

Country Report on Environmental Education in Cambodia

Roath Sith*



1 Executive Summary

Since 1993, environmental education in Cambodia has been slowly permeating the formal education sector at the primary, secondary and tertiary levels, including formal monk education, the training of government officials of Ministry of Environment, and sporadically the mass media and non-formal education sector.

There is currently no single long-term strategic plan for environmental education (EE) currently in place within Cambodia. Consequently the approach to EE is carried out in a fairly random manner. NGO's and IO's working in the EE field produce and apply their own educational material for their own projects without consultation, for the most part, with the Ministry of Environment (MOE). If this ad-hoc approach remains unchecked the Government will continue to have lack control or quality assurance mechanisms for EE.

In addition, the Ministry of Environment has identified that little knowledge exists of what environmental education (EE) materials/initiatives/capacity currently exists in Cambodia as a whole making it difficult to clearly identify and address national EE needs. Hence it is considered essential to formulate a national strategic plan to ensure the long-term effectiveness of EE in Cambodia and for the Government of Cambodia to regain control of its EE system and that Cambodia's EE needs are properly identified and addressed.

2 Background

2.1 General issues

The Kingdom of Cambodia seriously suffered from more than two decades of civil war and international isolation from the mid 1970's to the early 1990's. After the worst events were over, the United Nations supported the general elections in Cambodia in 1993 which ushered in a new era of peace. However due to a number of factors environmental degradation in Cambodia is apparent. This has been brought about by the prolonged war/conflict, the lack of capacity and knowledge on environmental issues, inadequate agriculture, business and industrial practices, imperfect infrastructure, unequal access to land tenure, lack of environmentally sound technologies and management, and a desire for rapid economic growth and poverty reduction. The links between poverty and environmental degradation are strong and need to be taken into consideration while planning or implementing environmental legislations and policies.

The major environmental issues facing Cambodia include inappropriate forest exploitation, soil erosion, sedimentation, coastal zone degradation, air and water pollution, depletion of the fishery stock, degradation of the Tonle Sap ecosystem, loss

* Environmental Education and Training Office, Department of Environmental Education and Communication, Ministry of Environment, Cambodia

of biodiversity, urban environmental degradation, and high population growth.

Environmental education (EE) is of fundamental importance in addressing these issues as it provides the necessary knowledge/awareness, values and skills needed by students, the general public and decision makers to understand the complexities of the environment. The primary aim of EE is to enable Cambodian citizens to be aware of and appreciate the complex nature of the environment, as well as the role played by a properly managed environment, in social and economic development.

However, the field of education was one of the most seriously disrupted by the prolonged civil war and conflict. Not only were schools demolished, education suspended, literature and schoolbooks destroyed; the majority of schoolteachers did not survive the atrocities. A moderate reconstruction of the educational system began in 1979 but after the 1993 elections a revitalized education system was considered as critical to broad-based development, and improved education as a major contributor to overall nation-building, democratization and economic liberalization.

The Royal Government of Cambodia is committed to position its education system in order to optimize its contribution to social and economic development and considers environmental education one of the top priorities for the country. It recognizes that EE strategies are needed to mobilize all the elements that constitute the formalized methods of education within Cambodian society including formal schooling education (secular and non-secular systems), non-formal education, mass media, and socio-cultural elements like religious networks, and professional and occupational training. Each element must take on the responsibility of delivering EE as a legitimate aspect of its activities and must accept EE as fundamental to accomplishing the objective of a better environment.

2.2 Brief background to Cambodian Education System

The Cambodian education system can essentially be placed into three categories: formal secular, formal non-secular (monk education) and non-formal education. Formal education is undertaken in educational institutions such as schools and universities and non-formal education comprises education to the community outside of the formal schooling system and can include vocational training etc.

The formal secular education system during the decade of the 1980s comprised 5+3+3 respectively for primary school, lower secondary school, and upper secondary school. The tertiary school was set for 4-7 years for technical and engineer training. In the 1990s the Cambodian education system was upgraded to 6+3+3 for primary, lower secondary and upper secondary schools respectively.

The tertiary level remained unchanged until 2000 when tertiary education was privatized so courses now vary in length depending on the type of qualification. Vocational and technical education and training are also conducted from 1 year to 3-5 years. Non-formal education also contributes to the training of citizens. (See Appendix 1: Education system flow chart)

The formal non-secular education system is designed for Buddhist monk students. There are two parts to teaching materials: one is about literature and science subjects and the other is on Buddhism principles. The education system

for this sector is designed similarly to the formal secular education system which comprises 6+3+3 for primary, lower secondary and upper secondary schools respectively.

The National Constitution provides for free primary and lower secondary education (up to grade 9) in public schools. However, private contributions are allowed to make up for the lack of public resources. In view of the scarcity of available resources pre-school education has not been a major focus. About 94 percent of children aged between 3 to 5 years old do not attend pre-school. Approximately 55 per cent of all primary schools offer six grades. Net enrolment rates are still low at all levels. Most children who start school bear the consequences of the internal inefficiency of a system that is characterized by high repetition and drop out rates.

The rather uniform centralised curriculum for primary schools is not always perceived as very motivating and relevant to the children and their parents. Teachers are often unable to provide an active learning environment as a short Textbook Orientation Training alone is insufficient for encouraging the teachers to make a shift from the tradition of teacher centred teaching to child centred teaching methods.

