Environment and Education: A Pathway to Sustainability by Dr Gursharan Singh Kainth

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Human resource development is the key to successfully achieving sustainable development, and a range of educational measures, including formal, non-formal and informal education and learning in broad terms is the primary tool to develop the human capacity required for sustainable development. Pertinent practices are widespread in various forms and efforts are ever expanding and their contribution to sustainable development is demonstrated in a number of cases at individual, group, community and local levels. However, despite their potential and expectations, the impacts of educational measures on society-wide changes have yet to be demonstrated with substantiated evidence.

Considering the critical importance and urgency of realizing the changes for shaping the sustainable future in the region, serious efforts are needed to reorient education policies and programmes and enhance their relevance and effectiveness in contributing to the attainment of sustainable development. Sustainable development cannot be achieved by education alone. A national multi stakeholder process to deal with education for sustainable development should be initiated as a first step to establish a coordinating mechanism for education for sustainable development.

The process essentially involves: a) definition and recognition of a broad range of relevant stakeholders for education for sustainable development, including, in particular, representatives of government agencies, schools, universities, education institutions, NGOs, business, religious groups and community- based organizations, b) improvement of communication among those groups, and c) establishment of a national forum or council for multi stakeholder consultation. A media campaign for general sensitization on education for sustainable development would also be conducted to facilitate the process.

Once such an organizational foundation has been established, the development of a national master plan for education for sustainable development should be undertaken, with the participation of all stakeholders as a prerequisite. This master plan will provide an overall policy framework and action strategy for all stakeholders in the country to join forces to promote their respective activities in an integrated manner towards the attainment of the common goal of sustainable development. Proposals on enabling policy measures for promoting such initiatives and programmes may also be addressed in the master plan. Such an arrangement should include: a) the securement of a strong political commitment with top-level leadership, and b) the establishment of a mechanism for inter-ministry coordination.

A core group, such as an inter-ministry task force, should be designated with appropriate authority and responsibility. An important mandate of the core group will be capacity-building for government officials (in all sectors), and reviewing/reorienting existing policy instruments across all ministries concerned, including stocktaking from other international initiatives addressing education issues. Particular attention should be paid to government functions in terms of channeling of national/local undertaking with international initiatives, such as regional networking, and with external financial resources.

The United Nations Decade for Education for Sustainable Development, 2005-2014, is very timely as it provides an indispensable opportunity to boost the concerted efforts at national, regional and global levels and mobilize the necessary resources to comprehensively respond to the major challenges of education, public awareness and training in achieving sustainable development that were addressed in the past decade. Nevertheless, the challenges are enormous as education for sustainable development has to meet the broad expectation that it should play a principal role in achieving the Millennium Development Goals,

the target year of which has been set in 2015, just after the completion of the decade.

Environmentally sound and sustainable development is not only a trendy phrase, it is a commitment made by international community at the Earth Summit embodied in Rio Declaration and in Agenda 21. The Earth Summit, the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992 alerted the world to the complex nature of the issues underlying environmental sustainability.

Perhaps the most pertinent was the increasing divergence between the northern 'environment' agenda and the 'development' agenda shared by the poorer nations. Many countries who were eager for economic development used the Summit to bring the world's attention to the stark choices they face between development, environmental protection and the need to overcome poverty. However, the realization at Rio that the existing development trends leave increasing numbers of people poor and vulnerable served to redefine and clarify the links between environment and development concerns.

The Earth Summit at Rio de Janeiro saw the essential indivisibility of environment, peace and development. It also recognized that global independence could no longer be conceived only in economic terms. Alongside, there was the calculus of military parity. They were related to the instability sprawled by widespread poverty, squalor, hunger, disease, illiteracy. They were connected to the degradation of the environment.

