societal issues (e.g. Environmental justice) ● Poverty, drug use, discrimination 	<p>[Irrelevance to “Real life”]</p> <ul style="list-style-type: none"> ● Curriculum not locally relevant, i.e.: Pacific region EE is driven by the USA, Australia, NZ and France. ● Curriculum does not build on local knowledge of environment, sustainable resource management systems. <p>[Systematized Programme]</p> <ul style="list-style-type: none"> ● EE/ESD is often viewed as the responsibility of the formal education system thus making cross-sectoral collaboration is difficult in regards to planning for ESD.(NZ) <p>[Lack of Priorities]</p>

<ul style="list-style-type: none"> ● Teachers entering the field without EE experiences. 	<ul style="list-style-type: none"> ● Lack of sustained support. <p>[Lack of Scope & Formation]</p> <ul style="list-style-type: none"> *Lack of time for EE/ESD because of on overcrowded curriculum. *Discipline-based approach discourages inter-disciplinary education such as EE/ESD. *Formal-non-formal work together. *Material/resources extraneous to cross curriculum. *Inaccurate resources, poorly mode, questionable motives (USA) *Ownership of Programmes, lack of sharing information cost for purchasing NGO Programmes.
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B. Counter Measures

COUNTERMEASURES (Pacific)	
<u>SUPPORT SYSTEM</u>	<u>INSTITUTIONAL CAPACITY</u>
<p>[Setting Adequate Policies]</p> <ul style="list-style-type: none"> ● Stakeholder policy ensures research to support ESD. ● Make education a priority in government ● Assessment tools <p>[Incentives]</p> <ul style="list-style-type: none"> ● Make education a priority in government 	<p>[Incentives]</p> <ul style="list-style-type: none"> ● Create an inbuilt system for individuals to take action and respond to challenges without exception (autonomy). <p>[Monitoring & Evaluation]</p> <ul style="list-style-type: none"> ● Teachers, professors, administrators need to pass an environmental literacy screening test. <p>[Decision Making]</p> <ul style="list-style-type: none"> ● Coordination: team members placed in teachers in-service support teams that work regionally (NZ). <p>[Institutional Culture]</p> <ul style="list-style-type: none"> ● Establish a new school culture. <p>[Management]</p> <ul style="list-style-type: none"> ● Institutional management, lack of funds, not separate discipline-based approach. ● Coordination: team members placed in teachers in-service support teams that work regionally (NZ). ● Recognizing teacher commitment to ESD by allocating staff management units (NZ). ● Model schools: <i>Enviro-schools</i> concept that links curriculum organizational principles, operational practices and school ground management.
<u>IN-SERVICE TEACHER'S CAPACITY</u>	<u>PROGRAMME , CURRICULUM</u>
<ul style="list-style-type: none"> ● Revisit the conceptual / philosophical basic of teacher training. ● Research on new teaching and leaning approaches for EE / ESD that focus on student action (NZ). ● Expose teachers to practical implications. 	<ul style="list-style-type: none"> ● Respect and support non-formal knowledge ● Flexible contexts ● Relevant evolving ● ESD/EE is the “core curriculum”. ● ‘good’ education

<ul style="list-style-type: none"> ● Able to account / access student learning qualitatively. ● Is accepted by stakeholders 	<ul style="list-style-type: none"> ● Effective professional development experiences (sustained practice). ● Regional EE/ESD Programmes that provide or allow for flexible contexts should be encouraged. ● Formal vs. non-formal, lack of sustained support inadequate resources. ● Environmental schools that “walk their talk” to teachers who make it happen for students.
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C. Recommendations

BEST PRACTICES, RECOMMENDATIONS, INNOVATIONS (Pacific)	
<ul style="list-style-type: none"> ● Promote ESD as a core of learning. ● Support actions on ESD to promote public understanding, advocacy, literacy and awareness. ● Identify + set priorities in consultation with stakeholders. ● Needs assessment ● Documentation of success stories on ESD from various cultural contexts. <p>[Support system]</p> <ul style="list-style-type: none"> ● Encourage the development of national EE/ESD co-ordination teams that support in-service training. ● More financial support for research to support ESD will make things go smoother. ● Try to do more PR activities (e.g. advertising, media work, etc.) to stimulate citizen participation in EE. 	<p>[In-service teacher’s capacity]</p> <ul style="list-style-type: none"> ● Encourage further research on effective teaching and learning strategies for EE/ESD. ● Effective centralization of research outcomes to promote educational innovations on ESD: (formal and non-formal) ● Encourage participatory action research in teacher training and learning in formal or non-formal EE. <p>[Institutional capacity]</p> <ul style="list-style-type: none"> ● Develop opportunities for formal education system to link with community partners in supporting initiatives in EE/ESD. ● Blend formal, informal and non-formal approaches together. <p>[Programme/Curriculum]</p> <ul style="list-style-type: none"> ● Examples of cross-curricular assessment for ESD should be shared among Asia / Pacific nations during 2005-2015. ● Stakeholder participation in curriculum development, implementation and assessment.