Another area of major concern is the low primary school attendance rate, particularly for the very youngest of school-aged children and especially girls. According to the 1998 census only 20 percent of six year olds, and around 40 and 50 percent respectively of all the seven and eight years old children were attending school.

At all levels of education, students from the poorest families are under-served and under-represented. Cambodia is faced with a clear gender gap for most of the access and quality indicators. The gender gap for net primary enrolment stands at 6.2 percentage points for the academic year 2000-2001. The percentage of female students at pre-school level are 50, for primary 46, for lower-secondary 37 and for upper-secondary levels 32. Boys and girls at early primary level appear to have initially almost equal schooling opportunities. However, around the age of eleven, girls start lagging behind boys (CARE, 1998). At the same time, girls have higher labour force participation rates than boys during their teenage years suggesting that financial factors outweigh attitudinal ones in explaining the gender gap. Number of school girls drop down to about 33% at lower and upper secondary schools. (See Appendix 2: Number of schools, classes, students and staff). Again, numbers of girls studying at tertiary schools become marginalized.

3 Environmental Education in Cambodia 1993-1998

3.1 Establishment of the Ministry of Environment and Department of Environmental Education and Communication

In late 1993 the Ministry of Environment (MOE) was established to undertake environmentally sound management and the preparations for environmental education in Cambodia also began. The Ministry was (and still is) made up of six main technical departments with one being the Department of Environmental Education and Communication (DEEC) (See Appendix 3: Organizational Structure of the MOE). The DEEC role and function is to initiate, coordinate and cooperate with relevant governmental institutions, national and international agencies, as well as business sectors, religious, and local communities to work together for improving environmental capacity building and awareness.

The main functions of the DEEC are to:

- Build up national capacity and capability.
- Collaborate with line technical departments for organizing training courses on environmental issues.
- Collect, collate, develop and publicize environmental education materials.
- Cooperate with other International Organizations, Non-Governmental Organizations, and voluntary organizations for the implementation and dissemination environmental education activities.
- Develop and distribute environmental educational materials to be used by all sectors in the society.
- Develop environmental education programs and concepts to be integrated into curriculums of primary, secondary and higher education.
- Develop non-formal educational planning, i.e. environmental campaigns.
- Develop office strategic direction and action plans.
- Disseminate environmental awareness to officials, military officers, and general public.
- Liaise with relevant Ministries, institutions, NGOs, IOs and donor agencies concerned with environmental issues to coordinate activities and provide technical guidance and direction as necessary.
- Organize capacity building training courses for government officers.
- Organize competition campaigns on environmental awareness.
- Prepare program of action based on the National Environmental Action Plan as well as national and international policy.

3.2 Establishment of Inter-Ministerial Steering Committee for Environmental Education

Shortly after the MOE's establishment in 1993 an Inter-Ministerial Steering Committee for Environmental Education (IMSCEE) was established by the MOE, Ministry of Education, Youth and Sport (MOEYS), and Ministry of Cult and Religion Affairs (MOCRA) to carryout all EE activities. The main role of IMSCEE was responsibility for all environmental education programs in formal education for primary, secondary, and tertiary schools (secular) and monk schools (non-secular). The IMSCEE was provided with technical and financial support by UNDP/CEAT.

The Committee members comprised representatives from the three Ministries. Three Sub-Committees for Primary, Secondary and Monk Education were also established to undertake technical work for these levels of education. In addition an IMSCEE Secretariat was established to facilitate/support the technical and administrative work of IMSCEE and its sub-committees.

Shortly after the establishment of the IMSCEE, the MOE and IMSCEE, in cooperation with UNDP's Cambodian Environmental Advisory Team (CEAT), outlined the first general framework for the integration of EE at all levels of Cambodian society. The framework of EE in Cambodia stated the following issues as priorities: health, pollution, sustainable use of natural resources, conservation of biodiversity and the relation between nature and culture.

In late 1995 another program was launched involving the IMSCEE, which focused on the integrated environmental education into both secular and non-secular (monk) education systems and the Buddhist Association became a member of the IMSCEE (See Appendix 4: Organizational structure of the IMSCEE).

The responsibility of the IMSCEE members was as follows:

- MOE/DEEC was responsible for overall EE programs,
- MOEYS was responsible for any EE initiatives in the public education system by focusing on environmental education issues within secular education system.
- MOCRA and BA were responsible for EE for the monk education system by focusing on environmental education issues within non-secular education system.

Technical and financial assistance for this program was provided by UNDP/ETAP. The duration of this program was over a three year period. Activities began in late 1995 and ended in December 1998. The main outcomes are given in section 3.3.1 below.

The IMSCEE was suspended in 1998 due to financial constraints and has not been reconvened since.

3.3 Formal Education Initiatives

3.3.1 Inter-Ministerial Steering Committee for Environmental Education

The IMSCEE developed integrated systems for EE into schooling education systems. There are two main integrated target areas: secular schooling system (primary, secondary and high school levels) and non-secular (religious) schooling system (primary and secondary school levels).

