Asia-Pacific Guidelines for the Development of National ESD Indicators

Working Draft 1 August 2006

Disclaimer: The following content is in a DRAFT stage and is likely to change over the coming months.
Asia-Pacific Guidelines for the Development of National ESD Indicators

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Executive Summary (Download TBA)

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Acknowledgements:

Many ESD practitioners and indicator experts from around the globe, as well as representatives from a range of UNESCO National Commissions and Field Offices in the Asia-Pacific contributed to the development of this document. As members of an “Expert Team” (see Appendix#1) and “Guidelines Review Team” (see Appendix#2) they shared experiences, provided input regarding monitoring and assessment needs, and gave feedback and recommendations for the content and practical nature of the Guidelines.
Executive Summary

*The Asia-Pacific Guidelines for the Development of National ESD Indicators* is a tool designed to assist countries in the Asia-Pacific region with the development of National ESD indicators for monitoring and assessing progress during the UN Decade of Education for Sustainable Development (DESD). The Guidelines are the product of the UNESCO-IUCN CEC DESD Indicators project, a collaborative effort headed by UNESCO Bangkok and the Commission on Education and Communication (CEC) of the World Conservation Union (IUCN), in conjunction with Macquarie University in Australia. Approximately 80 individuals contributed to the project by identifying and sharing key ESD indicator experiences, collaborating on ideas related to ESD indicator types and functions, and identifying DESD priorities of UNESCO Member States in the Asia-Pacific and the roles of UNESCO National Commissions in developing ESD indicators at the national level.

The Guidelines are a response to the DESD International Implementation Scheme’s (IIS) recommendation to develop indicators that assess progress of the DESD. The Decade, declared by the 57th Session of the UN General Assembly in December 2002, aims to integrate the principles of sustainable development into all aspects of learning. Governments are encouraged to incorporate the DESD within education systems, strategies and development plans, as well as promote public awareness of wider participation in these activities.

Initial efforts to raise awareness of the DESD should include promoting the importance of setting goals based on national priorities and the Asia-Pacific Regional Strategy for ESD. National ESD goals and priorities in the Asia-Pacific will be unique to the particular economic, political, environmental, and cultural contexts within a country’s borders. Ultimately, the ESD indicators produced using the Guidelines will assess progress during the Decade by the extent to which goals identified at the beginning of the DESD are acted upon and achieved at the national level and throughout the region.

Monitoring and evaluation of progress during the Decade will play a crucial role in assessing and re-orienting programs throughout the Asia-Pacific. Developing indicators that assist in identifying areas that require change ensures the ongoing relevance and effectiveness of ESD policies, programs and activities. A key challenge for monitoring and evaluation during the DESD will be the identification of suitable, relevant and measurable indicators at every level. To address this challenge it is crucial to identify and link ESD indicators with current indicator experiences and identifying clear ESD goals and priorities.

Ensuring that ESD policies, programs and activities remain relevant and address priorities during the DESD requires the implementation of effective monitoring and assessment mechanisms. As key partners at the national
level, National Commissions and Field Offices are the initiators and catalysts that assist to advance implementation of the Decade and play a key role in developing National ESD indicators. National Commissions and Field Offices can assist indicator development by identifying inter-linkages with other monitoring and evaluation mechanisms, such as those of the MDGs and EFA, promote sharing of experiences and learning about ESD indicators through partnerships and networks, and identify and support stakeholder needs in relation to the development, implementation and revision of indicators.
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<tr>
<td>ACCU</td>
<td>The Asia/Pacific Cultural Centre for UNESCO</td>
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<td>CEC</td>
<td>Commission on Education and Communication (IUCN)</td>
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<td>CSD</td>
<td>Commission on Sustainable Development</td>
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<td>DESD</td>
<td>Decade of Education for Sustainable Development</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>ESD</td>
<td>Education for Sustainable Development</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>International Implementation Scheme</td>
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<td>The World Conservation Union</td>
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<td>Millennium Development Goals</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<td>United Nations Education, Scientific and Cultural Organization</td>
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<td>United Nations General Assembly</td>
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<td>United Nations Literacy Decade</td>
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<td>UNU</td>
<td>United Nations University</td>
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<td>WSSD</td>
<td>World Summit on Sustainable Development</td>
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Introduction

UNESCO Bangkok and the Commission on Education and Communication (CEC) of the World Conservation Union (IUCN), in conjunction with Macquarie University (Australia), initiated a project to assist with the important task of monitoring and assessment of progress during the UN Decade of Education for Sustainable Development (DESD).

The Decade provides an important opportunity to enhance the profile of Education for Sustainable Development (ESD) in formal and informal learning spaces and assist in the transformation to sustainable societies worldwide. Efforts to promote and integrate ESD at all levels will be key to advancing the reach of the Decade. Responding to the DESD International Implementation Scheme’s (IIS) recommendation to develop indicators, the UNESCO Bangkok-IUCN CEC DESD Indicators project began in March 2006. The project aimed to design a set of Guidelines that assist nations in the Asia-Pacific region with the development of ESD indicators at the national level. The document provides a welcome resource in an area that lacks significant experience and knowledge.

Although indicators have been used to measure progress in many fields, including Education and Sustainable Development, their definition, development, application and interpretation are often considered to be difficult tasks. Amongst a great variety of definitions, the United Nations Economic Commission of Europe (UNECE) Expert Group (EG) on ESD Indicators defines an indicator as having the ability to point to an issue or condition with the purpose of showing how well a system is working\(^1\). In practice, indicators have been applied over the years with a multitude of functions and a variety of different purposes. The result has been an often confusing and overlapping array of existing indicator types.

Research undertaken during the project aimed to make sense of these indicator types and develop a framework that assists in clarifying their functions, benefits and limitations. Recommendations are made on how to develop the indicators in line with ESD programs in the region and what types of data should be collected. In an effort to make the Guidelines truly practical and relevant to the ESD field, input from key international and regional stakeholders and practitioners was also sought.

Collaborating as participants of an “ESD Expert Team”, 46 practitioners from around the world with expertise in ESD and/or indicators engaged in a process to identify and share key ESD indicator experiences, and provide advice and feedback on ideas related to ESD indicator types and functions. Members of the team were connected via an Email List, with the ability to initiate dialogue with the Asia-Pacific DESD Indicators Project Team or with the entire group. The dialogue and input received from the Team reflected the latest knowledge and thinking on ESD indicators. Complementing the
contribution of the “ESD Expert Team”, a “Guidelines Review Team” of 35 participants representing UNESCO National Commissions in the Asia-Pacific formed part of another Email List. This Team assisted to identify the DESD priorities of member states and clarify the roles of National Commissions in the development of indicators for the DESD. In addition, members shared their reporting priorities and needs. Importantly, the information provided by the “Guidelines Review Team” was used to shape the content of the Guidelines Document, thereby directly addressing the needs of UNESCO National Commissions, who take on an important catalyst role during the Decade.

This resource is the product of a collaborative effort to learn about and advance knowledge on ESD indicators. Both Teams not only contributed to the document but also played an important role as peer reviewers.

In addition, during a Review Meeting of the Guidelines document held on 10-11 August 2005 in Hiroshima, Japan, a selection of National Commissions were confirmed as piloting countries for the Guidelines. The meeting involved 25 participants with the majority representing “Guidelines Review Team” members with advanced ESD programmes within the Asia-Pacific as well as a selection of “ESD Expert Team” members. Meeting participants were an important source of interim feedback on the direction and practicality of the Guidelines and contributed to a discussion on how the indicators might be linked to current education monitoring and reporting initiatives in the region. Moreover, the future experiences of the pilot countries during the 2007 piloting stage will provide important lessons that contribute further to the development of knowledge on ESD indicators.

The UNESCO-IUCN CEC Asia-Pacific DESD Indicators Project has produced a tool that aids in assessing progress and achievements during the DESD. In particular, the purpose of this Guidelines document is to:

- Assist with understanding the nature of ESD indicators
- Share experiences and encourage learning about ESD indicators
- Identify the different types of ESD indicators and their benefits and limitations in practice
- Develop an indicator framework that encourages member-states to develop indicators and practice regular revision
- Improve important data sources and collection methods
- Encourage consistent and meaningful monitoring and assessment during the DESD

In recognition of the need to enhance efforts in education and learning to address sustainable development, the United Nations General Assembly (UNGA) declared a Decade of Education for Sustainable Development (DESD) at their 57th Session on the 20th of December 2002. Based upon increasing recognition of the vital role education plays in fostering sustainable practice, the DESD was recommended at the World Summit on Sustainable Development (WSSD) as an effective way to increase awareness and understanding about sustainability (see Box 1). Marked by the years from 2005-2014, the DESD encompasses a global vision where everyone has the opportunity to benefit from education and learning that motivates societal change towards a sustainable future.²

The Decade aims to integrate the principles of sustainable development into all aspects of learning. Governments are encouraged to incorporate the DESD within education systems, strategies and development plans, as well as promote public awareness of wider participation in these activities. Four key areas provide guidance to increase the profile of sustainability in education: improving access to quality basic education; reorienting existing education programmes; developing public understanding and awareness; and providing training. These actions assist to foster lifestyles that respect environmental integrity, economic viability, and a just society for present and future generations.³

In addition to and in support of the vision and aims of the Decade, the following objectives have been identified for the DESD:

- To facilitate networking, linkages, exchange and interaction among stakeholders in ESD;
- To foster an increased quality of teaching and learning in education for sustainable development;
- To help countries make progress towards and attain the Millennium Development Goals through ESD efforts;
- To provide countries with new opportunities to incorporate ESD into education reform efforts.⁴

Box 1. Recognizing the role of education & learning in achieving sustainable development

- 1996: CSD emphasized importance of learning beyond formal education raising awareness about informal education.
- 2002: WSSD & JPOI- led to the recommendation for a DESD

(adapted from Tilbury & Cooke 2005 p.11)
The DESD seeks to include people from around the globe. The International Implementation Scheme (IIS) sets out a broad framework for all stakeholders to contribute to the Decade. Promotion and advancement of the Decade are translated into seven key strategies: vision-building and advocacy; consultation and ownership; partnership and networks; capacity-building and training; research and innovation; use of Information and Communications Technologies (ICTs); and monitoring and evaluation (see Box 2). In addition, emphasis on partnerships highlights the importance of coordinating the efforts of nations, groups and individuals and fostering collective ownership of and commitment to the Decade.

As lead agency for the DESD, UNESCO undertakes an active, leadership role in coordinating action at the international level. Assisting to catalyze new partnerships, bring together stakeholders, share good ESD practices, and encourage monitoring and evaluation, among other supportive actions, UNESCO works together with the Inter-Agency Committee on DESD and the UN ESCO Community to ensure the success of the Decade.

Many countries are responding to the DESD initiative. Regional, national and program launches, strategies and activities for the Decade have shaped the first years of the Decade. On the 28-29th of June 2005, the Asia-Pacific Regional Launch of the DESD took place at the UNU/UNESCO International Conference in Nagoya, Japan. Presented at the launch was the Working Paper: Asia-Pacific Regional Strategy for Education for Sustainable Development, a guide to the implementation of ESD throughout the Asia-Pacific Region. The Regional Strategy, based on the outcomes of A Situational Analysis of Education for Sustainable Development in the Asia-Pacific Region, provides an overview of the current status of ESD and thus serves as a foundation from which to further plan and implement ESD related initiatives in the region (See Section on Asia-Pacific Goals and Priorities for the DESD for more information).

Countries from across the region have held DESD launches, workshops, symposiums, among other activities, in order to introduce and collaborate efforts for the Decade (See Box 3,4,5 & 6). These initiatives are vital to ensuring continued impetus for the DESD assisting to generate support for and engagement with activities that advance progress towards a sustainable future.

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**Box 2. Monitoring & Evaluation During the DESD**

- Key to ascertaining the changes and impact of the Decade
- Need to develop from the start of the Decade
- Need to identify suitable and relevant indicators at every level: local, national, regional and for each initiative and program.
- Partners should identify own objectives, outcomes and indicators within the Decade Framework.
- Results of monitoring and evaluation will assess and reorient programs during the Decade.

(UNESCO 2005a)
Event | Description | Details |
--- | --- | --- |
**Box 3. Australia: DESD Symposium**<br>A National DESD Symposium was held in July 2005 in order to raise awareness of the Decade among different sectors. The objective of the event was to identify potential partnerships and activities to promote the DESD. Representatives of nearly seventy national organizations attended the event. These included: industry groups, NGOs, trade unions, professional bodies, local government, state/territory governments and agencies, and further and higher education. The event showcased a range of initiatives being planned for the DESD & held planning workshops for a National Framework for the DESD. The suggestions made at the workshops were then sent for further consultation by local groups and then compiled to make a formal recommendation to the Australian Government. (Fien and Lang n.d) |
**Box 4. Iran: National Workshop on ESD**<br>Iran officially introduced ESD at a national workshop run by the UNESCO Tehran Cluster Office. Attendees included university academics and senior government personnel, including the Minister of Education and several Deputy Ministers. The focus of the workshop covered the development of actions towards: EFA goals, the UNLD, and cross-cutting issues such as environment, poverty alleviation, gender and human rights. One of the results of the workshop was to establish a National Secretariat for ESD. Subsequently, in June 2005, the Iran National ESD Secretariat was formed with responsibility for ensuring action towards DESD goals. The Secretariat includes representatives from tourism, culture, education, media, environment, science and research, health, women, social welfare and planning sectors (Torabian n.d). |
**Box 5. Indonesia: National DESD Launch**<br>Indonesia’s launch of the Decade took place in conjunction with the country’s World Environment Day celebrations in 2005. The event highlighted issues such as reducing pollution, cleaning the river, and greening the city. In addition, a memorandum of understanding was signed between the ministries of Education and Environment with the aim of developing cooperation and improving environmental understanding among communities and developing human resources to better address environment and conservation issues. Subsequent themes for the DESD have expanded to involve a wider range of stakeholders. For instance, as a result of the tsunami of December 2004, Indonesia has chosen to incorporate disaster reduction themes into the DESD and use the Decade as an opportunity to strengthen national policies on education for disaster management and preparedness (N/A) |
**Box 6. China: National Working Committee**<br>Embracing the DESD as a natural progression of its Environment, Population and Development (EPD) program that began in 1998, China has expanded its National Working Committee for EPD to include responsibility for DESD-related activities. The Committee secretariat exists within the Beijing Academy of Educational Sciences which was formerly entrusted by the Chinese National Commission for UNESCO with the DESD initiative. The Committee boasts a number of initiatives under the EPD program including research, training and educational program implementation. In addition, information relating to experiences and finding in the area of sustainable development and EPD are being published in the bimonthly journal renamed from “Education for EPD in China” to “Education for Sustainable Development in China” as well as a series of websites and books. (N/A)
Asia-Pacific Goals & Priorities for the DESD

As awareness of the DESD spreads across the Asia-Pacific region, initial efforts should include promoting the importance of setting goals and priorities for the Decade. Promotional and celebratory launches and workshops have brought stakeholders together and led to the formation of Working Groups and Committees for the DESD (See Boxes 3, 4, 5 & 6). These Groups and Committees are taking on the challenge of advancing and implementing actions for the Decade. Working together to identify goals and priorities will be vital to ensuring their success and continued commitment towards the DESD. Their identification will act as a guiding framework for stakeholders where countries and regions will highlight unique issues and sectors that represent meaningful avenues through which to implement and engage with the DESD. In addition, identifying national goals and priorities assists to foster cooperation and partnership among stakeholders, facilitating action towards common interests. Ultimately, progress during the Decade will be assessed on the extent to which goals identified at the beginning of the DESD are acted upon and achieved throughout the region.