They were enmeshed with inequity and injustice (Dodswell 1995).Recognizing that no nation could resolve these issues on their own, those attending the Summit signed agreements on international co-operation in tackling development and environment concerns. These concerns included 'the perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy and a continuing deterioration of the eco-system on which we depend for our well-being'. Most significantly, Agenda 21, of the conference called for 'a global partnership for sustainable development' (UNCED 1992, Preamble).

With growing recognition of unavoidable interaction among environmental, economic and social concerns, environmental issues have been more progressively discussed in the broader context of sustainable development. The Johannesburg Declaration on Sustainable Development, adopted at the World Summit on Sustainable Development in 2002, explicitly highlighted the collective responsibility of all mankind to advance and strengthen the interdependent and mutually-reinforcing three pillars of sustainable development – economic development, social development and environmental protection – at the local, national, regional and global levels (United Nations, 2002b). This notion essentially implied a need for significant change in scope and orientation for environmental education, and for the emergence of a new vision of education for sustainable development.

In 2002, the proposal for establishing the Decade of Education for Sustainable Development (DESD) was endorsed at the World Summit for Sustainable Development (WSSD) in Johannesburg. The UN General Assembly later adopted the decade by consensus, designating the years of the decade as 2005-2014.

The decade provides an opportunity for a concerted effort to integrate the various values inherent in sustainable development into every aspect of learning, through all forms of education, training and public awareness raising, to encourage changes in behaviour that allow for a more sustainable society. Internationally collaborative work is under way aiming at the development of the International Implementation Scheme and subsequently the Regional Implementation Strategies (UNESCO, 2005a, 2005b)

Achieving Sustainability: The Role of Education

There is wide agreement that education has an important role to play in motivating and empowering people to participate in the changes towards more sustainable lifestyles. It was a quarter of a century ago, that education was described (Schumacher 1973) as the 'greatest resource' for achieving a just and ecological society. Since then, the major

international reports have emphasized the critical role education to play for sustainable living.

Education for sustainability is the continual refinement of the knowledge and skills that lead to an informed citizenry that is committed to responsible individual and collaborative actions that will result in an ecologically sound, economically prosperous, and equitable society for present and future generations. The principles underlying education for sustainability include, but are not limited to, strong core academics, understanding the relationships between disciplines, systems thinking, lifelong learning, hands-on experiential learning, community-based learning, technology, partnerships, family involvement, and personal responsibility

Awareness and concern about environmental, economic, and equity issues must become firmly rooted in public consciousness. Also needed is an in-depth understanding of the short- and long-term implications of decisions and choices. To produce that understanding, students and adults need to know how natural systems work and appreciate natural cycles. But such knowledge is only the beginning. Also needed is an understanding of the interdependence of economic, social, political, and ecological conditions - in rural and urban areas as well as locally, regionally, nationally, and internationally.

In addition to formal classroom education, this objective can be implemented through various kinds of nonformal education, such as a multifaceted public awareness campaign. Advances in information and communication technologies (ICTs) will help in this effort by broadening awareness of sustainability and helping bridge cultures and continents in ways never before possible.

The Brundtland Report, (WCED 1987) argued that teachers had 'a crucial role to play in helping to bring about the extensive social changes' necessary for sustainable development. The 1980 World Conservation Strategy was more explicit about the role of education in bringing about such changes. It argued that:

'A new ethic, embracing plants and animals as well as people is required for human societies to live in harmony with the natural world on which they depend for survival and well-being. The long term task of environmental education is to foster or reinforce attitudes and behaviours compatible with this new ethic'. (IUCN, UNEP & WWF 1980).

Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues...It is critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making' (UNCED 1992).

Chapter 36 on *'Promoting education, public awareness and training'* was one of the few aspects of Agenda 21 which did not provoke contention at the Earth Summit. Both economically developed and developing countries agreed that education was critical for promoting sustainable development and increasing the capacity of the people to address environment and development issues (UNESCO-UNEP 1996).