In order to introduce the concepts, rational and goals of environmental education, and to discuss a model for the integration (interdisciplinary/multidisciplinary) of EE in primary and secondary schools, a First National Seminar on Environmental Education in Primary and Secondary Schools was held in August 1993 by the IMSCEE with technical and financial assistance provided by UNDP/CEAT. Participants to this seminar were officials from the MOE and MOEYS, primary and secondary school teachers' supervisors from both the central and provincial sectors. It was agreed that the EE should be integrated by changing the content of the broad learning areas (interdisciplinary approach). This meant that EE was to be integrated within the broad learning disciplines for primary school level. To begin with, EE was first to be integrated into primary school teaching and later on into lower and upper secondary school and tertiary school levels.

3.3.1.1 Secular primary school initiatives

In 1995 the IMSCEE successfully launched a program called "integrated EE into primary school level". This program began with the development of environmental education materials for both teachers and students followed by a three-week national workshop¹. The main objective of this workshop was to introduce EE materials and collect feedback, comments and recommendations from participants for improving those materials. There were 48 participants who attended the workshop. After review of the EE materials by using workshop feedback, IMSCEE published the first draft of a teachers guide and environmental manual for primary school teachers.

This material was then introduced at six regional workshops², each of which was attended by about 50 participants invited mostly from the MOEYS (primary school's teachers) throughout the country, and several were invited

¹ The National Workshop was held in Sihanoukville from 27th May-14th June 1996.

² The Six Regional Workshops were held at Kandal, Takeo, Stung Treng, Battambang, and Siem Reap Provinces, and Sihanoukville Municipality from May to June 1997.

from MOE line provincial departments who carried out the EE program at both provincial and municipality levels. Feedback, comments and recommendations from participants were used to review, correct, update and enhance the quality of the books.

The teaching manual consisted of ten modules each comprising one lesson and several practical exercises. Those modules are:

- Module 1: What is the Environment?
- Module 2: Environment and Socio-Cultural,
- Module 3: Green plant is sources of food,
- Module 4: Water is life,
- Module 5: the Sun,
- Module 6: Wildlife,
- Module 7: Forestry,
- Module 8: Natural Resources,
- Module 9: Environmental Pollution and
- Module 10: Quality of life.

In addition activity-based exercises were added to the modules. Exercises were divided into three main grade levels: lower level for grade 1-2, middle level for grade 3-4, and upper level for grade 5-6. These included classroom and outside classroom activities, and story telling.

Unfortunately, the final documents were unable to reach final publication due to the shortage of financial support (resulting from the international fund suspended for Cambodia in late 1997).

3.3.1.2 Secular secondary school initiatives

The initiative for the secondary school education program was planned to begin in 1997 for materials development and environmental education training program in cooperation with UNESCO-Bangkok's Asia-Pacific Center of Educational Innovation for Development (ACEID) with expected additional funding from Japanese Trust Funds. Unlike the primary education program, where IMSCEE drafted a new EE classroom manual for teachers, the secondary program focused on the professional development of teacher educators using the UNESCO-ACEID training modules. However in 1998 the IMSCEE initiatives to launch integrated EE programs into secondary school (secular area) level collapsed because of technical problems and financial constraints.

3.3.1.3 Non-secular primary and secondary school initiatives

Environmental education for the formal non-secular education sector was administered through IMSCEE's monk education sub-committee. It was designed to be responsible for both the primary and secondary monk educations. A Sub-Committee Working Group for Monk Education was established to prepare/develop the materials for Buddhist primary and secondary school teachers with technical and financial support provided through IMSCEE's Secretariat. MOCRA decided to use the draft Primary School Teacher's Manual (see section 3.3.1.1 above) as a model for a similar manual for monk educators. The draft manual consists of a teacher's guide and ten modules. Each module comprises lessons, exercises including written tests, storytelling, experiments, and outside classroom activities. The IMSCEE

also launched an additional program for the primary Buddhist monk education system. This program began with the development of EE materials for integration into primary monk education level.

The IMSCEE had planned to organize a national workshop on environmental education for monk education in late 1998, to be followed by six regional workshops across the country in which the draft manual was to be introduced. Participants of the national workshop were to comprise 50 department heads/representatives of MOCRA, MOE, and MOEYS. The majority of participants were to be from MOCRA which is responsible for Buddhist education. For the regional workshops, the participants would be head and/or lead teachers of the approximately 300 existing Buddhist primary schools for monks.

The first draft of these materials was prepared but not published and introduced to the National Workshop for comment and other input. Unfortunately this program was also suspended at the end of 1998 due to the shortage of financial support.

The draft manual (produced in both Khmer and English) aimed to deliver EE to Buddhist monk's students with Buddhist principles and concepts in regards to the environment and human attitudes of high importance. The draft manual comprised 10 modules as follows:

- Module 1: What is the Environment?
- Module 2: Buddhist and the Environment,
- Module 3: Wataram (Pagoda) and the Environment,
- Module 4: Buddhist Education and the Environment,
- Module 5: The Buddha and Forest,
- Module 6: Khmer Cultural Environment,
- Module 7: Pollution and the Hygiene of the Environment,
- Module 8: Natural Recourse and People's Need,
- Module 9: Element for Life and
- Module 10: Environmental Morality.

The coordination of formal environmental education for monks in Cambodia has been suspended since December 1998 because of lack financial support.