A strategy for the region

In 2005, UNESCO Bangkok, with the financial support of Japanese Funds-in-Trust, commissioned a Situational Analysis of ESD in the Asia-Pacific Region. This publication provides a snapshot of the current state of ESD throughout the region describing the extent to which countries have integrated ESD policies, programmes and practices into both formal and non-formal educational settings at the grassroots, sub-national and national levels. The Analysis is divided into the following sub-regions: South Asia, Central Asia, South-East Asia, North Asia and the Pacific; and includes individual country reports from Australia, the People's Republic of China, the Republic of Korea, Japan, Mongolia and the Socialist Republic of Viet Nam. The results of the Analysis assisted in guiding the development of the Regional Strategy for ESD as well as identifying ESD priorities. It directly informed the content of the Working Paper: Asia-Pacific Regional Strategy for ESD7. The Strategy for ESD identifies a number of core ESD issues or priority areas identified during the analysis by researchers in the region (See Box 7). These priority areas shape UNESCO’s project implementation and future project formulation, as well as help to create and strengthen regional partnerships and networks for ESD (UNESCO 2005-SitAn). In addition, emphasizing the importance of partnerships, the Strategy describes

Box 7. Core ESD Issues in the Asia-Pacific

- Information and Awareness
- Knowledge Systems
- Environmental Protection and Management
- Peace and Equity
- Local Context
- Transformation
- Culture
- Cross-cutting Issues and Themes
- Health
- Environmental Education
- Engagement of Leaders

(UNESCO 2005b)
the potential role of a selection of crucial stakeholders, making recommendations on how to engage them in ESD. Lastly, a section on monitoring and evaluation mechanisms emphasizes the importance of measuring the impacts of the Decade at all levels. Importantly, socio-economic, environmental and cultural realities are not static; therefore, the Strategy is an open document that is adaptable for revision to the changing needs of countries and stakeholders throughout the Decade.

National Priorities

The DESD is a far-reaching initiative that will inspire action in many different sectors and areas of learning, and involving the participation of all members of society. In response to the Decade, nations will identify and work towards a great number of goals and priorities that are unique to their particular situation. The UNESCO-IUCN CEC DESD Indicators Project asked participating UNESCO National Commissions and Field Offices to identify their countries DESD priorities (see Box 8, 9, 10, & 11 for excerpts; or Appendix 3 for full responses). Responses included priorities that ranged across all types of education, from reorienting curricula to working with the media, and targeted many different groups, from rural populations to younger generations. Moreover, activities taken to implement goals and address priorities covered actions everything from developing and promoting toolkits and resources to building community-learning centres.

Assisting countries to define goals and priorities and implement activities during the DESD, UNESCO Bangkok will publish a set of Guidelines on ESD Programs. Consisting of a compilation of ESD experiences and highlighting the processes taken to initiate DESD-related activities, documented experiences will serve as a model that might be used by other countries to develop their own approaches to ESD. As approaches are defined and priorities identified, monitoring and assessment mechanisms will need to be put in place. Indeed, the identification of countrywide and stakeholder priorities will be the first step in developing indicators, so that

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**Box 8. DESD priorities: Philippines**

- What are your DESD priorities? Lifelong learning with a focus on developing skills for sustainable development, and access to quality education.
- Who is your DESD priority? People across a lifespan including learning from early childhood to training beyond retirement
- How will you achieve your goals? UNESCO Lifelong Learning Center for Sustainable Development, production of hands-on tools, and literacy programs, etc.

Source: Preciosa S. Soliven

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**Box 9. DESD priorities: Vietnam**

- What are your DESD priorities? Reform curricula, contents, methods of education and training
- Who is your DESD priority? Focus on younger generations, disadvantaged populations and those living in rural areas
- How will you achieve your goals? Training teachers, educational methods, curricula, workshops, media, awareness raising, capacity building and networks and partnerships

Sources: Jan Kinsella and Pham Quang Tho
monitoring and evaluation efforts coincide with national programs and policies.

Box 10. DESD priorities: Palau

- What are your DESD priorities?
  Quality of education, raising awareness through the media, identifying & restoring lost cultures
- Who is your DESD priority?
  Younger generations,
- How will you achieve your goals?
  Capacity building of school administrators, professional development for content area teachers, promoting toolkits, and partnerships with media.

Source: Dwight G. Alexander

Box 11. DESD priorities: Malaysia

- What are your DESD priorities?
  Adding value to the economy, capacity building, addressing socio-economic inequalities, improving quality of life, strengthening institutional capacity.
- How will you achieve your goals?
  Developing human capital, improving national schools, strengthening teachers skills, and improving the delivery of education

Source: Naimah Ishak

Box 12. Sustainable Development Indicators for the Republic of Kazakhstan

In 2002, the Regional Environmental Center for Central Asia (CAREC) supported by TACIS initiated the project “Information System in the field of Sustainable Development in the Republic of Kazakhstan”. The project involved developing a system of indicators that reflected the major development problems in the economic, environmental and social areas. Indicators developed include:

- Energy intensity of GDP;
- Material use of GDP;
- Water use of GDP;
- Expenditures on New Technologies;
- Use of Alternative Energy Sources;
- Share of Expenditures on Production Workers payment in % of GDP;
- Expenditures on Scientific Research, in % of GDP
- Threatened species as % of total native species;
- Life Expectancy Rate (CAREC 2002)

Monitoring and evaluation

Monitoring and evaluation of progress during the Decade will play a crucial role in assessing and re-orienting programs throughout the Asia-Pacific. Identifying change in priority areas ensures the ongoing relevance and effectiveness of ESD policies, programs and activities being implemented during the DESD. Complementing DESD efforts to monitor and assess progress, current reporting initiatives within the region provide a basis from which to determine common linkages and learn from experiences. For instance, countries have been reporting on Millennium Development Goals (MDGs) and Education for All (EFA) initiatives for a number of years. In particular, EFA indicators link with proposed goals to monitor progress in areas such as early childhood education.
development and education; access to education; participation; financial resources; human resources; quality of education; efficiency; learning achievements; and literacy. Similarly, the Millennium Development Goal Indicators (MDGIs) include indicators that reflect the target of achieving universal primary education. Further experience with indicators is found in a number of member-state Sustainable Development Indicator (SDI) initiatives undertaken in the region (see Box 12).

According to the Asia-Pacific Regional Strategy for ESD, a key challenge for monitoring and evaluation during the DESD will be the identification of suitable, relevant and measurable indicators at every level. Vital to addressing this challenge will be the combination of tapping into and potentially linking with current indicator experiences and identifying clear goals and priorities. It is clear that meaningful indicators are those that best reflect a country’s goals. However, questions remain about the types of indicators that best align with ESD (this will be covered in greater detail in a later section TBA). The DESD IIS highlights the need to develop both quantitative and qualitative ESD indicators. Although indicators are not a new concept, little previous experience with ESD and qualitative indicators exists. Therefore, monitoring and assessment efforts require a consistent and regular revision of indicators developed to ensure that information generated is appropriate and capable of measuring progress. Learning and sharing of experiences among stakeholders, regionally and nationally, plays an important role in increasing understanding about ESD programs and indicators ensuring that society advances towards the goals and priorities of the Decade.
UNESCO National Commissions and Field Offices: Role in Monitoring and Assessment during the DESD

Ensuring that ESD policies, programs and activities remain relevant and address priorities during the DESD requires the implementation of effective monitoring and assessment mechanisms. UNESCO National Commissions and Field Offices are in a vital position to promote and support national efforts to develop and implement ESD indicators. As key partners at the national level, National Commissions and Field Offices are the initiators and catalysts that assist to advance implementation of the Decade\textsuperscript{11}. Specific activities undertaken and roles played during the DESD will differ across the Asia-Pacific region. Moreover, their engagement with the development and implementation of ESD indicators at the national level will reflect the diverse needs and experiences within their country.

Efforts to develop ESD indicators are still in their beginning stages, however National Commissions and Field Offices have already highlighted a variety of actions and responsibilities in the process. The UNESCO-IUCN CEC DESD Indicators Project asked “Guidelines Review Team” participants to clarify and describe the role they play or will play in developing national ESD indicators (see Appendix 4 for full responses). Responses ranged from cooperation on the development of ESD indicators to overseeing their implementation. Many National Commissions and Field Offices expressed a coordinating role that includes unifying efforts to identifying and analyzing stakeholder needs. In addition, many saw sharing of experiences on ESD indicators, both nationally and internationally, and continued learning as key factors in determining successful development and implementation of indicators during the DESD. Specific member-state responses are included in Box 13, 14, 15 & 16)

<table>
<thead>
<tr>
<th>Box 13. The Role of India’s National Commission for UNESCO</th>
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<td>• Central agency for the development of National DESD Indicators</td>
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<td>• Pro-active role as consultants for Education Departments and Ministries</td>
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<td>• Recommend and formulate policies that will support the development of DESD indicators</td>
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<td>• Developed a DESD National Action Plan</td>
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<th>Box 14. The Role of the Sri Lanka National Commission for UNESCO</th>
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<td>• Consultation, advice and guidance to the Ministry of Education and others</td>
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<td>• Dissemination of information through organized meetings, workshops or discussions on how to develop and implement DESD indicators</td>
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<td>• Submissions of indicator related project proposals</td>
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<td>• Provision of technical specialists</td>
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Monitoring and Assessment Activities

Action to promote goals and objectives, raise awareness, and disseminate information and experiences about ESD indicators form part of a motivational role that National Commissions and Field Offices play. They will assist to:

- coordinate government agencies, NGOs and other organisations to work in partnership for the development, implementation, and revision of DESD indicators;
- link UNESCO programmes, national institutions, NGOs and civil society at large in relation to specific ESD indicator efforts being undertaken;
- advocate and provide advice on the development, implementation, and revision of ESD indicators;
- inform and influence governments about the importance of ESD indicators and their continual revision; and
- strengthen cooperation towards the development of innovative policies and programmes related to ESD indicators at the regional level.

National Commissions and Field Offices can assist to ensure timely development of indicators by identifying inter-linkages with other monitoring and evaluation mechanisms, such as the MDGIs and the EFA initiative, promote sharing of experiences and learning about ESD indicators through partnerships and networks, and identify and support stakeholder needs in relation to the development, implementation and revision of indicators. Continued advancement of knowledge of understanding about ESD indicators contributes not only to improving our ability to monitor and assess progress during the DESD, but also to engaging a wider audience in the programs and activities that seek to transform society towards a sustainable future.

Box 15. Role of the National Commission of Uzbekistan for UNESCO

- Coordination of all activities related to DESD indicators
- Identification and analysis of stakeholder and partner needs related to DESD indicators
- Activities, projects, meetings, and events that promote the DESD and the importance of monitoring progress (Kurbanova 2006b)

Box 16. Role of Palau National Commission for UNESCO

- Coordinate with the Ministries of Education in the region to implement ESD indicators
- Encourage the involvement and cooperation of all stakeholders to develop ESD indicators at the national level
- Promote and support partnerships and networks (Alexander 2006b)
Box 17. Asia-Pacific Regional Strategy for ESD

According to the Asia-Pacific Regional Strategy for ESD, the involvement of UNESCO National Commissions is imperative during the DESD. Emphasizing their coordinating role, the Strategy identifies the following key tasks for National Commissions:

- mobilizing all relevant organisations in support of ESD;
- creating a common vision for the Decade; and
- disseminating ideas and activities for the Decade (UNESCO 2005b)
What is an indicator?

Progress and achievement of DESD goals and priorities depend on the decisions and actions that are made during the Decade. Effective decision-making and action-taking is based on knowledge and understanding of ESD needs, the activities and processes that facilitate ESD, and the results of various activities on ESD levels. Monitoring and assessment of these decisions and actions provides vital information that assists with ESD development. Indicators are a commonly used tool in monitoring and assessment. They assist stakeholders at all levels by giving value to relevant and meaningful variables of ESD. Ultimately, they can assist to assess progress towards sustainability through education during DESD.

Defining ESD Indicators

Defining an indicator is not an easy task (see Box 18). The UNECE Expert Group on ESD Indicators defined indicators as having the ability to point to an issue or condition. They show how well a system is working and, if there is a problem, help to determine which decisions or directions to take in order to address the issue. Indicators can be applied in many different fields as part of monitoring and assessment (see Box 19). The value of indicators lies not only in their widespread applicability, but in their ability to show information about a system that is not always visible or easily measured.

Indicators are variables that represent a quality, characteristic or property of a system. Indicators do not directly identify these attributes, but rather identify an image of the attribute that is defined through a specific measurement or observation procedure. For instance, measuring learning shows how indicators can assess attributes that are not always visible. Learning is not a tangible concept and we cannot actually see when it is happening. Therefore, indicators monitor and assess learning as the product of a students learning, relating to relevant and meaningful skills and knowledge. Indicators can also be used to assess learning in society. Progress during the DESD relates to invisible attributes such as the alignment of thinking or values in a society towards sustainability. Ultimately, determining which attribute to measure or observe through indicators depends to a great extent on the desired function of ESD indicators.

Box 18. Indicator Definitions

Many ambiguities and contradictions exist regarding the general concept of an indicator. Different authors define indicators in various ways resulting in a confusing use of terminology. Indicators have been referred to as:

- Variable
- Measure
- Proxy
- Parameter
- Statistical Measure
- Value
- Meter or measuring instrument
- Fraction
- Something
- Piece of information
- Quantity
- Sign

(Gallopin 1997)
Why use an indicator?

The information provided by indicators on DESD goals and priorities in different areas and levels is key to addressing any unwelcome changes and/or lack of desired change. ESD indicators can consider information related to change in a country’s ESD policies, programs and actions as well as the results of their implementation. These indicators are based on data that is either measurable or observational.18

Measurable data is in the form of simple numbers and/or ratios and tends to communicate the presence of policies and programs. Indicators that are based on measurable data are called quantitative indicators. On the other hand, observational data is in the form of observations or descriptions and tends to communicate the quality of a policy or program. Indicators that are based on observational data are called qualitative indicators. Both quantitative and qualitative indicators provide valuable information to stakeholders (see Box 20).