As a result, many environmental education policies and programmes around the world are taking on board the new vocabulary of sustainable development and acknowledge the need to mobilize all sectors of society, not just formal education in the task of achieving sustainability (Agyeman et al. 1996). All educational programmes need to be planned, designed and implemented with a clear reference to the desired target, i.e., the development of key capacities as identified above.

Integrated Approach Involving All Forms of Education

Sustainable development is a complex undertaking with connections to every part of life. Capacities required for sustainable development are enormous and can only be enhanced by engaging all possible measures of education, training and awareness-raising opportunities. In fact, education for sustainable development should take place within a perspective of lifelong learning, encompassing all modes of education initiatives; formal, non-formal and informal, from early childhood to adulthood. Available educational opportunities should not be equated with schooling or formal education alone, nor can they be conceived to limit non-formal environmental education (EE) activities provided by NGOs or advocacy groups.

A lifelong learning perspective sees all the different modes of education as a continuous and interactive

process, to collectively promote the societal changes towards sustainable development. Roles by different modes of education can be outlined as follows:

Formal education - With the perspective of "education for all," it carries a particular importance in providing basic education to the majority of the population, which is key to a nation's fundamental development, particularly through the improvement of literacy and numeracy. Common curricula like mathematics, science, health and physical education and social studies serve to develop a nation's intellectual infrastructure which is basic to promoting economic and social development.

Higher education also responds to societal needs for trained professionals as well as to the leadership required for the construction of modern institutions in various sectors and for improving the standard of living. Subjects of law, economics, science, engineering, agriculture and medical science all contribute to supporting the process of sustainable development.

Non-formal education – In the past, non-formal education demonstrated an impressive development in its scope and magnitude of delivery, in particular, in the field of environmental education (EE). It was developed in response to local needs and priorities, and thus closely linked to the development of the required human capacities within the local context. Non-formal education has advantages, e.g., its curricula are flexible and can be designed relatively quickly, participatory and interactive approaches are inherently adopted in its education methodologies, and it readily reaches a broader audience, i.e., the

general public, beyond that of the formal education system. NGOs and community-based organizations have been widely recognised as the primary providers of non-formal environmental education and are gaining greater responsibilities and influence in the development of education of this particular mode.

Informal education - This mode of learning takes place in the family, community, workplace and social interaction, as well as through the media (e.g., newspapers, television and radio) and a diversity of indigenous methods and processes, such as religions, informal beliefs, cultural activities, popular art, theatre and music. Informal learning generally raises public awareness on socio-economic and environmental implications of human activities, and shares relevant information for important decision-

making. In particular, vocational training addresses a range of business operations, including technical and managerial aspects, and thus enhances the participant's skills in directing those operations more compatible with sustainable development, while a number of religions in Asia and the Pacific, such as in Buddhism and Hinduism, promote respect and cultural belief related to nature conservation and sustainability issues.

A range of efforts and initiatives were taken for decades to strengthen the roles of different modes of education and to enhance the effectiveness and efficiency of their delivery in response to their respective weaknesses and problems identified from the past experiences. However, these efforts are mostly promulgated on an ad hoc basis and lack appropriate linkage across the sectors as well as inter-agency coordination in a consistent framework.

Synergy among different modes of educational efforts must be created, and an integrated approach needs to be employed. Formal, non-formal and informal education should be recognised as indispensable components of education for sustainable development, a strategic framework to ensure that they work in tandem to collectively cover all skills and expertise, values, and behavioural changes indispensable for sustainability.

Pioneering initiatives are being observed in many parts of the region. Linking literacy education to health, environmental awareness and other sustainable development concerns is progressively undertaken, *inter alia*, by community education groups in India (*Uttarakhand Seva Nidhi*, 2004). Initiatives for strengthening the collaboration between formal and non-formal sectors are under way in Indonesia where the formal education sector created "Local Study" as a subject in the school programme, and NGOs and universities work together to develop and disseminate environmental education materials for use in the subject course across the nation (Hans Seidel Foundation, 2005).