3.3.2 Tertiary Education

The tertiary education system was controlled by the government through its line technical Ministries up until the Year 2000. The Ministry of Education, Youth and Sport (MOEYS) had overall responsibility for most of the tertiary schools and established national policies and curriculum guidelines for them. Also some tertiary institutions and vocational and technical colleagues were under the governance of other technical Ministries (Ministry of Agriculture, Forestry and Fishery, Ministry of Health, Ministry of Commerce, etc). Courses on environmental issues were very limited if they occurred at all.

3.4 Non-formal Education Initiatives

3.4.1 Department of Environmental Education and Communication

The EE program in the MOE was first developed in 1994, soon after the MOE was established by the Royal

Government of Cambodia in late 1993. The initial EE program was primarily focused on the capacity building of the MOE staff and other governmental officers rather than providing environmental awareness to students, farmers and the general public.

In 1994 with technical and financial support by international organizations (in collaboration with UNDP/CEAT, IDRC, UNESCO, and IUCN), the Department of Environmental Education and Communication (DEEC) within the MOE prepared and conducted a series of lecture programs on general environmental issues for MOE staff, called "Environmental Skills Training Course". Five training courses (four-week training course length) were organized and conducted with the following objectives:

- To ensure the MOE staff understood and supported the mission and goals of the Ministry;
- To ensure the staff knew the functions of each department and office of the Ministry,
- To increase the competence of the staff of the MOE with exposure to the full range of issues, sciences, and technology related to the environment.

This training course was planned to take place once a year to upgrade the knowledge of MOE officials working in the field of environment and was to become a regular part of MOE's program.

The holding of the first three training courses was supported by UNDP, UNESCO, IUCN and IDRC with both technical and financial assistance. There were about 300 personnel who attended these courses, the majority was MOE staff working in various fields throughout the country and the rest were invited from relevant governmental institutions. The final two training courses were organized by the DEEC in collaboration with UNDP, UNESCO, CAREERE, IDRC, CEMP and other NGOs. Participants who attended these courses numbered about 200 and were invited from MOE line Provincial / Municipal Environmental Departments and also other participants were invited from relevant governmental institutions.

The short training courses were suspended early in 1996 due to a lack of technical and financial support and financial support provided by the government is generally inadequate.

DEEC had also been in cooperation with local non-governmental organizations to disseminate environmental awareness to the public. Implementation was via different types of education means such as short training courses, workshops, meetings and the mass media.

3.4.2 Non-Secular Education Initiatives

The non-formal education system for non-secular education (non-formal monk education) program was conducted through local NGOs covering Phnom Penh and 15 provinces. It should be noted that this program was under technical and financial assistance provided by from UNDP/ETAP and NORAD. An NGO Working group for a community based environmental training program for monks in the individual Wat (pagoda) community was established in December 1997 which comprised 11 NGOs. The working group was split into two task teams, one devoted to materials development (print and tape), and the other to training curriculum development. The

early material produced by the working group was a book called "A Cry from the Forest". This material was then distributed to pagoda and monk master trainers in 1999.

4 Enviromental Education in Cambodia 1998-Present

4.1 Formal Education

4.1.1 Secular Primary School

There is currently no government formal printed environmental education material available to be used in secular primary schools. However, the final "Teacher Guide Manual for primary school teachers" that was developed by IMSCEE in 1998 (but not published) has recently been put on a website for schools to use.

In addition, a group of 4-NGOs developed a primary school teaching aid called "Guideline for Environmental Educators" which comprises 42 lessons. Each lesson contains environmental issue explanation and exercise parts. This material was adopted by the MOEYS and then published and distributed in 2003.

4.1.2 Secular Secondary School

After the IMSCEE was suspended in December 1998, the MOEYS in collaboration with UNSECO developed a text book of materials related to environmental science for lower and upper secondary schools. This text book was called "Earth Science" and there are variety topics associated with environmental issues in general which focus on three different environmental fields: the green, blue and brown issues. Currently, this book is used in secondary schools.

4.1.3 Secular Tertiary

At the end of the 1990s, privatization of the education system at the tertiary level was encouraged. As a result, tertiary schools were dramatically growing while other levels of the schooling system remained controlled by the government. All kinds of private schools at the tertiary level are allowed to operate according to the curriculum development approved by the Ministry of Education, Youth and Sport.

A secular tertiary education program on environment was officially established in 2000 by the Royal University of Phnom Penh³ (RUPP) with financial support provided by UNESCO and DANIDA (Danish International Development Agency). This program was designed to provide an undergraduate degree, which is a four-year academic study with 23 subjects. Students that enroll in this program are required to take 71 credits core courses; 39 credits of basic requirement; 33 credits of general education, and 10 credits group-research in the last semester. There are about 30 undergraduate students who take this course each year. The first environmental graduation students will complete their study in the 2004 academic year.

Materials for this graduate course have been developed with technical assistance provided by the Asian Institute of Technology (AIT), based in Bangkok, Thailand. Developed materials were introduced to many workshops for comments and feedback in order to improve the quality of materials as well as to fit it into the Cambodia situation.

³ Royal University of phnom Penh (RUPP) is a specialized university under direct supervision by the Ministry of Education, Youth and Sport. The university mostly offers courses for professional teaching in various fields of education. Graduate students, after completing their courses in this university will generally become teachers.