In general terms, indicators serve a wide range of important functions. Indicator initiatives in both the Sustainable Development and Educational fields highlight that functions differ even within the same field (see Box 21). Indicator functions include but are not limited to:

- to act as a warning system or provide clues on the status of a system;
- to account for the effectiveness of resources that have been spent on a program or policy;
- to determine the performance of individuals or groups over time;
- to compare progress across a region;
- to guide planning; and
- to promote learning.

Recognizing the desired function or role of monitoring and assessment during the DESD is key to developing meaningful indicators. ESD stakeholders may find that more than one indicator function is appropriate to their particular efforts. In addition, ESD indicators will serve different purposes across the region reflecting the diversity of goals and priorities identified during the DESD.

Box 19. The utility of SDIs

During the last 10 years we have seen a remarkable expansion of interest in Sustainable Development Indicator (SDI) systems. SDIs are seen as useful in a wide range of settings, by a wide range of actors: international and intergovernmental bodies; national governments and government departments; economic sectors; administrators of geographic or ecological regions; communities; non-governmental organisations; and the private sector.

(Pinter et al. 2005)

Box 20. Qualitative vs. Quantitative Indicators

“In principle, indicators may be either a qualitative (nominal) variable, a rank (ordinal) variable, or a quantitative variable. Qualitative indicators may be preferable to quantitative indicators in at least three cases: when quantitative information is not available; when the attribute of interest is inherently non-quantifiable; and when cost considerations become determinant.”

(Gallopin 1997 p.17)
Ensuring that indicators play their role effectively requires a meaningful choice of data. Indicators may find value in the collection of both quantitative and qualitative data, however, there may be situations where quantitative data is a more appropriate choice for the indicator’s function or vice versa. For instance, to make comparisons across countries it is more appropriate to use quantitative data such as numbers or ratios because they are easier to compare than descriptions or observations. On the other hand, when using indicators for the purpose of learning it is more appropriate to use observational data that is likely to provide more meaningful information than numbers. It is helpful to think of indicators as representing a spectrum of characteristics from which ESD stakeholders may consider what is most appropriate given their situation (see Box 22). The dominant use of quantitative, prescriptive, and performance based indicators in practice, rather than qualitative, indicative and process based, has sparked debate within the ESD indicator community.

<table>
<thead>
<tr>
<th>Box 21. Highlighting the Different Functions of Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sustainable development indicators are applied in order to deduce the current state, direction and/or rate of change (Lawrence 1998).</td>
</tr>
<tr>
<td>• Sustainable Development indicators not only track progress but also provide the foundation for the development of performance targets (UNDSD 2005).</td>
</tr>
<tr>
<td>• Educational indicators play a central role in today’s accountability systems because they focus attention on results such as school’s performance on standards-driven tests (Lashway 2001).</td>
</tr>
<tr>
<td>• Decision makers in several countries formed the International Indicators of Education Systems (INES) project in 1998 because they required the means to compare the performance of their education systems with those of other countries, to better assess the effectiveness of their education systems, and to monitor their evolution (Bottani 1996 p.279).</td>
</tr>
<tr>
<td>• The UNECE Expert Group on ESD Indicators wanted to promote higher level learning in a number of ways: encouraging institutions and learners to set their own indicators and providing opportunities for respondents to state what they think their achievements will be over the next reporting period (Vare 2006b).</td>
</tr>
</tbody>
</table>

![Box 21. Highlighting the Different Functions of Indicators:](image)

Ensuring that indicators play their role effectively requires a meaningful choice of data. Indicators may find value in the collection of both quantitative and qualitative data, however, there may be situations where quantitative data is a more appropriate choice for the indicator’s function or vice versa. For instance, to make comparisons across countries it is more appropriate to use quantitative data such as numbers or ratios because they are easier to compare than descriptions or observations. On the other hand, when using indicators for the purpose of learning it is more appropriate to use observational data that is likely to provide more meaningful information than numbers. It is helpful to think of indicators as representing a spectrum of characteristics from which ESD stakeholders may consider what is most appropriate given their situation (see Box 22). The dominant use of quantitative, prescriptive, and performance based indicators in practice, rather than qualitative, indicative and process based, has sparked debate within the ESD indicator community.

<table>
<thead>
<tr>
<th>Box 22. Indicator Characteristics:</th>
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<tbody>
<tr>
<td>Indicator Characteristics:</td>
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<tr>
<td>Specificity:</td>
</tr>
<tr>
<td>Style:</td>
</tr>
<tr>
<td>Purpose:</td>
</tr>
<tr>
<td>Focus:</td>
</tr>
<tr>
<td>Context:</td>
</tr>
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</table>

Source: Adapted from Sterling (2006a)
The debate revolves not around the goals and objectives of ESD, but the means of how to achieve it. These differences are highlighted in the different approaches to indicators highlighted in Box 23. Indicator approaches range from desiring convenience and prescription to desiring reflection and learning in the indicators. The contested nature of indicators proves difficult in determining a single alignment with ESD, especially since both approaches have their advantages and disadvantages (see Box 24).

**Box 23. Differing approaches to indicators**

- “Desirable indicators are variables that summarize or otherwise simplify relevant information, make visible or perceptible phenomena of interest, and quantify, measure, and communicate relevant information.” (Gallopin 1997 p.15)

- “Rational pursuit of sustainable development demands that we have clear goals, that we operationalize those goals in terms of measurable results, that we devise analytical tools for deciding priority actions, and that we monitor and evaluate our progress. A More quantified approach to sustainable development is necessary.” (Hales and Prescott-Allen 2002 p.7)

- “If ESD is to emerge-through practice-throughout the education system...can we build an approach to ‘indicators’ that promotes reflection on practice rather than simply hitting targets?” (Vare 2006 p.10)

- “The Experts stressed that the resulted indicators and the reporting mechanism are not meant “to compare” but rather to “learn and develop” towards a “Learning Region” (UNECE Committee on Environmental Policy 2006 p.2)

**Box 24. Advantages and Disadvantages of the Differing Indicator Approaches**

<table>
<thead>
<tr>
<th></th>
<th>Mechanistic Indicators</th>
<th>Holistic Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td>-Generalizable</td>
<td>-Meaningful</td>
</tr>
<tr>
<td></td>
<td>-Precise</td>
<td>-Ownership and engagement</td>
</tr>
<tr>
<td></td>
<td>-Measurable</td>
<td>-Self Determination</td>
</tr>
<tr>
<td></td>
<td>-Comparable</td>
<td>-Motivating</td>
</tr>
<tr>
<td></td>
<td>-Recordable</td>
<td>-Encourage emergence</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>-Tecnocratic</td>
<td>-Not easily transferable or compared</td>
</tr>
<tr>
<td></td>
<td>-Sins of omission</td>
<td>-Imprecise and difficult to measure</td>
</tr>
<tr>
<td></td>
<td>-Emergence, creativity squeezed</td>
<td>-Direction (?)</td>
</tr>
<tr>
<td></td>
<td>-Too closed</td>
<td>-Too Open (?)</td>
</tr>
</tbody>
</table>

Adapted from Sterling 2006a
**ESD indicators in practice**

The absence of significant previous experience in the area of ESD indicators presents a challenge to the UNESCOs IIS call for the identification of ‘suitable and relevant’ indicators at every level. However, beginning in 2005, along side the various DESD launches, strategies and activities, a smaller movement of ESD indicator initiatives has been growing. Stretching across the globe to regions in Europe, North America and the Asia-Pacific, they will be important sources of experience from which to learn and build on (see Appendix 5).

The UNECE Region provides one particularly substantial effort that is currently being tested in practice (see Box 25). The ESD indicators were developed with two primary function:

a) monitoring the region’s progress in implementing the Regional Strategy for ESD; and

b) the effects of the Strategy itself\(^{20}\).

The importance of promoting higher level learning within the indicator set was also highlighted by the Expert Group responsible for developing the indicators (see Box 21).

Experience with ESD indicators is limited worldwide. It is a new area that will not only build on the indicator experiences of fields such as education and sustainable development and initiatives such as the EFA and MDGs, but potentially innovate indicators all together. Determining the appropriate ESD indicator will be a challenge for DESD stakeholders at all levels until more is understood about indicators. A review of the different ESD indicator types available assists to advance understanding.
Box 25. UNECE Region ESD Indicators

The United Nations Economic Commission for Europe (UNECE), which includes 55 countries from across Europe, Central Asia as well as the USA and Canada, has recently concluded perhaps the most substantial ESD indicator effort to date. ESD was formally recognised in the region in 2003 at the ‘Environment for Europe’ Ministerial Conference in Kiev where Member States endorsed a ‘Ministerial Statement on ESD’. An ESD Task Force was nominated to prepare a regional ESD Strategy that was adopted in 2005 at Vilnius by all UNECE Member States (except the USA) along with the Vilnius Framework for Implementation.

Subsequently, an ‘expert group’ (EG) on ESD indicators was formed with the task of developing ways to monitor: (a) Member States’ progress in implementing the ESD Strategy and (b) the effects of implementing the ESD Strategy. The EG included persons with extensive experience in national and international environmental and education policies, environmental education and education for sustainable development. The Group met on four occasions to discuss and develop ESD indicators that reflect the strategy’s objectives. In addition, a group of national focal points, stakeholders as well as the UNECE Steering Committee on ESD, provided feedback to the EG.

The ESD indicator development process included EG discussions on key areas of action within the Strategy, as well as issues such as: definitions, approaches, scope, and learning. Highlighting the need to measure effectiveness of the Strategy throughout its entire implementation, the EG developed indicators that ranged from initial measures on governance to possible effects in society.

The proposed set of indicators developed cover a variety of areas such as: policy, regulatory and organisational frameworks, school curriculum and tertiary education courses, educator training and materials, community projects and informal education, research as well as ESD quality, participation, networks and cooperation (See Appendix #2 for Draft Outline of Indicators 20 June 2006). The indicators range from quantitative to qualitative and differ in their means or source of verification and timeframe. The indicators developed, including all sub-indicators and the separate self-assessment, are meant to be used, not individually, but all together in order to assess the state of progress in, and effectiveness of, implementing the UNECE Strategy for ESD. In addition, the resulting indicators and reporting mechanism were not developed for comparison among countries within the region, but for learning and developing towards a “Learning Region”.

Sources:

b. UNECE Expert Group on Indicators for Education for Sustainable Development (2005) ’Background Paper on Development of Indicators to Measure Implementation of the UNECE Strategy for ESD’; Ede, the Netherlands: UNECE.
What is an indicator – Key Points:

• Indicators will assist with decision-making during the DESD

• Indicators are a valuable part of monitoring and assessment for their widespread applicability and ability to show information about attributes that are not always visible or easily measurable.

• Quantitative indicators are based on measurable data.

• Qualitative indicators are based on observational data.

• Indicators have many different functions. The role of function of DESD indicators must be recognized in order to determine meaningful and relevant data.

• There are different ESD indicator approaches. These relate to the purpose of the indicator. The approaches have advantages and disadvantages.

• There is a need to build on the experience of current ESD indicator initiatives.
Developing National Indicators to Assess Progress During the DESD

The purpose of this document is to assist stakeholders with the development of ESD indicators that assess progress at the national level. It provides a tool that stakeholders can use to inform the indicator development process during the DESD. This section is divided in two parts:

1. ESD Indicator Types and
2. Developing a National Indicator Framework

Understanding the scope and capabilities of the various indicator types is key to developing suitable indicators for the DESD. In addition, identifying a clear process among stakeholders provides a basis from which to collaboratively determine the ESD indicators that best meet a nation’s goals and priorities.

**ESD Indicator Types**

Many different types of indicators are available to monitor and assess progress during the DESD. These indicator types differ in *what they assess* and *why they are used*. Their distinction can be difficult because many types overlap in their scope and are often described using a number of different names. This section includes a selection of ESD indicator types. They encompass indicators that will assist to measure progress throughout all areas, levels, and phases of the DESD.

Stakeholders in the region will find that indicators on their own are not meaningful. Rather, considered as a group, indicators across a range of different types provide useful information relating to ESD efforts. Understanding the scope and capabilities of the various indicator types is key to developing meaningful indicators for the DESD. Clarifying their differences also assists stakeholders to collaboratively determine the indicator types that best meet a nation’s goals and priorities.

ESD indicators fall into four categories:

- **Status Indicators**: assess variables that highlight the position or standing of ESD in a country.
- **Communication Indicators**: (also referred to as communicative indicators) assess variables in a way that is accessible or facilitates communication to stakeholders and the general public.
- **Facilitative Indicators**: assess variables that assist, support or encourage engagement with ESD.
• **Result Indicators**: assess variables relating to initial, medium and long-term achievements during the DESD.

These indicators highlight the broad selection of variables that can be monitored and assessed during the DESD. The categories are a useful way of thinking about what variables are desirable for the purposes of the assessment. Indicators from each category will be considered at different points throughout the DESD. Within each category, there exist a number of indicator types that break down the categories into more specific groups. These indicator types are those that are applied and reported against in practice. A description of each of the types follows including examples of the kinds of ESD variables that the indicator might be used to assess.

**Status Indicators**

a) **Baseline Indicators**

Baseline indicators are used to identify the status of the overall ESD picture. These indicators show an existing situation in relation to an ESD variable at a given point in time. Their applicability in all areas of ESD makes them a subset of all indicator types. Considered as a group, baseline indicators assess the general position or standing of ESD within a country or region. For instance, baseline indicators might assess:

- ESD policies, programs or actions and/or public opinions;
- ESD processes and social learning; and
- ESD results in the form of resource materials, improvements and achievements in capacity building and changes towards sustainable actions.

Since baseline indicators provide information on the current position of ESD, they provide a useful basis from which to determine goals or develop impact indicators (see section on Result Indicators).

b) **Performance Indicators**

Performance indicators are baseline indicators that are measured at a later point in time. They are used to identify the status of the overall ESD picture. These indicators are compared to baseline indicators to determine performance of an ESD variable over time. Performance indicators are also applicable in all areas of ESD making them a subset of all indicator types. Considered as a group, these indicators highlight the positive or negative change in relation to the overall ESD picture in a country or region. For instance, a performance indicator might assess:

- ESD policies, programs or actions and/or public opinions;
• ESD processes and social learning; and
• ESD results in the form of resource materials, improvements and achievements in capacity building and changes towards sustainable actions.

Box 26. Performance Indicators in practice:

The NSW Environmental Education Council uses performance indicators to assess effectiveness of the Plan’s implementation and facilitate discussion among stakeholders about the extent to which environmental education is meeting identified needs. More specifically, some of the indicators highlighted in the plan are:

• the number of new environmental education programs and level of participation reported or
• the number of new professional development programs that are based on the needs of environmental educators.