Annex 4 A: Regional Level Recommendations

1. Overarching Efforts

REGIONAL LEVEL	
Overarching Efforts	<p>[Institutional Coordination]</p> <ul style="list-style-type: none"> ● Institutional coordination to avoid overlapping efforts.
	<p>[Organization of a Series of Workshops]</p> <ul style="list-style-type: none"> ● Organize regular seminars / workshop for exchange of experiences.
	<p>[Information & Experience Exchange]</p> <ul style="list-style-type: none"> ● Create an on-line exchange of information and experience.
	<p>[Setting / Linking Regional Centres of Excellence]</p> <ul style="list-style-type: none"> ● Promote regional centres of excellence. ● Develop links with existing educational institutes / centres of excellence. ● Clearinghouse at regional level.
	<p>[Mobilization of Technical & Financial Resources]</p> <ul style="list-style-type: none"> ● Mobilize resources, both technical and financial.
	<p>[Partnership between Government & Donor Agencies]</p> <ul style="list-style-type: none"> ● Partnership between government and donors in implementing national action plans.
	<p>[Partnership between Different Agencies & Practitioners]</p> <ul style="list-style-type: none"> ● Co-ordinate activities between different agencies and practitioners.
	<p>[Networking]</p> <ul style="list-style-type: none"> ● Create an effective mechanism for maintaining existing networks. ● Strengthen networks based on existing initiatives. ● There is a need to develop a strong network for sharing ideas and innovations in EE / ESD throughout the decade 2005/2014. ● Strengthen educational networks (educational institutes), schools and communities through EE (focus on community-based learning and research). ● Strengthen networking by creating a multi-level forum including educators, teachers, community representatives, NGOs and government representatives. ● Promote networking at the sub-regional level.

2. Project Implementation Process

A. Design & Planning Stage

REGIONAL LEVEL	
Design Stage	<p>[Concept & Approach for ESD]</p> <ul style="list-style-type: none"> ● Emphasize the UNDESD as a “Peoples Decade” not just a “UN/UNESCO Decade”. ● Clarify the distinction between EE and ESD. ● Avoid SD jargon and message fatigue. ● Identify organic “on the ground” ESD initiatives which “capture the representation of diverse audiences”. ● Find the “missing link” in our planning. ● Envision uncertainties. ● Revisit histories and learn from the past. ● Arouse the “refilling” of UNDESD. ● Establish a focus at the regional & country level to co-ordinate Programmes on ESD. ● Learn from what already exists (stock taking). ● Stock taking activities should include not only EE but also ESD. ● Build capacity for developing countries. ● “Meet people where they are” to understand and build relationships. <p>[Needs Assessment]</p> <ul style="list-style-type: none"> ● Needs assessment at each sub-regional, regional and country level about ESD implementation. How can we help each other? ● Country / community consultations. ● Consult widely to build partnerships. <p>[Marketing]</p> <ul style="list-style-type: none"> ● Identity possible key agents to implement DESD. ● Review the current capacity / situation. ● Assess the strengths and weaknesses of ESD.
Planning Stage	<p>[Regional Strategy & Implementation Plans]</p> <ul style="list-style-type: none"> ● Formulate Regional and Sub-Regional strategies. ● Country / community consultations. ● Develop a common agenda & strategies for ESD at the regional level. ● Set a common agenda. <p>[Research Plans]</p> <ul style="list-style-type: none"> ● What research is available in EE / ESD that identifies teaching & learning for change.

B. Implementation & Follow up Stage

REGIONAL LEVEL	
Implementation Stage	<p>[Capacity Building, Education & Literacy Promotion]</p> <ul style="list-style-type: none"> ● Promote distant on-line learning through the Global Virtual University (GVU). ● Promote Type II Initiatives, Asia-Pacific Initiatives. ● Establish a good knowledge base through the Toolkit project. ● Literacy promotion. <p>[Material Production]</p> <ul style="list-style-type: none"> ● Regional book production on certain topics. <p>[Accumulation of Lessons from Experiences]</p> <ul style="list-style-type: none"> ● Use grassroots successes to advance systemic changes. ● There is a need to develop a strong network of sharing ideas & innovations in EE / ESD. ● Through-out the decade 2005/2014. ● Identify best practices <p>[Public Relations & Outreach]</p> <ul style="list-style-type: none"> ● Popularize DESD. ● Publicity and awareness campaign for UNDESD. ● Spread the ESD message as widely as possible. ● Need for acceptance at the public level. There is a need for a public forum.
Follow Up Stage	<p>[Evaluation & Assessment]</p> <ul style="list-style-type: none"> ● There is a need to develop and share examples of assessment.