4.1.4 Non-secular Primary and Secondary Schools

Due to ETAP ending in December 1998, the initiative for integrated environmental education into non-secular education system for both primary and secondary school levels was suspended and no further activities have taken place due to limited financial support. EE in this sector needs to be reactivated.

4.2 Non-formal Education

4.2.1 Ministry of Environment

Since 1998 non-formal education carried out by the Department of Environmental Education and Communication (DEEC) within the MOE has been limited. This is because it has not been a priority task for DEEC due to limited capacity of the staff, uncertain policy, and financial constraints. It is essential to reactivate a program in order to provide and strengthen the capacity of officials on environmental issues. This capacity building needs to be focused on various target groups, i.e. general officials, decision-makers and policy makers. A clear strategic plan for this development needs to be made.

4.2.2 Non-Government Organisations EE work

Since 1998 there has been quite a lot of activity in the non-formal sector which has been undertaken by Local and international Non-Governmental Organizations (NGOs), Associations, and Religious Groups. Similar to the formal education system, non-formal education has been implemented in both the secular and non-secular education sectors.

Non-formal education carried out by the Non-Governmental Organizations is more active because those organizations have clear work plans, enough funding to undertake such works, and their scope of work is generally small scale (focusing on one or a few provinces or districts or communes). To date we know that there are about 30 national and international NGOs working in the environmental field in Cambodia (See Appendix 5: List of National and International NGOs in Cambodia). Such organizations mainly focus their work on environmental protection and conservation, environmental pollution, and only slightly concentrate on environmental education. Only a few NGOs are concentrating more on environmental education, namely the Cultural and Environmental Protection Agency (CEPA), Save Cambodia Wildlife (SCW), and Mlup Baitong (Green Shade) for example. Their main activities cover various fields including EE material development, EE training programs for local villagers, advocacy, radio broadcasting, campaigns, etc.

However, most of the NGOs EE activities are lacking coordination/cooperation links either with the MOE nor MOEYS, and vice versa. They work by collaboration mostly with local authorities only. Such lack of cooperation with the central authority results in inadequate information for nationwide planning. Consequently, it is considered that some areas may have many environmental NGOs working in them, while others have none.

4.2.3 Public awareness raising of EE

Environmental awareness still tends to be very limited and is particularly low among people in rural areas and in areas of high bio-diversity. This lack of environmental awareness is a contributing factor to the destruction and/or degradation of the natural environment i.e. soil erosion, deforestation, declining fish stock etc.

In order to promote public awareness about current environmental issues, it is necessary to develop non-formal education programs where people can learn about environmental issues through mass media, campaigns and/or listening to advice from the monks.

The raising of public awareness in most provinces relies mostly on the print media, television, and radio broadcasting. However, to ensure effective high quality news coverage and information campaigns on the environment, journalists with specialized education in environmental issue are necessary. There is a lack of well-trained journalists in Cambodia.

Cambodia has more than 20 newspapers, four of which are published in foreign languages. The non-Khmer papers are well known among foreigners but have very low circulation among Cambodian people. Most newspapers in Khmer circulate well in Phnom Penh and Siem Reap municipalities, but have poor distribution in the other provinces. Environmental issues are not often covered by either the local or foreigner's newspapers.

Radio is a cost effective and influential medium with a vast reach into rural areas. The lack of an electrical network in most rural areas does not obstruct the distribution of information by radio, as batteries are commonly used in these areas. The size of radio audience in Cambodia is unknown but radio ownership is high. Radio programs will therefore reach a large section of the public and it seems to be an opportune time to introduce programs relating to environmental issues. Some regular radio broadcasting of environmental issues has been introduced recently by MOE and some NGOs i.e. Mlup Baitong and it is carried by the National Radio. There are about 10 radio stations in operation but only two stations are regularly broadcasting environmental programs/news twice time a week (the National Radio and Radio FM-103MHz).

Television (transmitting and cable TV) is becoming more widespread in large cities such as Phnom Penh, Siem Reap, Sihanoukville, and Battambang. Soon after the formulation of the framework for environmental education in July 1993, the MOE in collaboration with UNTAC and CEAT produced four short-term video bites for TV broadcasting. The videos were targeted at the general public and aimed to inform the people on the importance of Cambodia's forests. Then, in 1995 with support provided by UNDP/ETAP, the MOE/DEEC initiated and launched a TV Quiz Show on environmental issues. These shows were produced quarterly and broadcast 2 times a week. Such productions have decreased since 1998 due to inadequate resources. Currently, only two TV Quiz Shows a year are produced and broadcast. General environmental information programs are however shown quite regularly by 7 local TV operators.

Environmental campaigns also contribute to raise public awareness on the environment particularly on brown issues. Such campaigns are carried out by the MOE and are undertaken for many events including National Environmental Day, World Environmental Day, Clean up the World, Clean up Cambodian Beaches and Keep Phnom Penh City Clean. Again, financial support for such campaigns is inadequate and as usual what finance there is has been provided by private enterprises, local and international NGOs and embassies. Students, governmental officers and local people generally volunteer to participate in these events.

5 Challenges in Environmental Education

There is currently no single long-term strategic plan for environmental education (EE) currently in place within Cambodia. Consequently the approach to EE is carried out in a fairly random manner. NGO's and IO's working in the EE field produce and apply their own educational material for their own projects without consultation, for the most part, with the Ministry of Environment (MOE). If this ad-hoc approach remains unchecked the Government will continue to have lack control or quality assurance mechanisms for EE.