(NSW EE Plan p.14)

Communication Indicators

a) Headline Indicators

Headline indicators are used to communicate change among key ESD policy priorities. These indicators show an existing situation relating to ESD policy variables at a certain point in time. They are made up of a selection of ESD indicators compiled to produce short core sets that are closely linked to policy.24 These indicators might assess the status, facilitation, or results of:

• Sustainable schools initiatives
• Capacity Building/Employment strategies
• Health education campaigns

Headline indicators are a practical way of linking indicators to ESD issues that are high on policy-makers’ and the public’s agenda. They are also smaller in number making them easier to communicate.

b) Aggregate Indicators

Aggregate indicators are used to produce a figure that facilitates communication of the status of the overall ESD picture. Measuring the overall picture through baseline and performance indicators often results in large numbers of indicators. This makes it difficult to communicate results to policy-makers and the public. Aggregate indicators take all indicator types, designate each type a weight relating to their importance, and then simplify the measurement by turning a system of ESD indicators into a few numbers.25 For instance, an aggregate indicator might assess:
• ESD policies, programs or actions and/or public opinions;
• ESD processes and social learning; and
• ESD results in the form of resource materials, improvements and achievements in capacity building and changes towards sustainable actions.

Once these variables are assessed, the final results are converted into a composite figure that gages the overall ESD standing.

**Facilitative Indicators**

**a) Context Indicators**

Context indicators are used to identify the existence and/or quality of ESD support systems. In addition, they can also be used to identify public opinions about sustainability. These indicators show the supportive framework in which ESD is being implemented. Context indicators consider ESD variables relating to national governance mechanisms and institutional support systems, as well as public opinions on ESD\textsuperscript{26}. For instance, these indicators might assess:

• ESD (or related) strategies, policies, legislation and regulations
• Formal support structures within government, NGOs and other agencies
• Public concern, awareness and/or knowledge about sustainability.

**Box 27. Aggregate Indicators in Practice**

- Ecological Footprint
- Human Development Index (HDI)
- Environmental Sustainability Index (ESI)
- Environmental Performance Index (EPI)
- Barometer of Sustainability
- Genuine Progress Indicator (GPI)
- Genuine Savings Indicator
- Total Material Requirement
- Compass of Sustainability
- Eco-efficiency Indices.

(Pinter et al. 2005)

**Box 28. Context Indicators in Practice**

The UNECE EG developed *Checklist indicators* for measuring the implementation and effectiveness of the Regional Strategy for ESD. These indicators might be considered a subset of context indicators. *Checklist Indicators* are defined by the EG as those that provide information on initial policy, legislation, regulatory and governance measures taken by a government in order to implement the Strategy.

(UNECE EG 2005)
b) Process Indicators

Process indicators are used to identify the existence and/or quality of ESD processes and activities. These indicators show the level of engagement with ESD that is occurring within a country or region. Process indicators consider ESD variables relating to the planning, development, implementation and monitoring and assessment of ESD policies, programs and activities. Process indicators might assess:

- The development and implementation of an ESD action plan
- The monitoring and assessment of an ESD training course
- Inclusion of all stakeholders in decision-making processes

These processes and activities might occur within schools, organizations and/or local governments and all levels. Process indicators are difficult to define and remain contested as to the scope of their assessment (Box 30).

---

Box 29. Process Indicators in Practice

The UNECE EG developed Input Indicators in order to provide information on the broader spectrum of activities taking place as part of the implementation of the UNECE Strategy for ESD. These indicators might be considered a subset of process indicators. (UNECE EG 2005)

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Box 30. Defining Process Indicators

- Process indicators consider the instruments that control and enhance educational processes for example: steering groups in schools for the implementation of innovations, or support structures like teacher training and research facilities for evaluation (Rode 2006).
- The OECD considers process indicators to provide information on the educational, financial and human resources, participation and decision-making processes (Bottani 1996; and Walberg and Zhang 1998).

---

c) Learning Indicators

Learning Indicators can be used to identify the quality of a nation’s engagement with ESD. These indicators show the level of capacity building and social learning that occurs as a result of ESD processes. They are directly related to the extent to which people feel motivated and empowered to make decisions related to sustainability. Learning indicators consider ESD variables relating the development and monitoring of ESD policies, programs and actions. Learning indicators might assess:

---

1 The learning indicator is likely to change as we are awaiting further input from the Expert Team
• The use of futures thinking to help inspire and clarify sustainable development goals.
• Critical thinking that occurs to help people improve understanding of sustainable development
• Awareness and understanding of diverse perspectives and values.
• Systemic thinking that occurs to help people take action towards sustainable development

Learning indicators can also be applied to the indicator development process. For instance, learning during the concluding phase of an indicator development process can be assessed. This is also called the review phase where evaluation, learning and adaptation occurs. In addition, learning indicators are also related to the way that indicators are framed. The indicators themselves can promote learning by allowing space for respondents to complete tables rather than exhaustive lists as well as by asking them to state what they thinking their achievements will be over the next reporting period.

**Box 31. Learning indicators in practice**

- Members of the UNECE EG argued in favour of developing indicators that promote learning in themselves. This includes the ECO Forum’s suggested indicator example:

  “Evidence that groups (classes/community groups/work-based teams, etc) have discussed and developed their own set of indicators on sustainable development.” (Vare 2006 p.1)

- “The action research approach” Indicator- The percentage of learners who have successfully taken part in action learning designed to explore ways of creating a more sustainable society. (Huckle 2006)

**Result Indicators**

a) **Output Indicators**

Output indicators are used to assess ESD outputs such as tools and learning resources. Outputs are the material products of a project that do not normally have value in and of themselves but rather as tools for the achievement of outcomes and impacts. These indicators show initial progress during the DESD based on the availability and access of stakeholders and societies to ESD tools and resources. Output indicators might assess:

- Local Agenda 21 resources
b) Outcome Indicators

Outcome indicators are used to assess ESD outcomes related to changes or improvements that result from ESD efforts. Outcomes are the achievements or changes brought about by a program, project or activity that provides a supportive context or infrastructure for longer-term impacts. These indicators show progress during the DESD based on resulting increases in awareness, understanding and capacity building for sustainable development. Outcome indicators might assess:

- Increased levels of ESD awareness;
- Increased competencies relating to all disciplines and sectors, for example the improved understanding of youth about the dangers of drug abuse.

Box 32. References to outcome indicators in the literature

- Outcome indicators as those that tell us about the results and effects of educational processes (Rode 2006)
- Achievement indicators (Bottani 1996)
- Result indicators (Walberg and Zhang 1998)
- Learning outcome indicators measure anticipated and unanticipated learning (Sollart n.d)

c) Impact Indicators

Impact indicators are used to assess ESD impacts that result from ESD efforts. Impacts are the longer-term cumulative effects of a program, project or activity that embody lasting changes. These indicators show genuine ESD progress related to the organisational, societal and learner oriented change for sustainable development. Impact indicators consider results, both short and long-term achievements, that stem from increased awareness, understanding and capacity building. These indicators might assess:

- Increase in the number of sustainable communities
- Increase in the number of women with university degrees or in managerial positions in the workplace
- Increase in the number of children graduating from primary school
- Decline in the income-inequality gap
- Increase in the ecological footprint of a nation
- Improved human rights record
- Increased access to credit for micro entrepreneurs
- Improved productivity of farmers
- Decrease in rural-urban migration
Developing a National Indicator Framework

Measuring national progress during the DESD requires the development of a national indicator framework and the continual modification and change of indicator types as priorities transform and achievements are attained during the DESD. Together, these indicator types form a basis from which ESD indicators can be developed. The table attached provides a tool to assist with understanding the differences between the indicator types. It attempts to address the following questions:

- What does the indicator assess?
- Why you would use the indicator?
- What does the indicator look like?
- What are the benefits of the indicator?
- What are the limitations of the indicator?

Benefits and limitations of the different indicator types are an important consideration in determining the suitability of an indicator. Criteria of interest are:

- What information or practical convenience does the indicator facilitate?
- How essential is the information that it provides?
- How convenient is the indicator to develop and monitor?
- How convenient is the data to collect, interpret, and communicate?
- Is the indicator comparable?

Box 33. Impact indicators in practice

The UNECE Expert Group uses output (or effect) indicators to provide information on the eventual impacts of the implementation of ESD relating to the values, attitudes and choices in favour of SD (UNECE Expert Group 2005).
### ESD Indicator Framework for Measuring Progress During the DESD

<table>
<thead>
<tr>
<th>Indicator Categories</th>
<th>Status Indicators&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Communication Indicators&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Facilitative Indicators&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Result Indicators&lt;sup&gt;5&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type:</strong></td>
<td><strong>Baseline / Performance</strong></td>
<td><strong>Headline (HI) / Aggregate (AI)</strong></td>
<td><strong>Context</strong></td>
<td><strong>Output</strong></td>
</tr>
<tr>
<td><strong>Differentiating function:</strong></td>
<td></td>
<td></td>
<td>Process</td>
<td>Outcome</td>
</tr>
<tr>
<td><strong>Learning</strong></td>
<td></td>
<td></td>
<td>Learning&lt;sup&gt;6&lt;/sup&gt;</td>
<td>Impact</td>
</tr>
<tr>
<td><strong>Result Indicators</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

#### What ESD variables does this indicator assess?

- The overall ESD picture. (These indicators are subsets of all Types)
- HI-ESD policy priorities.
- AI- The overall ESD picture as a composite figure.

- HI-For instance: Sustainable Schools Initiatives; Capacity Building /Employment strategies; and Health education campaigns.
- AI- For instance: same as Baseline / Performance

- For instance: ESD policies, programs, actions, & public opinions; ESD processes & social learning; and ESD materials, improvements & achievements.

- ESD governance mechanisms and institutional support systems.
- Processes and activities relating to the planning, development, implementation, monitoring and assessment of ESD efforts.
- The social learning that takes place during the development & monitoring of ESD policies, programs & actions.
- ESD outputs (often in the form of materials) such as tools and learning resources.
- ESD outcomes (often in the form of changes that result from ESD efforts). They provide the context for longer-term achievement.
- ESD impacts (often in the form of lasting changes that result from ESD efforts) such as sustainable practices.

#### Notes:

<sup>2</sup> Status Indicators assess variables that highlight the position or standing of a country during the DESD.

<sup>3</sup> Communication Indicators (also referred to as communicative indicators) assess variables in a way that is accessible or facilitates communication to stakeholders and the general public.

<sup>4</sup> Facilitative Indicators assess variables that assist, support or encourage engagement with ESD.

<sup>5</sup> Result Indicators assess variables relating to initial, medium and long-term achievements during the DESD.

<sup>6</sup> Learning indicators are likely to change as we are awaiting further input from the Expert Team.
### Why would you use this indicator?

- To identify the current state of play of ESD & change over time.
- To establish a point from which to compare future assessments & to determine performance over time.

### HI (To communicate change among a core set of policy related issues.)
- To identify the existence and/or quality of ESD support systems.
- To determine public opinions or knowledge in desired areas.
- To identify the existence and/or quality of ESD processes and activities.
- To identify the quality of a nation's engagement with ESD.

### AI (To produce a figure that facilitates communication of change associated with the state of play of ESD.)
- To identify the existence and/or quality of ESD support systems.
- To determine public opinions or knowledge in desired areas.
- To identify the existence and/or quality of ESD processes and activities.
- To identify the quality of a nation's engagement with ESD.

### What does this indicator look like?

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>No. of schools across the country that are adopting a whole school approach to sustainability.</td>
</tr>
<tr>
<td>HI</td>
<td>No. of television programs that cover priority sustainability themes (per month or year)</td>
</tr>
<tr>
<td>HI</td>
<td>No. of postgraduate research programs with a focus on sustainability.</td>
</tr>
<tr>
<td>HI</td>
<td>% of population that believe sustainability skills important (<em>these indicators generally consist of numbers or ratios</em>)</td>
</tr>
<tr>
<td>HI</td>
<td>Does a national ESD/SD strategy exist? (UNECE)</td>
</tr>
<tr>
<td>HI</td>
<td>Does a formal structure for interdepartmental co-operation exist at the national government level on issues of ESD? (adapted UNECE)</td>
</tr>
<tr>
<td>HI</td>
<td>To what extent is informal and non-formal learning addressed in policy or regulatory documents? (adapted UNECE)</td>
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<td>HI</td>
<td>Are there opportunities for stakeholder engagement in the development of a regional sustainability plan?</td>
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<tr>
<td>HI</td>
<td>To what extent do ESD training workshops involve educators from across the education system?</td>
</tr>
<tr>
<td>HI</td>
<td>No. of self-assessment programs in place.</td>
</tr>
<tr>
<td>HI</td>
<td>% of states or provinces with an ESD strategy.</td>
</tr>
<tr>
<td>HI</td>
<td>To what extent does the ESD strategy development process include values clarification?</td>
</tr>
<tr>
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<td>To what extent do indicators monitored and reviewed as a multi-stakeholder activity after they have been developed?</td>
</tr>
<tr>
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<td>To what extent do indicators promote learning? (ie. space to answer questions rather than yes/no) (<em>These indicators consist of observational data only</em>)</td>
</tr>
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<td>Are toolkits for facilitating the integration of ESD into curriculum available?</td>
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</tr>
<tr>
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</tr>
<tr>
<td>HI</td>
<td>Improved competencies of youth to stay away from unhealthy living habits.</td>
</tr>
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</tr>
<tr>
<td>HI</td>
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</tr>
<tr>
<td>AI</td>
<td>Ecological Footprint</td>
</tr>
<tr>
<td>AI</td>
<td>Human Development Index</td>
</tr>
<tr>
<td>AI</td>
<td>Genuine Progress Indicator.</td>
</tr>
<tr>
<td>AI</td>
<td>The Compass of Sustainability (<em>these indicators generally consist of numbers or ratios</em>)</td>
</tr>
<tr>
<td>AI</td>
<td>Does a national ESD/SD strategy exist? (UNECE)</td>
</tr>
<tr>
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<tr>
<td>AI</td>
<td>Improved competencies of youth to stay away from unhealthy living habits.</td>
</tr>
</tbody>
</table>

(*these indicators generally consist of numbers or ratios*)
<table>
<thead>
<tr>
<th>What are the benefits of the indicator?</th>
<th>HI</th>
<th>AI</th>
<th>practices (unprotected sex/drugs)</th>
<th>of numbers or ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Facilitates identity of areas that require improvement.</td>
<td>Provides a ‘snapshot’ of the ESD governance &amp; support structures</td>
<td>Provides a ‘snapshot’ of the ESD processes and activities that facilitate advancement during the DESD</td>
<td>Provides info on genuine ESD progress (quality) rather than existence or state of play.</td>
<td>-Assesses the existence of outputs.</td>
</tr>
<tr>
<td>-Provides a practical way to design impact indicators.</td>
<td>Facilitates identity areas that require improvement.</td>
<td>Promotes learning for change (or higher level learning).</td>
<td>Provides a ‘snapshot’ of ESD tools and resources available.</td>
<td>-Provides a ‘snapshot’ of improvements resulting from ESD policies, programs and activities.</td>
</tr>
<tr>
<td>-Assists to determine quantitative change relating to the overall ESD picture</td>
<td>Relatively simple to develop and monitor indicators as well as to collect, interpret &amp; communicate data.</td>
<td>Facilitates identity of areas that require improvement.</td>
<td>Easy to identify areas that require attention.</td>
<td>-Simple to communicate &amp; understand.</td>
</tr>
<tr>
<td>-Relatively simple to develop &amp; monitor indicators as well as to collect, interpret, &amp; communicate data.</td>
<td>Comparable at times, particularly if quantitative.</td>
<td>Comparable at times, particularly if quantitative.</td>
<td>May be simple to communicate &amp; understand. (for example when yes/no answers)</td>
<td>-Comparable when explicitly defined.</td>
</tr>
<tr>
<td>-More likely to be comparable across regions.</td>
<td>-Provides a ‘snapshot’ of the ESD processes and approaches in place may be difficult to attain or qualify.</td>
<td>-This data is not usually gathered and therefore may present some challenges.</td>
<td>-Explicit criteria must be developed to define the boundaries of improvement as well as to make the indicator comparable.</td>
<td>-Difficult to establish clear cause and effect relationships (ESD =&gt; sustainable practices).</td>
</tr>
<tr>
<td></td>
<td>-Details about the quality of the support structures in place may be difficult to attain or qualify.</td>
<td>-Details about the quality of processes and approaches in place may be difficult to attain or qualify.</td>
<td>-Unable to provide info on details of the tools and resources.</td>
<td>-Difficult to identify whether these</td>
</tr>
<tr>
<td></td>
<td>-More time consuming to fill in observational data</td>
<td>-Often difficult to define a process</td>
<td>-Explicit criteria must be developed to define what constitutes an</td>
<td></td>
</tr>
<tr>
<td>What are the limitations of the indicator?</td>
<td>HI</td>
<td>AI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Unable to provide detailed information on ESD efforts.</td>
<td>Unable to provide an adequate base from which to make decisions.</td>
<td>Unable to provide details of the tools and resources.</td>
<td>-Explicit criteria must be developed to define what constitutes an</td>
<td></td>
</tr>
<tr>
<td>-Potential for indicator set to become too large to be practical, limiting ability to</td>
<td>Potential for indicator set to become too large to be practical, limiting ability to</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Communicate change. (*large numbers of indicators are a challenge among all indicator types.)
- Explicit criteria must be developed to define what constitutes an ESD program, i.e. Sustainable School.