In Japan, the 1998 revision of the "Course of Study," or the basic national guidelines for school education set by the Ministry of Education, Culture, Sports and Technology, stipulated the introduction of a new course subject, "Period of the Integrated Studies" (*Sogo Gakushu no Jikan*) in the school curriculum, which provided a window for bringing NGO programmes and community-based, non-formal environmental education into an integral part of school education (Box 8-1).

Innovative materials, textbooks and tools, such as Kids-ISO, developed by non-formal sectors including NGOs, business and academia are progressively used in this course. Effective coordination and

specialization according to differentiated roles and effectiveness of education modes attracts special attention (Box 8-8). This viewpoint is particularly important if education for sustainable development is to be promoted effectively within the limited available resources.

Problems of Environmental Education

Along with the proliferation of environmental education practices, information and knowledge-based on practical experiences should be progressively exchanged and fed back for further improvement of education programmes and their delivery. An IGES workshop on the Regional Strategy on Environmental Education in the Asia-Pacific Region, held in December 1999, was a landmark event where experts discussed the issues and problems related to the delivery of environmental education at different levels (IGES, 2002). Most of the major problems of environmental education, in particular those encountered at the operational level, were already raised in the workshop. Some of those problems included:

Inadequate Educational Infrastructure – A lack of appropriate infrastructure is very common in the education sector in developing countries in the region. School buildings are often dilapidated and lack minimum facilities, such as furniture, classroom, laboratories, library, materials, tools and equipment. Because of a lack of designated space, non-formal classes are being operated in shifts.

Inadequate Curriculum Development – Existing curricula, in particular, in school education, are mostly knowledge-based and inflexible in incorporating additional subjects or activities to involve students in a broader perspective of leaning on ecological sustainability in locally-relevant contexts. In most environment education programmes, curricular components are often dominated by the natural sciences and do not reflect the multi-disciplinary characteristics of environmental education, nor are they constructed around accurate scientific or ecological concepts.

Lack of Trained Teachers – There is a great shortage of trained and competent human resources, especially environmental educators and facilitators. The lack of training opportunities that focus on content and methodology of environmental education, as well as incentives to motivate teachers to enhance their competency, is significant. In fact, these were considered the areas where policy intervention and support are definitely required. In effectively addressing these problems, there is need for identification of the needs of overall policy intervention, in particular, for:

(i) Enhancing the integrity of national policy/strategy for environmental education, which provides a basic principle for guiding the broad range of environmental education activities in a country in an integrated and coordinated manner;

(ii) Improving the institutional coordination among different educational sectors and the governmental agencies to ensure that financial, technical and human resources are appropriately mobilized and allocated to support the sound development of an education infrastructure and curricula as well as training/ capacity-building activities targeting different sectors; and,

(iii) Enhancing the availability of, and facilitating access to, relevant data and information, especially on environmental trends, conditions, solutions and alternatives.

Most of these problems and policy requirements are not specific to environmental education. The findings in the environmental education field are largely relevant to the cases of thematic education in other subject areas addressing the important components of sustainable development, such as poverty, health, social cohesion, and local development, and thus can be applied to the further promotion of those thematic education efforts

How can Education for Sustainability be accomplished?

Education for sustainability can give people the tools, skills, and experience they need to understand, process, and use information about sustainable development. It will help them make individual and collective decisions that both benefit themselves and promote the development of sustainable communities. And it will provide a means for creating a more highly skilled and globally competitive workforce and developing a more informed, active, and responsible citizenry.

Integrated approach involving all forms of education

Sustainable development is a complex undertaking with connections to every part of life. Capacities required for sustainable development are enormous and can only be enhanced by engaging all possible measures of education, training and awareness-raising opportunities. In fact, education for sustainable

development should take place within a perspective of lifelong learning, encompassing all modes of education initiatives; formal, non-formal and informal, from early childhood to adulthood.