In addition, the Ministry of Environment has identified that little knowledge exists of what environmental education (EE) materials/initiatives/capacity currently exists in Cambodia as a whole making it difficult to clearly identify and address national EE needs. It also believes that there is little coordination of current EE initiatives which may be resulting in duplication of efforts and inconsistencies in approach. Indeed from discussions with a number of organizations involved in EE this view appears to be supported.

It is considered that the implementation of environmental education in Cambodia faces many obstacles including:

- Limited cooperation and coordination/networking between governmental institutions, NGOs, and the private sector,
- Limited environmental legislation, regulations and enforcement tools for managing its resources,
- High percentage of illiteracy among Cambodian people,
- Limited public knowledge on environment, so that their participation and commitment in environmental activities is still limited,
- Limited capacity on environmental education,
- Limited materials and facilitation equipment for EE.
- Limited financial support.
- Inadequate strategic planning for EE.

6 Strategy to overcome the problems

MOE/DEEC is developing a Strategic Direction on EE, the vision of which is that "All Cambodians have environmental awareness ensuring a sustainable future". The mission is "To achieve a coordinated and consistent approach to Environmental Education (EE) in Cambodia to better enable the conservation and protection of the environment to the benefit of all people's livelihoods, particularly the poor and disadvantaged." This is to be achieved by reaching four main goals:

- Development and implementation of a National EE Strategic Plan to identify and address EE need with integration of the ASEAN Environmental Education Action Plan (AEEAP).
- Development of a Sub-decree on Public Participation and Access to Information.
- Development of information tools for EE (website/newsletter/ CDs/Video, etc.)
- Development and mobilization of human resources for EE.

The major part of the strategic direction is to develop and implement a National Environmental Education Strategic Plan (NEESP) with integration of the ASEAN Environmental Education Action Plan (AEEAP)⁴. As a first stage to the development of the Plan a research project (known as the National Environmental Education Research Project or NEERP), is proposed to be undertaken. The NEERP will provide a picture of what EE materials/initiatives/capacity exist in Cambodia and a database developed with the information obtained to assist government and non-government institutions to better

identify the EE need of the Cambodian people at all levels of education (primary, secondary, tertiary, non formal and monk education) and help improve environmental awareness at these levels.

EETO has already commenced the NEERP with preliminary discussions with government institutions and NGOs about the project. However due to a level of financial constraint within the MOE donor funding is required for the NEERP to be substantially continued and completed (approximately US\$30,000). Once funding is secured it is estimated that the research stage will take around twelve months to complete.

Once the NEERP is completed the material on the database would then be evaluated (as a further separately funded project) to identify the need for what further measures are to be undertaken to ensure EE is occurring at some level in all parts of the Country. Following the evaluation the strategic plan would then be formulated to address the needs identified. In the formulation of the strategic plan it is proposed that the equivalent of the IMSCEE be created to act as a steering committee for the plan's development with all relevant stakeholders being represented. The NEESP would then be implemented. The completion of the NEESP as a whole is expected to take 2 years (subject to availability of funding). The NEESP's implementation is anticipated to take between 3-7 years, possibly more (again subject to funding).

In addition it is recognized that in the interests of good governance it is important that the Ministry gains knowledge of what EE materials/initiatives/ capacity exists so it can establish a lead coordinating role for EE initiatives and also identify the need for future EE initiatives in Cambodia. Such measures would also be in line with the important regional initiative of the ASEAN Environmental Education Action Plan 2000-2005 (AEEAP).