<table>
<thead>
<tr>
<th>of detail)</th>
<th>which may lead to less of it.</th>
<th>More difficult to compare.</th>
<th>More time consuming to fill in an indicator requiring “the extent to which”.</th>
<th>More difficult to compare.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit weighting criteria must be developed in order to produce a meaningful aggregation.</td>
<td>Explicit criteria must be developed to define what constitutes an ESD strategy, policy, legislation or regulation.</td>
<td>Explicit criteria must be developed to define what constitutes a social learning process.</td>
<td>Explicit criteria must be developed to define what constitutes an ESD activity or process.</td>
<td>ESD tool or resource as well as the boundaries of “the extent to which”</td>
</tr>
</tbody>
</table>

- More difficult to compare.
- More time consuming to fill in an indicator requiring “the extent to which”.
- More time consuming to fill in an indicator requiring “the extent to which”.

- Few programs include funding for long term assessment
- Difficult to know when it is realistic to expect the timing of an impact.
- Difficult to ensure that the impacts are lasting.

- Results stem from increased awareness, understanding and capacity building or for example, legislation.
The ESD Indicator Development Process

To be completed…

Common characteristics in the process of developing a National Framework for ESD indicators:

Multi-stakeholder: The process actively engages multiple stakeholders from a wide range of areas and sectors of society. The process specifically includes participation from the decision-makers who are in a position to support and implement the outcomes of the process.

Transparent: At all stages the process being used to develop the national framework of indicators is clearly articulated and open to public input.

Participation: The process is participatory in a sense which goes beyond pure consultation to involving participants in decision-making and action-taking.

Capacity building for decision-making: Participation in the development process provides participants with opportunities to increase their knowledge, skills and ability to be involved in decision-making processes.

Combination top-down and bottom-up approaches: In acknowledgement of the strengths and weaknesses of each of these approaches the use of a combination of both provides stronger outcomes. A top-down approach capitalizes on the benefits of strong leadership support and commitment to the framework. A bottom-up approach ensures that on-the-ground support for the framework exists.

Facilitation: The main role for those who lead the development of the indicator framework is to be facilitators of the process. The focus is on providing the participants with encouragement, support and the structural base to ensure all of the above points can be achieved.

(adapted from Tilbury and Cooke 2005 p.83)

Who should be involved in the Indicator Development Process

“In order to ensure a good quality of the reports on implementation, it is crucial that governments prepare reports in a participatory manner, involving relevant stakeholders at all stages of preparation, as appropriate, and, in particular, giving a feasible and workable opportunity to those stakeholders to comment on the draft report before its final submission to the UNECE. They strongly recommended including this as a requirement for the reporting mechanism to be considered by the Steering Committee.” (UNECE EG 2005).
Choosing an indicator:

-considering tables as an option to assist stakeholders during the DESD

<table>
<thead>
<tr>
<th></th>
<th>Input</th>
<th>Output</th>
<th>Outcome</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Resources/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processes (?)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(partnerships)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmes</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People training in it and using it</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Priority or Goal</th>
<th>Context</th>
<th>ProcessA</th>
<th>ProcessB</th>
<th>Output</th>
<th>Outcome</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media relations</td>
<td>Support for relations</td>
<td>Planning done with media</td>
<td>Learning others perspectives</td>
<td>Media toolkit</td>
<td>Media people learn General public learning</td>
<td></td>
</tr>
</tbody>
</table>

Criteria for effective development of indicators:

For example:
The following are criteria of an effective assessment:

1. Establish clear goals
2. Ensure adequate preparation
3. Employ appropriate methods
4. Produce significant results
5. Arrange for effective presentation
6. Practice reflective technique.

(Eder 2004)
Determining an adequate scope of ESD indicators:

UNECE EG determined the scope of their indicators to cover the Strategy for ESD only. “With regard to scope, they agreed that the indicators should be strictly determined by the objectives of the Strategy. The experts confirmed that the indicators should reflect both aspects of the mandate: “the implementation” as a process, and “the effectiveness of the implementation”, as a qualitative aspect of the process and of the outcome, including long-term effects of learning. (UNECE EG 2005).

Indicators and sub-indicators.…

Aggregation

“The Expert Group discussed the methodological approach to be used to aggregate in a consistent manner the 80 initial indicators throughout the whole set. The conclusion was reached that a uniform approach in e.g. aggregation of underlying questions for the whole set is not feasible due to the complexity of ESD issues and the tailor-made approach for each indicator was chosen. However, it was decided to follow an overarching methodology, consisting in a more efficient structuring of the 80 initial indicators into revised indicators with sub-indicators.” (UNECE Committee on Environmental Policy 2006)
Collecting New and Existing Data for ESD Indicators

To be completed

Data Gathering and Reporting

“Indicators should be based as much as possible on the available data, however, at the same time, due to the complexity and newness of ESD, some proposals for a new data collection policy should be introduced.” (UNECE EG 2005).

“In some cases, there is a need for baseline data and this should be clearly reflected in the draft of indicators. Baseline data shows the existing situation in relation to an issue at a certain point in time. They also stress the important of taking into account difference in starting points for different countries with respect to the implementation of the Strategy and therefore, to the outcome of evaluation based on indicators.” (UNECE EG 2005).

“The Expert Group also took into consideration the Steering Committee’s request to reduce the number of indicators in order to permit a realistic and effective reporting process. Furthermore, the Group proposed to compile as appropriate the substance of some indicators into template-tables that should be annexed to the set of indicators. This approach will allow for simplification, while retaining the substance of the initial set of indicators to the greatest extent possible. It would also provide countries with a user-friendly template requiring them to select predefined boxes as relevant.” (UNECE Committee on Environmental Policy 2006)

“The EG decided that each sub-indicator could be answered in two ways, one is the “yes” and “no’ answers ( a “no” answer should be selected also in the case of “not applicable”, and explanation provided on why it is not applicable) similar to a checklist and the second is a descriptive part consisting of questions requesting a description or specification of certain aspects and issues. For some-sub indicators there are designed templates to be filled in.” (UNECE Committee on Environmental Policy 2006)

More from (UNECE Committee on Environmental Policy 2006)
- Designed a reporting formal. To facilitate the use of the reporting format an informal Guidance on Reporting was developed which includes the available explanations on the methodology, approach and logic behind the indicators that currently is provided in various documents.
- Need to have a multi-stakeholder participatory process in preparing the national implementation reports.
- To evaluate answers in tables a ranking system was developed.
- Encouraging self-assessment exercise as a summary of the reporting.
In Summary & Next Steps

To be completed

END NOTES

1 UNECE 2005
2 UNESCO 2004
3 UNESCO 2005a
4 UNESCO 2005a
5 UNESCO 2005a
6 UNESCO 2005c
7 UNESCO Asia and Pacific Regional Bureau for Education 2005b
8 UNESCO Asia and Pacific Regional Bureau for Education 2005b
9 UNESCO Institute for Statistics 2001
10 UN Statistics Division 2006
11 UNESCO 2005c
12 Adapted from UNESCO 2005c
13 Gallopin 1997
14 UNECE EG 2005
15 Eder 2004
16 Gallopin 1997
17 Eder 2004
18 Gallopin 1997
19 Huckle 2006
20 UNECE EG 2005
21 UNECE Committee on Environmental Policy 2006
22 Sollart n.d
23 Sollart n.d
24 Pinter et al. 2005
25 Olalla Tarraga 2006
26 Rode 2006
27 Pinter et al. 2005
28 Vare 2006
29 Fien et al. 2001
30 Fien et al. 2001
31 Fien et al. 2001
References


The Regional Environmental Centre for Central Asia (CAREC) (2002) Towards the World Summit on Sustainable Development: Sustainable Development Indicators for the Republic of Kazakhstan. Almaty: CAREC and TACIS


# Appendix 1 – ESD Expert Team UNESCO – IUCN CEC DESD Indicators Project

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<tr>
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<td>Gillian Martin-Mehers</td>
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<td>Osamu Abe</td>
<td>Zabariah Matali</td>
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<td>Carl Lindberg</td>
<td>Paul Vare</td>
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<tr>
<td>Heila Lotz-Sisitka</td>
<td>Rikka Vuorela</td>
</tr>
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</table>
Appendix 2 – Guidelines Review Team UNESCO – IUCN CEC DESD Indicators Project

Aline Bory-Adams
Nassrine Azimi
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Naimah Ishak
Sonja Janousek
Denise Jeanmonod
Komiljon Karimov
Jan Kinsella
Dilnoza Kurbanova
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Shuichi Nakayama
Gholam-reza Samarbakhsh
Masahisa Sato
Shailendra Kumar Sharma
Tomoko Shibao
Preciosa Silverio Soliven
Pham Quang Tho
Daniella Tilbury
Balaram Timalsina
Rikka Vuorela
Aya Yokoi
<table>
<thead>
<tr>
<th>IUCN-UNESCO DESD Indicators E-List Guidelines Review Team Members</th>
<th>What are the DESD priorities in your country?</th>
<th>What ESD activities have been or will be implemented in your country during the DESD?</th>
</tr>
</thead>
</table>
| **UNESCO Hanoi** Ms Jan Kinsella Assistant Education Project Officer | **Taken from the draft Viet Nam National Action Plan for DESD** **Main contents and priorities of the Decade:**  
- Reform curricula, contents, methods of education and training for comprehensive educational improvement for the younger generations; enhance practicality, practical skills, self-study ability with emphasis on social and humanity knowledge; supplement modern science and technology achievements suitable with students’ ability to acquire and approach common education level of countries in the region and in the world.  
- Assist disadvantaged provinces in implementation of compulsory secondary education by 2010 by helping training teachers for 10 disadvantaged provinces; increase budget for building schools, boarding schools and procurement of teaching equipment and facilities for disadvantaged areas.  
- Train human resource for rural areas to equip farmers with basic knowledge of rural professions, enabling farmers to diversify their production and trade activities to generate jobs and raise income through rapid growth of Community study centers network across the country.  
- Sustainably develop education in ethnic minority and disadvantaged areas; narrow the gap of education development between regions by implementing the following measures: building a suitable network of schools and classes in ethnic minority and mountainous areas; strengthen and renovate teaching training centers to improve the quality and efficiency of teacher training, particularly teachers for ethnic minority and mountainous areas; implement proper budget allocation and financial aid from the | **Specific activities of DESD**  
Within the framework of DESD and on the basis of the Orientation of Vietnam’s sustainable development strategy, the National Decade of Education for Sustainable Development Committee of Vietnam plans the following activities:  
5.1 Awareness raising and capacity building: raise awareness and build capacity of beneficiaries through seminars and workshops as well as other forms with emphasis on the following beneficiaries:  
- Managers at ministries/central and local branches, lawmakers (National Assembly)  
- Teachers and educators  
- Those directly involved in DESD  
- Reporters from press agencies  
5.2 ICE  
- On radio, newspapers, TV  
- In schools  
- At tourist attractions  
- Manufacturing factories, companies  
5.3 Policies  
- Education: incorporate sustainable development into informal and formal curricula with policies encouraging schools to incorporate this content into curricula and examinations.  
- Manufacturing sectors: sustainable development is a critical factor during project assessment. There should be policies that require manufacturing sectors to pay for environment protection cost and a policy that stipulates sustainable development labeling for standard products.  
- There should be regimes and policies ensuring presence of ESD in all national sustainable development strategies.  
- Policies to reward organizations with achievements in ESD: policy to label “sustainable development”.  
- Appropriate policy to boost implementation of Action plan of education for all (2003-2015); UN Decade of illiteracy eradication (2003-2012); education socialization |
- Mobilize all the society and citizens to contribute to establishment of the education system, education socialization, informal and formal educational form diversification, living skill and lifetime study education, making the country a learning society.
- Incorporate ESD into curricula both in and outside schools; promote and spread knowledge of sustainable development to improve people’s knowledge and awareness to get all citizens involved in sustainable development on this basis.
- Implement objectives of the National action plan of Education for all 2003-2015 to make study opportunities available to everyone so that they can get access to basic high-quality education pursuant to 6 Dakar objectives.