Available educational opportunities should not be equated with schooling or formal education alone, nor can they be conceived to limit non-formal environmental education (EE) activities provided by NGOs or advocacy groups. A lifelong learning perspective sees all the different modes of education as a continuous and interactive process, to collectively promote the societal changes towards sustainable development. But how can it be accomplished? The following key principles are identified about education for sustainability.

EFS must involve everyone.

Education on any topic, but particularly on sustainability, should flow from school to community and back again. Educators at all levels should reach beyond school walls, as many successful programs already do, to involve parents, industry, communities, and government in the education process. Colleges and universities should work with other schools and communities -- to deliver information, identify questions for research, and provide direct services to help solve community problems. For their part, communities should take a stronger interest in educating their citizens for sustainability, recognizing that current and future generations will need to be well-educated on this topic in order to bring about a sustainable future.

EFS emphasizes relationships between formal and nonformal education.

It thrives in all types of classrooms, exposing students to local, state, national, and international issues through hands-on, experiential learning in alternative educational environments - such as wading through streams to do water quality testing, volunteering in the community, or participating in school-to-work programs.

Because sustainability is all-encompassing, learning about it cannot and should not be confined to formal settings such as schools, universities, colleges, and training institutions. Nonformal education settings, such as museums, zoos, extension programs, libraries, parks, and mass media, provide significant opportunities to complement and build on classroom learning. This means that formal and nonformal educators should work together to produce an educated citizenry.

EFS emphasizes connections.

Educating for sustainability does not follow academic theories according to a single discipline but rather emphasizes connections among all subject areas, as well as geographic and cultural relationships. Rather than weaken the rigor of individual disciplines, education for sustainability offers an opportunity to strengthen them by demonstrating vital interrelationships. Students must strive to achieve high standards within the core disciplines, even as they develop an understanding of the connections across these disciplines. Further, education for sustainability involves consideration of diverse perspectives, including those of ethnic groups, businesses, citizens, workers, government entities, and other countries.

EFS is practical.

While delving into many disciplines, education for sustainability helps students apply what they learn to their daily lives. It engenders a sense of efficacy. Part of sustainability education is learning citizenship skills and understanding that citizens have the power to shape their lives and their communities in light of their vision of a healthy and prosperous future.

EFS is lifelong.

Continual efforts should be made to institute programs about sustainability in a variety of arenas, including the workplace and community centers and through the media. A citizenry knowledgeable about the benefits of sustainable living will have the capacity to create and maintain lasting change. Benefits to the individual include an understanding of and ability to participate in the social and economic changes that will affect their lives. For example, many communities have used planning processes that engage citizens in defining a desired future plan for their community. Using their plan, citizens work to achieve a sustainable future for themselves, their children, and their community.

Policy Recommendations and Actions

Although a number of individuals, businesses, government entities, and communities across the nation have taken the task toward sustainability, much more can be done to nurture a sustainable society. To foster awareness, dialogue, and action for sustainability, three policy recommendations are proposed,

which address both formal and nonformal educational settings and acknowledge the lifelong nature of education. They also address an array of crosscutting issues that relate to formal and nonformal education alike - such as technology, partnerships, cultural, and international contexts.

Each recommendation is accompanied by specific actions that articulate the necessary partnerships and activities needed for implementation at local, state, and national levels. By exploring successful case studies in which challenges were faced and barriers overcome, strategies and initiatives for implementing action are offered. Together, these suggested recommendations and actions form a comprehensive educational strategy that promises to help lead the nation to a more sustainable future.

Formal Education Reform

Encourage changes in the formal education system to help all students (kindergarten through higher education), educators, and education administrators learn about the environment, the economy, and social equity as they relate to all academic disciplines and to their daily lives.