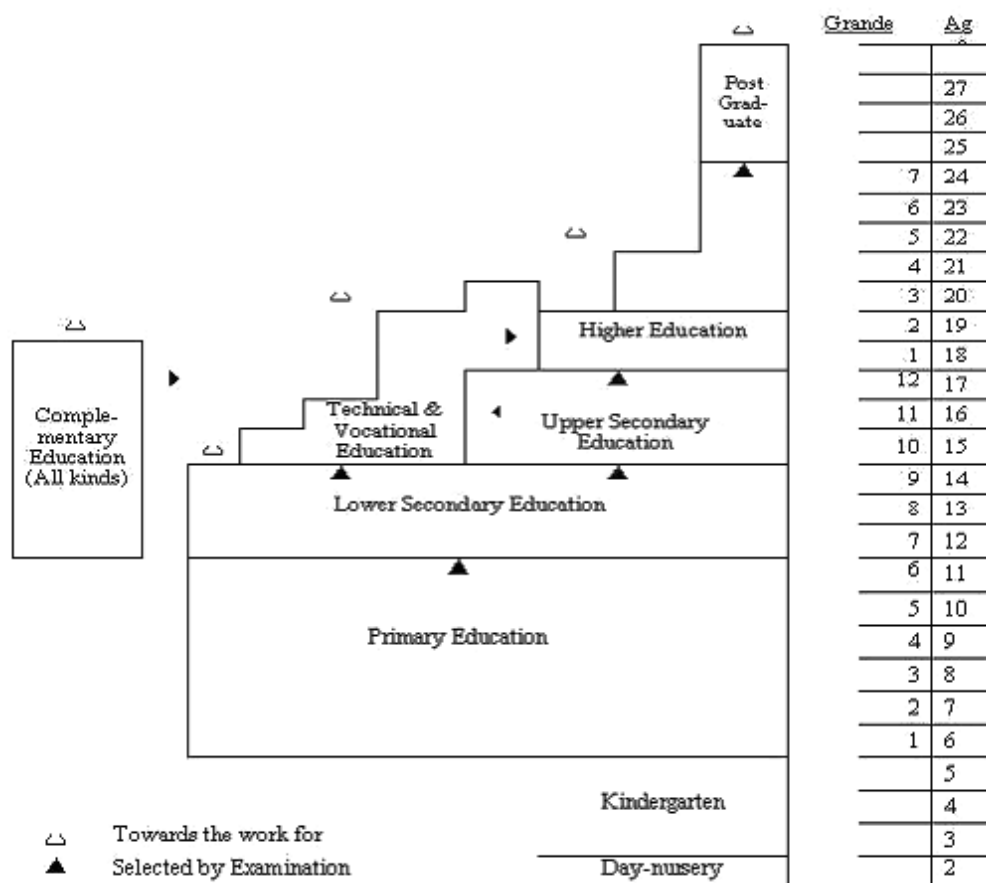
7 Conclusion

Since 1993, environmental education in Cambodia has been slowly permeating the formal education sector at the primary, secondary and tertiary levels, including formal monk education, the training of government officials of Ministry of Environment, and sporadically the mass media and non-formal education sector. Between 1993 and 1998 much of the EE activity in Cambodia occurred at the Government level, particularly in the MOE and MOEYS. Since then EE activity has been limited within the MOE though the MOEYS has been integrating EE into the secular primary and secondary school curriculums. The Environmental Science degree at the RUPP has also been recently developed. There has also been varying levels of environmental education work undertaken by NGO's over more recent years with the majority of the work occurring in the non-formal education sector.

However the MOE considers that the approach to EE is carried out in a fairly random manner. NGO's and IO's working in the EE field produce and apply their own educational material for their own projects without consultation, for the most part, with the Ministry of Environment. In addition it is recognized that little knowledge exists of what EE materials/initiatives/capacity currently exists in Cambodia as a whole making it difficult to clearly identify and address national EE needs. It is therefore essential that a national strategic plan to ensure the long-term effectiveness of EE in Cambodia is developed in order for the Government of Cambodia to regain control of its EE system and that Cambodia's EE needs are properly identified and addressed.

8 Appendixes:

8.1 Appendix 1: Education system flow chart



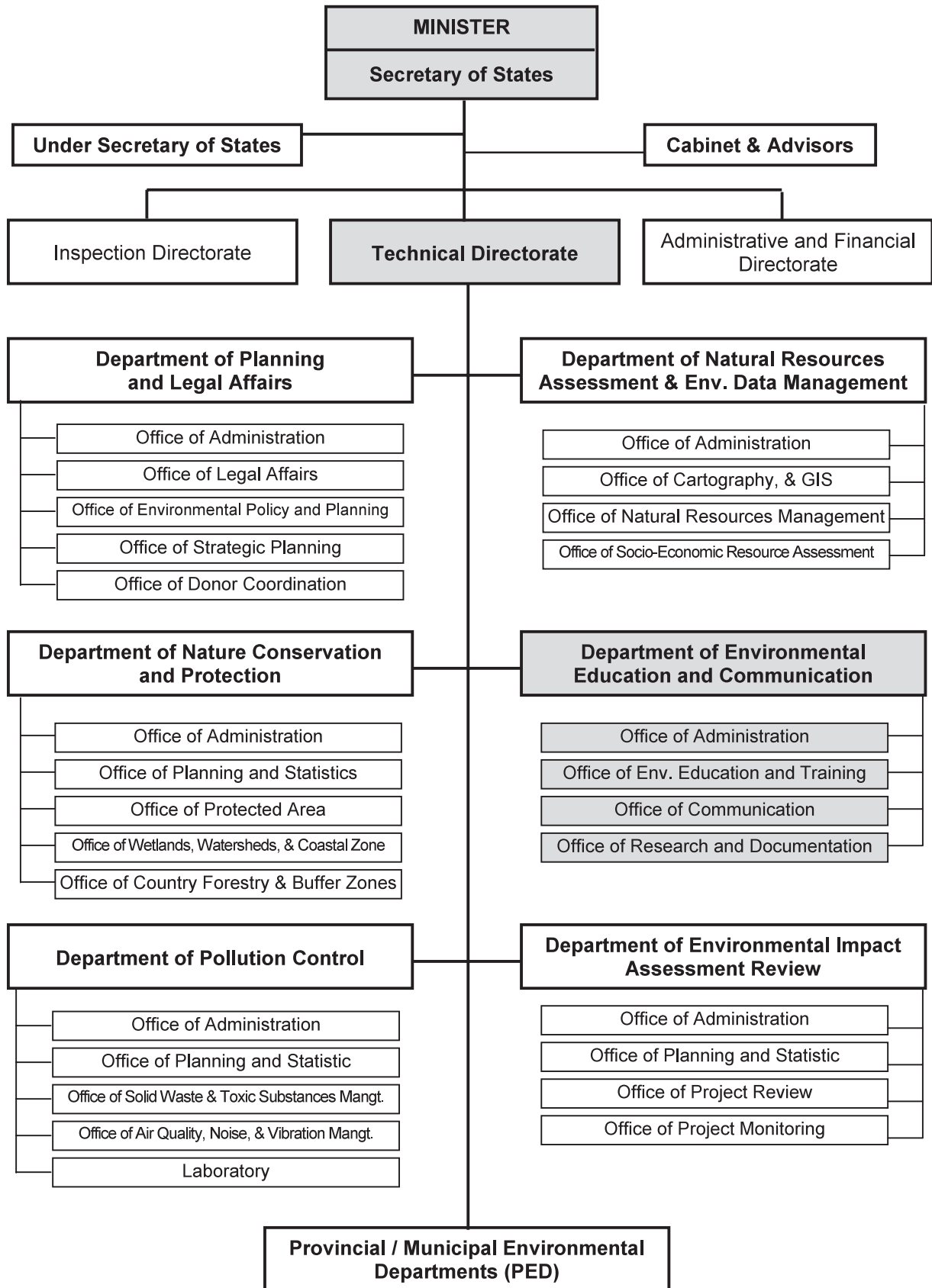
Source: Expanded basic education program 2002-2005, Ministry of Education, Youth and Sport, Cambodia, 2002