<table>
<thead>
<tr>
<th>5.4 Document editing</th>
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</thead>
<tbody>
<tr>
<td>- Reference and extracurricular documents</td>
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<tr>
<td>- Formal curricula</td>
</tr>
<tr>
<td>- UNESCO ESD related translated documents</td>
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</tbody>
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<tr>
<th>5.5 Teacher training</th>
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<tbody>
<tr>
<td>- Teachers are the major force to deliver the contents of sustainable development to everyone. Teachers need to be provided with relevant knowledge and proper training to be able to effectively perform their task.</td>
</tr>
<tr>
<td>- Beneficiaries: the first are teachers in teaching training colleges then teachers at schools and those teaching at centers.</td>
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<tr>
<th>5.6 Research on incorporation of sustainable development into formal curricula</th>
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<td>Among the 15 themes, select themes that receive attention of the government to be incorporated into the current curricula. This should be identified as a long-term process, requiring active participation of all relevant organizations (in each relevant them), particularly the Education Program and Strategy Institute, the Education and Training Ministry, the National Assembly and other educational agencies. Incorporate sustainable development into compulsory examinations.</td>
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<tr>
<th>5.7 Set up a website of the Decade</th>
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<tr>
<td>- Information on ESD in different countries</td>
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<tr>
<td>- Provision of activities in Vietnam</td>
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<tr>
<td>- Biosphere reserves</td>
</tr>
<tr>
<td>- Nature and heritage reserves</td>
</tr>
<tr>
<td>- Community study centers</td>
</tr>
<tr>
<td>- Partnership schools</td>
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<tr>
<td>- Relevant seminars and workshops</td>
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<tr>
<td>- Research subjects</td>
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<th>5.8 Holding seminars and workshops on each theme</th>
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<tr>
<td>- Related to environment: sustainably exploit natural resources, preserve biosphere reserves and biodiversity, change production</td>
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</table>
and consumption models to be more environmentally friendly.

- Related to economics: encourage production of clean products, boost living skills education and disseminate science and technology knowledge to raise income of poor households.
- Related to socio-culture: preserve heritage, encourage sustainable consumption, enhance education on prevention of HIV/AIDS and other health care issues, spur activities to establish a cultural living style and establish a healthy and civilized society.

5.9 Establish a network of partners and stakeholders

- Network of universities
- Network of enterprises, private organizations, voluntary organizations and NGOs
- Network of reporters and journalists
- Network of educational research centers
- Network of community study centers and regular education centers at localities
- Network of partnership schools
- Network of specialists, researchers, scholars and professors
- Network of typical centers: educational technique center, MAB commission, Hanoi teacher training college

5.10 Participation in regional and international activities

- Assign participants to regional and international seminars and workshops
- Take part in research projects
- Exchange experience with regional and international countries
- Hold regional and international seminars in Vietnam
- Take visiting delegates to beauty spots and heritages as well as other research trips

5.11 Other assistance activities

- Research on establishing the budget for ESD with assistance from sources like:
  - UNESCO and other international organizations
  - Interested countries like Denmark, Canada, Japan
  - Domestic enterprises
- Research on other fund raising activities: organizing ecological tours and heritage tours for pupils and students; organize second-hand items market, collect unused items to raise fund; educate on saving in consumption within schools, families and
### Ministry of Education Malaysia

Dr Naimah Ishak  
Principal Assistant Director  
Education Planning and Research Division  
4th July 2006

The following are our priorities based on government's National Mission 2006-2020. The five key thrusts for Malaysia are:

1. To move the economy up the value chain  
2. To raise the capacity for knowledge and innovation and nurture ‘first class mentality’  
3. To address persistent socio-economic inequalities constructively and productively  
4. To improve the standard and sustainability of quality of life  
5. To strengthen the institutional and implementation capacity

The list of activities ESD that have been or will be implemented during the DESD is based on programmes that have been identified under the education sector only.

1. the development of human capital in order to drive the transformation to a knowledge-based economy  
2. making the national schools the school of choice  
3. narrowing the gap between urban and rural areas  
4. strengthening teaching profession  
5. improving educational institutions excellence  
6. Improving the delivery system  
7. Establishing the nation-state through education

### Nepal National Commission for UNESCO

Balaram Timalsina, Section Officer  
3rd July 2006

- Education  
- Science and technology  
- Culture  
- Peace  
- Environment  
- Health  
- Media  
- Empowering private sector  
- Community development and capacity building  
- Teacher training and development  
- Other public private sector

- Implementation of Education for all  
- Development of school as a peace zone  
- Implementation of Secondary education support program  
- Post conflict management  
- Implementation of millennium development goals  
- Curriculum and text book change in accordance with changing context:  
- Cultural awareness and enhancement program  
- Protection and development world cultural site  
- Development of national parks and reserves  
- Introduction of computer science in government school
**IUCN-UNESCO DESD Indicators E-List Guidelines Review Team Members**

**What are the DESD priorities in your country?**

**What ESD activities have been or will be implemented in your country during the DESD?**

| Palau National Commission for UNESCO | a) Palau's priority area in Education is Access to Quality Basic Education. While Palau has access for all children including there is a greater need to improve the quality of education starting with capacity building of school administrators and professional development for content area teachers.  
b) Palau also needs to build a strong partnership with the media, and to use the media to inform the public of ESD programs and initiatives. Most of the media outlets in the country whether paper media, radio or television still plays the typical role of the media in focusing on saleable items rather than informative and educational.  
c) The private sector has a strong partnership with education and this is one area that Palau is very well advanced in through the Summer Work Experience Program (SWEP). Where the businesses and NGO's are given students to teach and train on the job so students can make wise decisions regarding their future career. In other words, it exposes students to different types of work so they can make an informed decision about their future career.  
d) Culture: The country as a whole is acting through various agencies to identify and restore some of the lost cultures and traditions through traditional arts and crafts. There are learning of traditional chants, stories, arts and crafts as well as others. This is an area that is lacking support and the people feel that should be pursued as many of Palau's traditional practices have been influenced by foreign cultures and peoples. For the Pacific region, the development of the "Our Pacific Heritage" handbook is a key area for the Pacific to pursue "Education for Sustainable Development" by ensuring  |
|---|---|
| Dwight G. Alexander, Secretary General 3rd July 2007 | a) The main and key focus that Palau will work on is to reorient existing education to address education for sustainable development. Palau is in its last year of the 2000 Education Improvement Plan and has completed its evaluation of the progress in the last 10 years. It is now developing a new plan for the next ten years covering 2006-2016. Thus reorienting the existing educational programs to address education for sustainable development is very timely and would be incorporated into the plan.  
c) Building partnerships would be a key area to develop and pursue within the decade as it is critical to the development of national ESD programs. This would help in identifying new modules for teaching and best practices.  
d) Palau will also give considerable effort to the sustainability of the environment and in particular the marine and related ecosystems. Palau presented the "Micronesian Challenge" in the Conference in Biodiversity in Brazil, where the Small Island Developing States were challenged to reserve portions of land (20% of forest land and 30% of the reef area) from ridge to the reefs as protected areas to ensure sustainability of the environment and biodiversity. This will be a project that will require networking between the small island developing states. Already, many countries of the north Pacific have already signed the initiative. These include countries such as Guam, Saipan, Federated States of Micronesia and the Republic of the Marshall Islands. |
that the students know their heritage, their identity and their culture. This is an ongoing project in the Pacific where several workshops have been held to train the teachers to use the tool kit in their classrooms. There are further plans to develop a new teaching kit on the Pacific Heritage to make it more country specific rather than the general covering the entire Pacific. This new development will require each state, including Palau, to develop a heritage teaching kit that will be used in the classroom part of the school curricula to teach the students of their heritage.

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| **UNESCO National Commission of the Philippines**  
Ms Preciosa Silverio Soliven  
Secretary General  
17th July 2006 | The Philippine priorities on DESD are the following:  
- Respect, value and preserve the achievements of the past;  
- Appreciate the wonders and the peoples of the Earth;  
- Live in a world where all people have sufficient food for a healthy and productive life;  
- Assess, care for and restore the state of our Planet;  
- Create and enjoy a better, safer, more just world;  
- Be caring citizens who exercise their rights and responsibilities locally, nationally and globally. | 1. THE OPERATION BROTHERHOOD MONTESSORI PAGSASARI LI MOTHERCRAFT LITERACY TWIN PROJECTS  
Initially funded by Operation Brotherhood International in 1966, the 40-year old OBMCI became financially self-sufficient by 1973. It has been advocating activities to make Filipinos economically independent.  
The OB Montessori Child and Community Foundation is the implementing arm of OBMCI that reaches out to “help people help themselves” setting up alternative non-formal education referred to as the OB Montessori Pagsasarili Mothercraft Literacy Twin program. The Foundation office with full time directors and staff provide yearly teacher training and regular monitoring for the seven OB Montessori Pagsasarili preschools in Metro Manila, five in the Ifugao World Heritage Site, and 30 in Lipa City, Batangas. The Pagsasarili system is also currently being used in the EFA-DAKAR Pilot Project in Angeles Elementary School to initiate UNESCO’s framework of action for quality education in the public schools. The above are all self-sustained with the partnership of local government and parents.  
The OB Montessori Pagsasarili Mothercraft Literacy training course for village mothers was developed to fulfill UNESCO’s vision of “Teach a Mother, Teach the Nation”. From 1986 to 1990, it established 14 Mothercraft literacy houses in Cadiz and Sagay, Negros Occidental which aimed to elevate the status of village mothers by developing their potentials to the fullest, thus, making them economically self-sufficient. Given a complete household environment, village mothers and their children learn together a very disciplined way of Personal Grooming, Housekeeping, Child Care and Cooking. |
This Literacy Twin Project won the 1993 UNESCO International Literacy Award in New Delhi, India.

2. PROGRAMS AND ACTIVITIES PROMOTING ECONOMY, EDUCATION FOR ALL AND ENVIRONMENTAL THRUSTS

2.1 Saint Louis University train and provide the people in the community with technical assistance in order to cultivate backyard business such as the production of honey for commercial purposes. They also provide livelihood training and certificate programs on Beekeeping. They educate community folks to develop small business and to handle entrepreneurship, management, technical training, consultancy, research and information. Conduct of classes for parents and adults to address and arrest the dismal health situation such as lack of health manpower, poor facilities and services in the underserved and far-flung areas of the Benguet province. Faculty and students visit barangays and provide lectures and classes on health education. They also provide Mobile Nursing Clinic and Health Education to Far-Flung Areas.

2.2 La Consolacion College Bacolod through its programs of building capacity, especially of the indigents and those who have less opportunities, seek to respond to the challenges of the Third Millennium. The school officials, teacher and students are one in their efforts to bringing LCC closer to the larger community through the day care center. This program has helped hundreds of poor but deserving students to be given opportunity to improve their lives through education. Most of the indigent beneficiaries of the program are working during daytime as household helpers and then goes to school after working hours.

2.3 University of St. La Salle Bacolod program primarily aims to provide continuing formation to the street children and their parents, equip them with basic numeracy and literacy skills to become functional and productive members of the community, as well as develop their livelihood skills to help them generate additional and alternative sources of livelihood. USL also provide coastal-marine environmental education, capability building seminars, environmental issues advocacy, economic self-sufficiency and environmental monitoring and enhancement for fishermen in Balayan, Negros Oriental, through the Fisherfolk Project. Research on its effectivity is needed if it will become a flagship model.

2.4 University of Negros Occidental, Recoletos started project
“Handumanan” (in the native language means “A Place to Remember”) adopting a poor community, the Purok Katilingban of Barangay 39 in Bacolod City. Handumanan offers the poor families with instructions on health care fully equipped with medical facilities, automotive, electrical and computer aided courses, technical and vocational courses, early childhood day care facilities for out of school kids and housing projects. Monitoring and evaluation should be recorded.

2.5 University of the Philippines Open University (UPOU) provides quality higher and continuing education to Filipinos through distance education. Its mission is to give its students formal qualification, as well as to develop in them the discipline and capability to become lifelong learners who are at home in today's knowledge society. UPOU reaches adult learners and professional through distance education. Certificate programs are also offered for barangay officials and local government officials. Monitors must meet students on a quarterly basis to acquire tertiary qualifications as is done in Australia.

2.6 Miriam College promotes Public Education and Awareness Campaign for the Environment (PEACE) works to promote environmental concern for the 21st century in the school community and in communities around the school. Miriam College is home to Environmental Education Center, which gives seminars and workshops on environmental themes and studies. However, this should be matched with horticulture projects.

2.7 Philippine Women's University promotes peace issues through the activities of youth organization Called Children and Peace Philippines, which has been working to spread a culture of peace in their schools and their communities. They have been involved in peace education and advocacy for more than ten years now, conducting workshops with children and other young people, in efforts to replace prevailing culture of violence with a culture of peace and hope. Specific action for sustainable development over and above advocacy working should be inputted.

3. DESD ACTIVITIES under the Technical Education and Skills Development Category

3.1 Marikina Institute of Science and Technology conducts Non-Formal Skills for Life Education for skills development on basket weaving, meat processing and other income generating training programs. This is dependent on sustained work laboratory.
3.2 Concrete Hollow Blocks Making in North Luzon - The CHB makers were trained in value formation program; leadership program; entrepreneurial development; health management; and cooperative development training in partnership with various organizations. It has monitoring mechanism.

3.3 Zambales Dairy Development in Zambales City includes lectures and training on milk production utilizing the rural technology level to utilize marginal land for grass/legume production and to improve the economic conditions of the farmers. This requires monitoring since dairy industry depends on rich grassland.

4. DESD ACTIVITIES For BASIC EDUCATION

4.1 Sta. Ana National High School provide out-of-school youth and adults continuing learning opportunities and experiences after acquisition of basic literacy

5. DESD ACTIVITIES of Non Government Organizations

5.1 Quezon City Social Service Development Department - MYH was established in 1973. Youth offenders were given informal training and education by the local government. They also take accreditation and equivalency programs to qualify for higher education even when they are in prison.

5.2 Department of Land Reform Bureau of Agrarian Reform Information and Education (BARIE) aims to develop high performing community of workers in DLR and contribute in the empowerment of Agrarian Reform Beneficiaries through the implementation of integrated and responsive HRD and ARB programs, such as the Agrarian Reform Advocacy Program.

5.3 Department of Social Welfare and Development (DSWD) provide social protection and promote the rights welfare of the poor, vulnerable and the disadvantaged individual, family and community to contribute Self-Employment Assistance-Kaunlaran (SEA-K) is a big project.

5.4 Technology and Livelihood Resource Center (TLRC) Training Courses have set the standard in business and livelihood technology training for practicing and would-be entrepreneurs.
5.5 Asian Institute of Journalism (AIJC) through quality graduate education, research and development, and community communication programs, the Institute prepares professionals to become leaders of communication and society.

5.6 International Institute for Rural Reconstruction (IIRR) is a rural development organization that works with the rural poor in developing countries to improve their lives by building on their unique assets and strengths through the field research, training, publications, and field programs with poor communities and in partnership with other development organizations.