Action 1. Parents and representatives from states, schools, educational organizations, community groups, businesses, and other education stakeholders should identify the essential skills and knowledge that all students should have at specified benchmark grades for a basic understanding of the interrelationships among environmental, economic, and social equity issues. This set of voluntary standards could serve as a model for states and communities to use in setting their own requirements for academic performance.

Action 2. State officials, school administrators, and other educators and stakeholders should continue to support education reform; emphasize systems thinking and interdisciplinary approaches; and pursue experiential, hands-on learning at all levels, from elementary and secondary schools to universities, colleges, community colleges, and technical schools.

Action 3. Colleges and universities should incorporate education about sustainability into pre-service training and in-service professional development for educators of all types, at all levels, and in all institutions.

Action 4. Schools, colleges, and universities should promote curriculum and community awareness about sustainable development and should follow sustainable practices in school and on campus.

Nonformal Education and Outreach

Encourage nonformal access to information on, and opportunities to learn and make informed decisions about, sustainability as it relates to citizens' personal, work, and community lives.

Action 1. Nonformal educators should encourage lifelong learning about sustainability through adult education programs, community and civic organizations, and nonformal education programs -- such as those sponsored by museums, zoos, nature centers, and 4-H clubs -- so that individuals can make well-informed decisions.

Action 2. Media strategists and sustainable development experts should develop an integrated approach for raising public awareness of and support for sustainability goals, conveying information on indicators of sustainable development, and encouraging people to adopt sustainable decision making in their daily lives.

Action 3. A new or expanded national extension network should be developed to provide needed information to enhance the capacity of individuals and communities to exist sustainably.

Action 4. Local and state governments should continue to extend their partnerships with community organizations and other levels of government to support community sustainability planning processes and periodic assessments.

Action 5. Employers -- in partnership with all levels of government, community organizations, businesses, educational institutions, and others -- should develop training programs to create a workforce with the skills and abilities needed to adapt to changes brought on by the national and global transition to sustainability.

Strengthened Education for Sustainability

Institute policy changes at the federal, state, and local levels to encourage equitable education for

sustainability; develop, use, and expand access to information technologies in all educational settings; and encourage understanding about how local issues fit into state, national, and international contexts.

Action 1. Federal, state, and local governments should form partnerships with private sector organizations, businesses, professional societies, educational institutions, and community groups to develop and implement coordinated strategies supporting education for sustainability.

Action 2. The public and private sectors should support the development of and equitable access to enhanced multimedia telecommunications technologies and improved clearinghouse capabilities that promote an understanding of sustainability.

Action 3. Educators in both formal and nonformal learning programs should help students understand the international factors that affect the nation's transition to a sustainable society.

Action 4. Formal and nonformal educators should ensure that education for sustainability invites and involves diverse viewpoints, and that everyone -- regardless of background and origin -- has opportunities to participate in all aspects of the learning process. This will ensure that education for sustainability is enriched by, and relevant to, all points of view.

All educational programmes need to be planned, designed and implemented with a clear reference to the desired target, i.e., the development of key capacities as identified above. In order to facilitate this process, an introduction of an evaluation process in the project cycle of any education programme is encouraged. A number of management tools and instruments are available for this purpose. The Plan-Do-Check-Act (PDCA) cycle is a commonly-used management tool that provides a framework for the improvement of a process or system. The cycle involves a four-step cyclic process consisting of Plan, Do, Check and Act stages, which enables the completion of one turn of one cycle to flow into the beginning of the next.

Conclusions and Recommendations

Human resource development is the key to successfully achieving sustainable development, and a range of educational measures, including formal, non-formal and informal education and learning in broad terms is the primary tool to develop the human capacity required for sustainable development. Pertinent practices, including in particular, those in environmental education, are widespread in various forms and efforts are ever expanding and their contribution to sustainable development is demonstrated in a number of cases, mainly at individual, group, community and local levels.