Annex 4 B. Recommendations for National Implementation

A. General

NATIONAL LEVEL	
Others (National Level)	<p>[National Action Plans & Political Negotiations]</p> <ul style="list-style-type: none"> ● Develop national-level action plans. ● Sensitize politicians and policy makers to the vitality of ESD (to muster their support). <p>[Institutionalization]</p> <ul style="list-style-type: none"> ● Make Education for Sustainable Development a foundation course in all teacher training institutions. ● Organize short courses and materials on ESD to reorient teacher educators in colleges and universities. <p>[Teaching & Learning Strategies]</p> <ul style="list-style-type: none"> ● There is a need to identify teaching and learning strategies, methods and Programmes that focus on change. ● If education is to be the agent of change, then we need to adopt teaching and learning strategies that focus on change, help learners, and reflect our altitudes and values. <p>[Curriculum / Material Development]</p> <ul style="list-style-type: none"> ● Review the present curriculum. ● There is a need to promote ESD as a course of education. ESD is not added to the curriculum. It is the context or overarching theme of the curriculum. ● Curriculum tools for ESD during the decade. ● Sensitize curriculum developers to how to integrate ESD into learning curricula at different levels. ● Provide toolkits for different groups.

B. Institutional Efforts.

Ways of Implementation	
Institutional Efforts	<p>[Setting Coordination Body]</p> <ul style="list-style-type: none"> ● Country coordination team (meets 2-3 times per year). ● Regional coordination team (meets 1 time per year). ● Coordination teams should include formal education and community / NGO educators. ● Set-up core groups. ● Regional / Sub-regional / In-country consultations. <p>[Open Communication Structure]</p> <ul style="list-style-type: none"> ● Evaluate and discuss channels opened in order to promote the ESD message and workings models. <p>[Public Relations & Outreach]</p> <ul style="list-style-type: none"> ● PR activities. <p>[National Commitment to Keep the Network]</p> <ul style="list-style-type: none"> ● Commitment to maintain the network by individual nations. <p>[Setting/ Linking Regional Centres of Excellence]</p> <ul style="list-style-type: none"> ● Establish regional/sub centres for ESD. ● Promote regional centres of excellence. <p>[Setting Monitoring System]</p> <ul style="list-style-type: none"> ● Monitor progress of ESD projects (network, field project, media...) to identify obstacles and characteristics of success.

C. Approach

Ways of Implementation	
Approach Based	<p>[Research]</p> <ul style="list-style-type: none"> ● Research ESD / EE teaching and learning, networking and coordination. ● Documentation research (Action). <p>[Implementation of Project]</p> <ul style="list-style-type: none"> ● Pilot project (focusing on DESD). ● Strengthening of networks and partnerships. ● Regional launch, country launch, local launch. ● Donor-supported projects. <p>[Information Exchange by On-line Basis]</p> <ul style="list-style-type: none"> ● Set up on-line exchanges at educational institutes. <p>[Data Base]</p> <ul style="list-style-type: none"> ● Share practices that work. <p>[Partnership]</p> <ul style="list-style-type: none"> ● Promote bilateral / multilateral national efforts for co-operative activities (partnerships). ● Bring together different ESD partnerships to transfer ideas and activities to countries where ESD initiatives are not working. <p>[Regular Regional Workshop & Seminars]</p> <ul style="list-style-type: none"> ● Hold regional / sub-regional workshops & seminars for needs assessment and sharing ideas. ● Feed the network by regular seminars / workshops. ● Sub-regional to regional workshops, on a regular basis for a step-wise approach. ● Workshops and training for different effective countries. ● Invite representatives to share information and develop networks on ESD. <p>[Regional Planning Workshop]</p> <ul style="list-style-type: none"> ● Scenario building. ● Plan for uncertainties (through scenarios). <p>[Regional Evaluation Workshop]</p> <p>[Regional Media Workshop]</p> <ul style="list-style-type: none"> ● Tools for media, media workshops. ● Media awareness information and involvement of stakeholders.

D. Topic Based.

Ways of Implementation	
Topic Oriented Efforts	[Book & Material Production & Its Workshop]
	● Develop different materials and guides for different audiences (policy, private, NGO, community, etc.).
	● Prepare low-cost / low technology awareness materials.
	● Provide basic tools (materials, guidebooks...) for developing countries (to create a knowledge base).
	[Curriculum Development & its Workshop]
	● Regional workshop on development and matrix for incorporating EE into existing curricula / teacher training.
	[Regional Training Workshop]
	● Training workshops to update training curricula and manuals at the regional level.
	● Regional workshops on teacher training for adapting curriculum to local needs.