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</thead>
</table>
| Sri Lanka National Commission for UNESCO | 1 Education  
2 Environment  
3 Science and Technology  
4 Media  
5 Health  
6 Peace  
7 Culture  
8 Private Sector  
9 NGO | Education Sector, Ministry of Education  
• Implement education for all  
• Curriculum Development and curriculum change according to the global trend  
• Implement millennium development goals  
Environment, Ministry of Environment  
• To protect protected areas  
• To enhance the children as well as villagers knowledge on environment issues  
• Implement law and order who against the environment acts and laws  
Science and Technology, Ministry of Science and Technology  
• To implement new technologies  
• Establish the resources center which is call vidatha centers, the main objectives is to give the new technical knowledge to the villages |
<table>
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<tr>
<th>Ministry</th>
<th>Activities</th>
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<td>Media, Ministry of Mass Media</td>
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</table>
- To focus on social development issues  
- Implement community media centers |
| Health, Ministry of Health |  
- Implement the free health system  
- Make people aware especially HIV/ AIDS, social diseases, cancer, and other disease  
- Conduct health camp |
| Peace |  
- Establish the peace secretariat to promote peace process  
- Promote UNESCO's Teachers Guild to Peace Education  
- Establish Peace Education unit in Ministry of Education |
| Culture |  
- Protect and conserve all the cultural Heritage sites  
- Protect and promote intangible and tangible cultural heritage  
- To establish the divisional level cultural centers  
- Make aware the villagers and children about culture  
- Promote UNESCO’s World Heritage in Young Hands Kit |
| Private sector |  
They have involved in various ESD activities which are:  
- Primary and Secondary education  
- Environmental protection  
- Cultural protection |
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<tr>
<td>National Commission of Uzbekistan for UNESCO</td>
<td>Based on the National Program and Conception on &quot;Development of Environmental Education and Perspectives of Improvement of Preparing and Retraining Ecologist Personnel in Uzbekistan for 2006-2010&quot; national policy on ESD will be created with the main objectives being:</td>
<td>1. The UNESCO Office in Tashkent, the National Commission of the Republic of Uzbekistan for UNESCO and National University of Uzbekistan had organized the National launch of DESD in 11 May 2006.</td>
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<td>• To reorient existing education program to address sustainable education;</td>
<td>3. The National Commission of the Republic of Uzbekistan for UNESCO in collaboration with UN Agencies and local partners will organize educational Youth Camp &quot;Youth and Sustainable development: Environment for Healthy Life&quot; for 180 young people in August 17-27.</td>
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<td>• To develop public understanding and awareness;</td>
<td>This project is targeted to the young people between ages 14-16 from the member of UNESCO ASPnet in Uzbekistan. Also it is expected participation of young people of project of UNDP “Internet Schools in Uzbekistan”.</td>
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<td>• To provide training programmes for all sectors of private and civil society;</td>
<td>The program of the Camp is designed to provide considerable opportunity for group and plenary discussions and activity on themes of:</td>
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<td>• To elaborate lifelong environmental education system;</td>
<td>• Environment and sustainable development;</td>
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<td></td>
<td>• To elaborate the State Program on environmental education and improvement of the population awareness;</td>
<td>• Healthy style of life;</td>
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<td></td>
<td>• To integrate ecological subjects to other studies in higher educational establishments;</td>
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- Improve the ICT capacity
- NGO's
- They also have involved ESD related activities
  - Give environmental education
  - Cultural activities
  - Disaster Management
- To create the Center for retraining personnel of environmental organizations;
- To create museum of local lore in the regions of Uzbekistan;
- International cooperation in the sphere of education.

- World heritage in young hands;
- Youth values;
- Standard-setting documents on child rights;
- Principals of democratic society;
- Preventive education on HIV/AIDS and drug abuse;
- Combating against desertification;
- Ecology and biological diversity;
- ICT and Youth (Internet Festival)
- United Nations model.

4. CLC project in Uzbekistan
The concept of lifelong education was introduced in Uzbekistan since 1999 and it was started with pilot project on establishing and development of Community Learning Centres (CLC). The project was supported from UNESCO within the framework of Asia - Pacific Programme Education for ALL (APPEAL). In the meantime there are ten CLC’s and one CLC Resource Centre created under the initiative of the National Commission of Uzbekistan for UNESCO. Moreover, UNESCO Office in Tashkent had initiated creation of the two CLC’s on skills development (carpet weaving) - in Khiva, Bukhara, and three CLC’s under the creation - in Samarkand (traditional paper), Shakhrisabz (Suzanne) and Tashkent (traditional music instruments).

Due to the fact that most of population lives in rural social environment with strong community sense, CLC provides opportunity for individuals to acquire knowledge and life skills through structured activities and non-formal learning. CLC environment also is encouraging all age groups living together in one community to make and follow their own educational plans and programs.


The objectives of this project are:

- Setting the groundwork with situational analysis for the development of EIU policy
- Sharing the information of current situation of EIU in formal/ non-
6. UNESCO/ZEF Pilot project of research works on sustainable development - “Economic and Ecological conversion of land tenure and stream use in Khorezm region (Uzbekistan)” (2002-2012) in Aral Sea basin is being realized in Khorezm region (Uzbekistan). The aims of the project are following:

- Elaboration of possibility of long term land tenure and stream use in the basin Aral Sea.
- Combat against desertification
- Improvement of living condition of local population

7. “Waste management” project in Uzbekistan. National Commission of the Republic of Uzbekistan for UNESCO is adopted and published educational kit on environmental education PLANET 3 “Waste management” by financial support of ACCU (Japan) and distributed for all ASPnet schools (31) and 10 Community Learning Centers (created by UNESCO in ten region of Uzbekistan). This kit duplicated and distributed two times by Uzbekistan/UNDP project “Waste management in Uzbekistan”. Present time the project EU/UNDP “Enhancement of Living Standards in Karakalpakstan and Namangan Region of Uzbekistan” is republishing above mentioned educational kit. Several seminars and training being organize by National Commission o the Republic of Uzbekistan for UNESCO in collaboration with Ministry of Public Education, State Committee for Nature Protection of Uzbekistan and UNDP Office in Uzbekistan.

**IUCN-UNESCO DESD Indicators E-List Guidelines Review Team Members**

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<th>Vietnam National Commission</th>
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| Mr Pham Quang Tho          | 1. Reform curricula, contents, methods of education and training for comprehensive educational improvement for the younger generations; enhance practicality, practical skills, self-study ability with emphasis on social and humanity knowledge; supplement modern science and technology achievements suitable with students’ ability to acquire and approach common education level of countries in the region and in the world. | Within the framework of DESD and on the basis of the orientation of Vietnam’s sustainable development strategy, Vietnam tentatively plans the following activities:  
1. Awareness raising to all stakeholders and institutions on DESD through:  
   - Seminars and workshops on ESD as well as on themes with participation of all stakeholders, including private sectors and individuals. |
2. Assist disadvantaged provinces in implementation of compulsory secondary education by 2010 by helping training teachers for 10 disadvantaged provinces; increase budget for building schools, boarding schools and procurement of teaching equipment and facilities for disadvantaged areas.

3. Train human resource for rural areas to equip farmers with basic knowledge of rural professions, enabling farmers to diversify their production and trade activities to generate jobs and raise income through rapid growth of Community study centers network across the country.

4. Sustainably develop education methodologies in ethnic minority and disadvantaged areas with due consideration and recognition of cultural sensitiveness; narrow the gap of education development between regions by implementing the following measures: building a suitable network of schools and classes in ethnic minority and mountainous areas; strengthen and renovate teaching training centers to improve the quality and efficiency of teacher training, particularly teachers for ethnic minority and mountainous areas; implement proper budget allocation and financial aid from the state and local budget.

5. Mobilize all the society and citizens to contribute to establishment of the education system, education socialization, informal and formal educational form diversification, living skill and lifetime study education, making the country a learning society.

6. Incorporate ESD into curricula both in and outside schools; promote and spread knowledge of sustainable development to improve people’s knowledge and awareness to get all citizens involved in sustainable development on this basis.

7. Implement objectives of the National action plan of Education for all 2003-2015 to make study

| Mass media : radio, newspapers, TV, Internet . |
| Dissemination of information on ESD to various organizations, schools and CLCs (Community Learning Centers), local communities at tourist sites, mass gatherings, factories and companies. |
| Translation of UNESCO and other international ESD documents for distribution. |

2. Capacity building on the following fields :

- Research and develop appropriate policies on ESD and ensure incorporation of ESD elements in all national sustainable development strategies, policies and plans .
- Develop teaching and learning material on ESD for both formal and non formal education.
- Research the reform of formal and non-formal education curricula centering on quality of education and implementation of the National Education for All Action Plan (2003-2015); UN Literacy Decade (2003-2012); and socialization of education.
- Train and equip teachers and instructors, especially at university level, on methodologies of delivery , approaches and knowledge on ESD.
- Develop ESD monitoring and evaluation indicators .
  a. Networking and partnerships :
  - Establish a network of partnership among : Stakeholders , institutions , universities , ...; professional associations , social organizations , private sectors, formal and non formal education sectors, ASPnet-CLC, regional and international organizations , NGOs , ...
  - Participation in regional and international seminars, workshops and activities such as student exchange programme and scholarships, establishment of opportunities for students to take part in international youth forums on sustainable development, research and study trips by key ESD stakeholders to other countries.
  - Sharing experiences and knowledge on DESD among national, regional and international stakeholders.

3. Some immediate activities :

- Development of shared teaching material for ASPnet –CLCs Phase 1 & Phase 2 .

| Networking and partnerships : |
| Establish a network of partnership among : Stakeholders , institutions , universities , ...; professional associations , social organizations , private sectors, formal and non formal education sectors, ASPnet-CLC, regional and international organizations , NGOs , ...
| Participation in regional and international seminars, workshops and activities such as student exchange programme and scholarships, establishment of opportunities for students to take part in international youth forums on sustainable development, research and study trips by key ESD stakeholders to other countries.
| Sharing experiences and knowledge on DESD among national, regional and international stakeholders.

| Development of shared teaching material for ASPnet –CLCs Phase 1 & Phase 2 . |
opportunities available to everyone so that they can get access to basic high-quality education pursuant to 6 Dakar goals.

<p>| • Meeting of Viet Nam National Committee on DESD for approval of DESD Action Plan. |
| • Awareness Raising Seminar for all stakeholders on DESD. |
| • Participation in ACCU-UNESCO Asia –the Pacific DESD Programme on IP and COE. |</p>
<table>
<thead>
<tr>
<th>IUCN-UNESCO DESD Indicators E-List Guidelines Review Team Member</th>
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</tr>
</thead>
</table>
| **Indian National Commission for UNESCO**  
Mr Shailendra Kumar Sharma  
Director  
21st July 2006 | 1. The role of National Commissions in developing National DESD Indicators is that of a nodal agency which is central to the success of the Decade. The Indian National Commission has been playing an pro-active role in developing the DESD indicators in consultation with the concerned Departments and Ministries. Being a part of the Education Ministry, it is placed in a unique position to interact continuously for inclusion of various provisions of DESD into National Education Policies especially the National Curriculum. However, as was pointed out by me in an earlier mail several of the provisions of DESD are already being implemented in our country. Various social, economic and environmental issues have been incorporated in the revised National Curriculum in consultation with all the major stakeholders.  
2. The Indian National Commission as part of its commitment in developing DESD indicators and its implementation given the local variations as per the socio economic factors has taken the following steps for taking this process forward.  
3. To oversee the implementation of DESD in our country, the Indian National Commission has worked out a National Action Plan with the approval of the competent authority.  
As part of this National Action Plan, a National Committee consisting of experts and officials from government, civil society, academics and NGOs on education, environment, culture, social sciences, science, communication, media and other related fields, under the Chairmanship of Secretary (HE) and Secretary General, INCCU has been constituted.  
This Committee would monitor the development and implementation of the National DESD Action Plan. It’s role is also: - Policy making and framework setting, - Budget and mobilization of resources - Promotion of public consultation and input - National and International public campaigns - Restructuring of educational systems to enable the implementation and operationalisation of ESD. It would also recommend and formulate ESD policy options which reflect local-level experience and challenges, set national ESD priorities, integrate ESD into country programmes of international priorities. |
| **Ministry of Education Malaysia**  
Dr Naimah Ishak  
Principal Assistant Director  
Education Planning and Research Division  
21st July 2006 | 1. Sustainable development has been integrated into national development policies since late 1970s and factors such as increase access to education; increase equity in education; increase quality of education; and improve the efficiency and effectiveness of education management have been the major thrusts of the Education Blueprint 2001-2010.  
In meeting the demands of globalisation and becoming a fully developed nation by 2020, Malaysia is embarking upon a new phase of development towards realising its aspiration, the next 15-year phase will be guided by the National Mission, a policy and implementation plan. |
framework aimed at obtaining greater performance and impact from the country’s collective and developmental initiatives. As such, the Ministry of Education is revising the Education Blueprint 2001-2010 and is producing the Education Master Plan (2006-2010) aimed at fulfilling the Mission's thrusts and objectives for the 2006-2010 period.

One of the key thrusts of the National Mission is to raise the capacity for knowledge and innovation and nurture 'first class mentality’. In line with National Mission, human capital development will be one of the key thrusts in the Education Master Plan, 2006-2010. Thus, the role of National Commission and/or the field office in developing national DESD indicators is crucial to ensure that ESD activities are integrated in the implementation of educational programmes.

In developing the DESD indicators, a working group from the Educational Planning and Research Division, Ministry of Education was set up to plan and produce the ESD indicators which encompass various aspects of education such as enhancing national schools, establishing a nation state through education, developing human capital, narrowing the education gap, enhancing teaching profession, establishing institutional excellence and effectiveness and efficiency in delivery system. These i.e. strategies, plan of action and indicators were developed with inputs from various Divisions in the Ministry of Education so that a concerted effort is derived to enable the Ministry of Education in producing a comprehensive Education Master Plan 2006-2010.

The field office is responsible in coordinating the development of DESD indicators among the stakeholders in the Ministry of Education. This is deemed important as to increase collaboration between various divisions in the Ministry of Education and to ensure that there is commitment among the stakeholders. The Ministry of Education will continuously establish linkages with stakeholders from other governmental and non-governmental agencies as to ascertain that the educational programmes as outlined in the Education Master Plan will be carried out effectively and efficiently.

Malaysia welcomes the sharing and learning of best practices from other countries on ESD.

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<tr>
<td>Palau National Commission for UNESCO</td>
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<td>Dwight G. Alexander, Secretary General</td>
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<td>20th July 2006</td>
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<td>Palau does not have any field offices except for the Pacific Cluster Office in Apia, Samoa. They will have a greater role in the implementation of ESD in the Pacific and will rely on the National Commissions and the Ministries of Education in the implementation of ESD and ESD indicators at national level.</td>
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<td>The future role of the National Commission in the development of the national DESD indicators is a real challenge in our country. There are several agencies, government agencies and non-governmental agencies, that are implementing ESD programs in the country. Some are in environment, culture, education and technology.</td>
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<td>The Palau National Commission for UNESCO is ensuring that DESD is integrated into education policies by working with the framers of the Education Development for the next 10 years to include the Pacific Framework for ESD in the national plan. This would cover all ESD activities related to education whether it be in science, environment, health, culture or CI.</td>
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<td>The Palau National Commission for UNESCO hopes to play a key role in unifying all efforts or at least get all the different agencies involved in ESD programs to work together so that one set of ESD indicators can be developed to cover all ESD activities. While some maybe well in advance and some are still in the development stage, once all the agencies agree to work together, it will make it much easier to measure the progress of ESD development in the country.</td>
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The role of the National Commission is critical and crucial because all the agencies put emphasis and focus in their area while leaving other areas for others. There is also the issue of government agencies vs. the non-government agencies and the lack of networking and partnerships. Since the National Commission consists of experts from the different fields and sectors, it should be able to establish partnerships between the agencies where they can build a network focusing on ESD.