However, despite their potential and expectations, the impacts of educational measures on society-wide changes have yet to be demonstrated with substantiated evidence. Considering the critical importance and urgency of realizing the changes for shaping the sustainable future in the region, serious efforts are needed to reorient education policies and programmes and enhance their relevance and effectiveness in contributing to the attainment of sustainable development.

In response to this challenge, four important response principles are emerging globally:

1) Environmental education should readjust its focus from ecological concerns to interlinking relationships among socio-cultural welfare, economic livelihood and environmental quality in a broader agenda of sustainable development. This evolution will help educational initiatives to better address practical solutions to actual environmental problems in the existing socio-cultural and economic conditions and to enhance its relevance to the promotion of sustainable development at the society scale.

2) An integrated approach should be employed to enhance interlinkage and collaboration among educational programmes in different sectors, ranging formal/non-formal education, training and public awareness-raising. The optimum combination of different educational opportunities may be pursued within a perspective of lifelong learning.

3) Appropriate institutional arrangements should be introduced to best support the notion of education for sustainable development. A policy framework strongly addressing a holistic and integrated approach to education for sustainable development and a coordination mechanism involving not only governmental agencies but also all relevant stakeholders should be established at the national level. Governments can play an "enabling role" by introducing a range of innovative policies to facilitate and support the education initiatives and programmes by all stakeholders committed for sustainable development.

4) An effective policy-mix should be employed among educational measures and other policy instruments in the non-education field. Such policy instruments would include regulatory, voluntary and market-based

measures. Sustainable development cannot be achieved by education alone. In line with these recommended principles, immediate actions that countries in the region can take are recommended as follows:

A national multi stakeholder process to deal with education for sustainable development should be initiated as a first step to establish a coordinating mechanism for education for sustainable development. The process essentially involves: a) definition and recognition of a broad range of relevant stakeholders for education for sustainable development, including, in particular, representatives of government agencies, schools, universities, education institutions, NGOs, business, religious groups and community- based organizations, b) improvement of communication among those groups, and c) establishment of a national forum or council for multi stakeholder consultation. A media campaign for general sensitization on education for sustainable development would also be conducted to facilitate the process.

Once such an organizational foundation has been put established, the development of a national master plan for education for sustainable development should be undertaken, with the participation of all stakeholders as a prerequisite. This master plan will provide an overall policy framework and action strategy for all stakeholders in the country to join forces to promote their respective activities in an integrated manner towards the attainment of the common goal of sustainable development.

It should include definitions of the respective roles of different groups, their commitments and an action agenda to ensure engaging all stakeholders in relevant initiatives and programmes. Proposals on enabling policy measures for promoting such initiatives and programmes may also be addressed in the master plan. In order for governments to appropriately discharge the enabling functions, i.e., formulate and implement a range of enabling policies, and provide appropriate support and necessary resources in facilitating the national multi stakeholder process, an institutional arrangement to ensure a "whole-government" approach should be provided. Such an arrangement should include: a) the securement of a

strong political commitment with top-level leadership, and b) the establishment of a mechanism for inter- ministry coordination on ESD policies and programmes. A core group, such as an inter-ministry task force, should be designated with appropriate authority and responsibility. An important mandate of the core group will be capacity-building for government officials (in all sectors), and reviewing/reorienting existing policy instruments across all ministries concerned, including stocktaking from other international initiatives addressing education issues (Education for All, UN Literacy

Decade, etc.). Particular attention should be paid to government functions in terms of channeling of national/local undertaking with international initiatives, such as regional networking, and with external financial resources.

The United Nations Decade for Education for Sustainable Development, 2005-2014, is very timely as it provides an indispensable opportunity to boost the concerted efforts at national, regional and global levels and mobilize the necessary resources to comprehensively respond to the major challenges of education, public awareness and training in achieving sustainable development that were addressed in the past decade. Nevertheless, the challenges are enormous as education for sustainable development has to meet the broad expectation that it should play a principal role in achieving the Millennium Development Goals, the target year of which has been set in 2015, just after the completion of the decade.

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