Palau welcomes the sharing and learning from the experiences of ESD Indicators Initiatives and believes that the valuable lessons gained would truly help countries that are off to a slow start on the Decade like Palau and other countries in the Pacific. Palau believes in the statement made and shared with the members of The Review Team as follows, "Vital to the Asia-Pacific DESD Indicators Project, is learning from the experiences of similar initiatives. Since there are no documented experiences on education for sustainable development (ESD) indicators, we need your help in collating information related to current and recent initiatives. This information will aid in avoiding replication of efforts, deepen our understanding of ESD indicators and assist with identifying lessons learnt."

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<tr>
<td><strong>Sri Lanka National Commission for UNESCO</strong></td>
<td><strong>The Sri Lanka National Commission for UNESCO is under the Ministry of Education and the Chairman of the Sri Lanka Natcom is the Hon. Minister of Education. The Deputy Chairman of the Natcom is Secretary Ministry of Education. Our normal activities comprise consultation, advice and direction to the Ministry of Education and other relevant ministries on UNESCO subjects. If UNESCO brings out new issues related to the Education, Science, Culture and Communication, we will organize a meeting or a special discussion with the relevant officials in the Ministries. Also there is a special EFA Branch in the Ministry of Education, where all the EFA activities are handled.</strong></td>
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<tr>
<td>Mr Keembiyage Prasanna Chandith</td>
<td><strong>Our major role is to disseminate UNESCO ideas to the Ministry of Education. We have discussed several times; how to implement and develop the DESD indicators.</strong></td>
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<tr>
<td>21st July 2006</td>
<td><strong>Following, the workshop on 23rd February 2006 regarding the ESD conducted by the ACCU UNESCO, we have already conducted a special workshop to the officers who are involved in the Education sector and NGO's. We disseminate the ESD indicators, ideas and other important issues related to the ESD.</strong></td>
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<td><strong>The following steps have been taken in the development of DESD indicators</strong></td>
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<td><strong>1. Submitted two innovative project proposals to develop the ESD indicators to the ACCU</strong></td>
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<td><strong>2. Submitted a proposal for the center of excellence which is regarding to develop the ESD indicators</strong></td>
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<td><strong>3. The Sri Lanka National Commission for UNESCO conducted a Child Camp which is important to develop the ESD indicators.</strong></td>
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<td><strong>New Delhi UNESCO regional office has already funded a technical specialist for the Ministry of Education to support the EFA branch.</strong></td>
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<td><strong>ESD is not a single subject. It is integrated with others subjects involving EFA. The technical specialist will also provide inputs to the Ministry on ESD.</strong></td>
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<td><strong>Our commission has also discuss with the Minister of Education; Secretary of Ministry of Education and held meeting with the donors. Donor</strong></td>
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coordination will indirectly help to develop the DESD indicators.

Success in any or all the 3 projects put forward for ACCU funding, viz: 2 Innovative projects and 1 center of Excellence project for Sri Lanka, will further enhance our efforts at promoting ESD.

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<tr>
<td><strong>National Commission of Uzbekistan for UNESCO</strong></td>
<td>In Uzbekistan the National Commission of the Republic of Uzbekistan and UNESCO Office in Tashkent (Uzbekistan) are coordinating all activities of DESD and analyzing with partners needs of people.</td>
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<tr>
<td>Dilnoza Kurbanova, Senior Expert 21st July 2006</td>
<td>• National Program and Conception on “Development of Environmental Education and Perspectives of Improvement of Preparing and Retraining Ecologist Personnel in Uzbekistan for 2006-2010” has been elaborated.</td>
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<td>• In 11 May 2006 was official National launch of DESD and Resolution was adopted.</td>
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<td>• Sub regional Conference on VIH/AIDS and Education had organized in 26-27 May 2006 (Tashkent, Uzbekistan) and Recommendation was adopted.</td>
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<td></td>
<td>• CLC project is implementing in Uzbekistan (CLC provides opportunity for individuals to acquire knowledge and life skills through structured activities and non-formal learning, in particular in rural areas).</td>
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<td></td>
<td>• The National Commission of the Republic of Uzbekistan for UNESCO in collaboration with UN Agencies and local partners will organize educational Youth Camp “Youth and Sustainable Development: Environment for Healthy Life” for 200 young people in August 17-27 2006.</td>
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<td></td>
<td>• UNESCO Office in Tashkent will organize Youth Camp “Against HIV/AIDS and drug abuse” in August 2006.</td>
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<td>• UNESCO/ZEF Pilot project of research works on sustainable development - “Economic and Ecological conversion of land tenure and stream use in Khorezm region (Uzbekistan)” (2002-2012) in Aral Sea basin is being realized in Khorezm region (Uzbekistan).</td>
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<td>• “Waste management” project on environmental education PLANET 3 “Waste management” (ACCU, Japan) is realizing by National Commission of Uzbekistan and UN Agencies in Uzbekistan.</td>
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<td></td>
<td>• APCEIU in cooperation with National Commission of the Republic of Uzbekistan for UNESCO and UNESCO Tashkent Office will organize “Asia-Pacific Consultation on Developing EIU Policy 2006 Situational Analysis and Consultation on EIU in Central Asia, Tashkent, Uzbekistan, 9-11 September 2006. This Meeting will be organized in framework 3-year project on Asia Pacific Consultation on Developing EIU Policy (2006-2008).</td>
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<td></td>
<td>• The National Commission of Uzbekistan, UNESCO Office in Tashkent and UN Information Centre in Uzbekistan had organized Essay and Drawing Contest for pupil of Uzbekistan on Intercultural dialogue (May-July).</td>
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<td></td>
<td>• The Project proposal “Creation of experimental special groups in kindergartens and secondary schools for introduction of inclusive education” which was submitted by Resource Centre on Special Education of the Ministry of Public Education of Uzbekistan was approved by ACCU Innovation Programme on ESD for the years 2006-2007 in July 2006.</td>
</tr>
<tr>
<td></td>
<td>• UNESCO Office in Tashkent and National Commission for UNESCO of Uzbekistan are cooperating on development of DESD with Ministries, Community, Universities, Schools, NGOs, UN Agencies in Uzbekistan.</td>
</tr>
<tr>
<td></td>
<td>• UNESCO Tashkent Office, National Commission of Uzbekistan for UNESCO in collaboration with UN Agencies in Uzbekistan are elaborating ICT Pilot project on set up Intranet on ESD for ASPnet School in Uzbekistan.</td>
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</table>
Vietnam National Commission
Mr Pham Quang Tho
Deputy Secretary General
23rd July 2006

The development of national DESD indicators in Vietnam will be led by the Vietnam National Committee on DESD and coordinated through the NatCom which functions as its secretariat with technical support from UNESCO Hanoi Office. The Vietnam National Committee on DESD consists of vice-ministers from the relevant ministries and representatives from key institutions. The president of the Vietnam National Committee on DESD is the Deputy Prime Minister Mr Pham Gia Khiem. Groups of leading experts and specialists from relevant sectors have been created to support the national committee.

The National Action Plan for DESD was recently drafted and will be ratified by the Prime Minister in the near future. For DESD indicators development, relevant statistical and indicators experts will be identified and invited to contribute to this work. Concrete guidelines for the development of DESD indicators will be established based on the objectives, goals, targets and priorities outlined in the National DESD Action Plan.

The respective roles for DESD of the NatCom and UNESCO Hanoi Office are outlined below. The development of the DESD indicators will be in line with these roles.

The National Commission for UNESCO

In Vietnam’s case, the Secretariat of NatCom also plays the role of the Secretariat of the Vietnam National Committee on DESD. Therefore, the DESD roles of the NatCom are as follows:

- Study and develop strategies, plans, programmes and legal instruments.
- Organize the implementation of the above mentioned fields of activities.
- Coordinate activities among stakeholders, in networking, internal and external relations and activities in research and study.
- Advocate DESD (awareness raising, publication of documents, information sharing)
- Raise funds for activities and projects.
- Monitor and assess DESD activities and its implementation based on DESD indicators.
- Compile reports on DESD for government and for UNESCO as required.
  UNESCO Hanoi
- Monitor, observe and study the host country’s activities on DESD.
- Coordinate international activities on DESD with those of the host country.
- Support international institutions and NatCom as well as the National Committee on DESD by providing international guidance, expertise, know-how, and professional experts on the development and implementation of DESD programme and activities.
- Mobilize international support and raise funds for DESD activities and projects, promote research and carry out some DESD promotional activities.
- Monitor and assess the host country’s DESD achievements, weaknesses, advantages.
- Compile reports for relevant authorities and institutions on the host country’s DESD status.

UNESCO Hanoi
Appendix 5- Current ESD Indicator Initiatives Worldwide

UK- Developing an ESD Indicator for Formal Education within the UK Strategy for SD

In March of 2005, the UK Government launched ‘Securing the Future’ a new strategy for sustainable development (SD). The Strategy identified 68 indicators to assess progress during implementation. Within the Strategy the government also identified its intention to develop an ESD indicator to show the impact of formal learning on knowledge and awareness of sustainable development.

The UK Sustainable Development Commission (SDC) was given the responsibility of developing possible approaches for this indicator and forwarding its proposals to the Department for Environment, Food and Rural Affairs (DEFRA) and the Department for Education and Skills (DfES). In November 2005, the SDC commissioned an ESD consultant (John Huckle) to research approaches for this indicator and agreed with the consultant’s request to change the wording of the indicator to ‘The extent to which learners have developed the skills, knowledge and value base to be active citizens in creating a more sustainable society’ in order to better reflect the first objective of the DfES action plan for sustainable development.

The approaches developed by the consultant were drawn from the ESD literature and represented six distinctive rationales, each offering a framework of learning outcomes and related modes of assessment, and each yielding its own indicator. These approaches are to differing degrees relevant to all levels and forms of education, but in developing sample assessment or survey instruments, he focussed on the primary and secondary levels of formal education. The six approaches are:

- **The sustainability literacy approach**: Indicator- The percentage of learners who attain the required level of sustainability literacy
- **The sustainable schools approach**: Indicator- Percentage of pupils that are able to relate activities carried out in schools to key themes of sustainable development and recognise the values, skills and knowledge that are relevant to taking considered action on issues relating to such development
- **The citizenship survey approach**: Indicator- The percentage of pupils who report knowledge, attitudes and activities relevant to active citizenship for a sustainable society in a questionnaires that form part of an ongoing NFER study
- **The action research approach** (or sustainable schools approach): Indicator- The percentage of learners who have successfully taken part in action learning designed to explore ways of creating a more sustainable society.
- **The frame of mind approach**: Indicator- The percentage of learners who have development sustainability as a frame of mind
- **The dilemma approach**: Indicator: The percentage of learners having the skill to match imaginary characters’ decisions to the knowledge and values that is likely to have prompted such decisions.

(*Approaches for which a sample test/survey instrument was written)

These approaches were outlined and justified within a consultation paper that also included sample assessment/survey instruments and discussion of the possible advantages and disadvantages of each approach. This was the focus of two
consultative workshops, for members of the UK ESD community, held at DfES in February 2006. Workshop participants were asked to identify their first and second choices from the six approaches suggested. They were also asked to rate the two approaches selected with reference to eight criteria: validity, reliability, simplicity, objectivity, cost, equal opportunities, good practice, and government policy. Whereas there was overwhelming support for the action research approach and some support for the sustainable schools approach, there was clear suspicion, or outright rejection, of any approach that sought to test prescribed knowledge, skills and values.

Sources:

The Nordic Minister Council- Developing ESD indicators for the Regional Strategy for SD

The Nordic Minister Council (NMC) is an organisation for formal cooperation between the governments of Denmark, Finland, Iceland, Norway and Sweden. In May of 2005, subsequent to their adoption of a Revised Strategy on Sustainable Development for 2005-2008, a Working Group on Indicators for SD was appointed by the NMC. Their task included the development of ESD indicators for presentation to the NMC in June of 2006.

Given that the aims of the Nordic Region were similar to the UNECE Region, the Group decided to work closely with the UNECE EG to develop their indicators. The Working Group identified a set of twelve indicator questions (See Appendix #3) for the Ministries of Education based on “checklist” and “input” indicators. These indicators will be used until the end of the Strategy in 2008 at which time a set of questions based on “output” and “outcome” indicators will be developed. ESD development will be measured by comparing the change in the answers on a yearly basis.


Germany- Self-Assessment during the DESD

The German National Committee for the DESD is currently developing a self-evaluation mechanism to monitor achievements during the Decade. In particular, official German contributions for the DESD must meet the following criteria: the contribution is innovative, can serve as a model to others, and should be based on a complex concept of ESD (e.g. not only the environmental but the social and economic dimensions as well). Along with stakeholder submissions of contributions
to the Decade, the Committee is asking practitioners to develop a set of approximately four questions to form the basis of their self-evaluation. Stakeholders will answer these questions so that they can be compiled yearly, forming part of a monitoring report to the Committee. The purpose of the self-monitoring initiative is to encourage a learning process within the contributing organisation, as well as the education system as a whole.


Germany- ESD Indicators for Formal Education:

In Germany, discussion on ESD indicators in the formal education sector has begun. The ESD indicators that will be developed will undertake the following functions or play the following roles:

- indicators as a tool for self-evaluation;
- indicators as a support instrument for implementation and dissemination of ESD initiatives in practice; and
- indicators as a measurement of knowledge about and acceptance of ESD.

In addition, Germany’s fragmented indicator system will consider an indicator system that encompasses three levels: macro, meso and micro.

- On the macro level, indicators will take into account the responsibilities of the German states for education and their relationships to the federal level. For example, indicators could include: progress in implementation efforts, ESD in central curricula and federal programmes, regional and national support structures.
- On the meso level, indicators will reflect measures taken to establish and stabilize ESD within educational institutions.
- On the micro level, indicators will reflect ESD at the classroom level. For example, indicators could be time allocated for ESD issues, forms and methods of teaching, perceived learning successes – the viewpoints of teachers and of pupils as well.

Sources:


European Research Project Indicators for ESD

Forum Umweltbildung (Austria), in cooperation with the University of Luneburg, is planning a European Research Project on Indicators for ESD with the purpose of developing manageable and practical sets of ESD Key Indicators for Formal Education. According to the March 2006 discussion paper, the indicators developed will serve to orient education practitioners in primary, secondary and higher education to adapt their practice towards the goals and methods of education for sustainable development. In addition, a basic set of ESD indicators will be developed to bridge general characteristics expressed by the various educational levels. It has been proposed that the indicators should be developed via a participatory,
interdisciplinary research and evaluation process as well as complies with the demands of education practitioners in terms of practicability, applicability and relevance. In conjunction to the development of ESD indicators, this project aims to develop a European Learning Community by bringing together researchers and practitioners across national boundaries.