8.2 Appendix 2: Schools, classes, student and staff

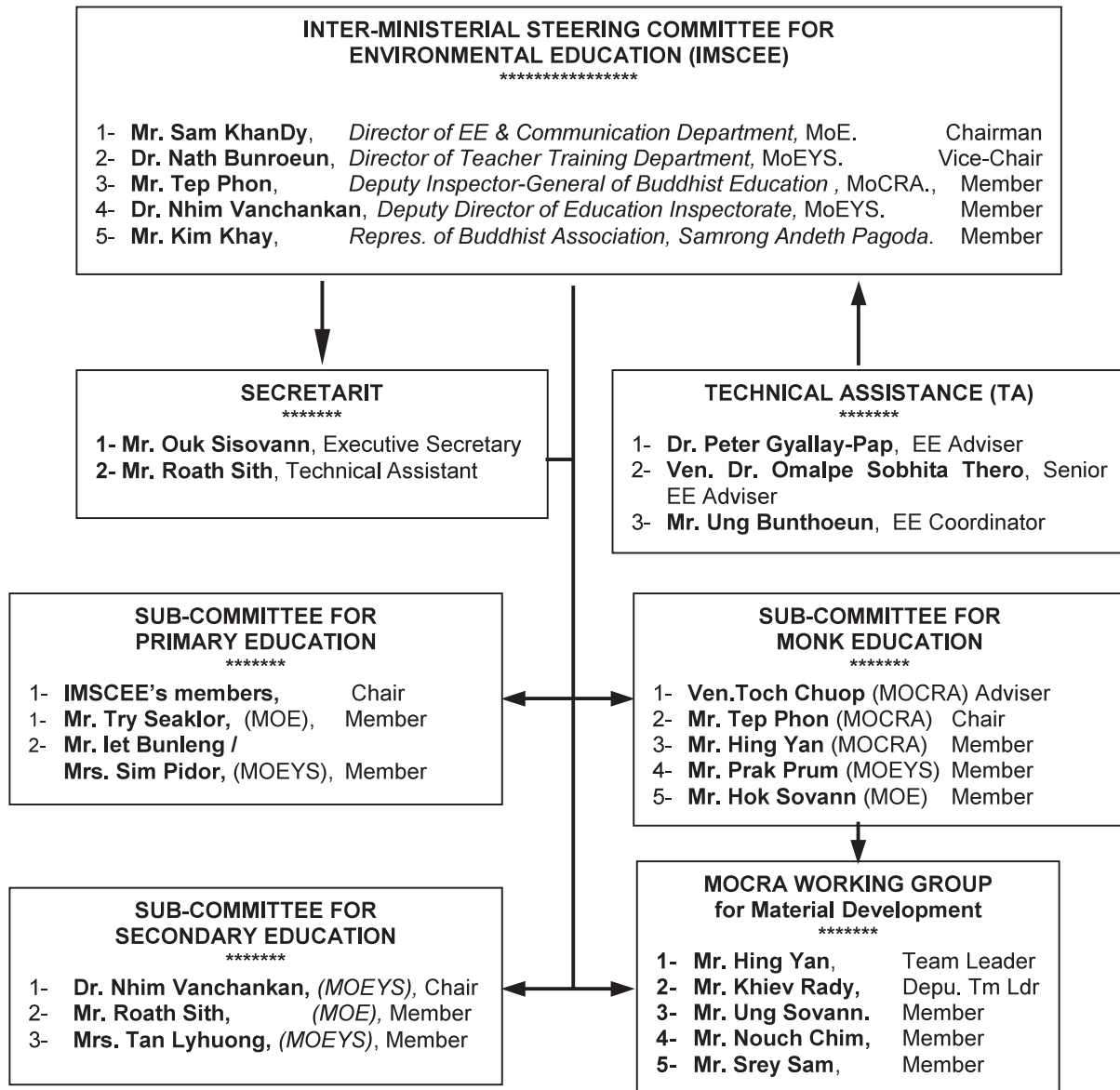
Particulars	Number of Schools	Disadv. Schools	Number of Classes	Classes in Pagoda	Enrollment		Repeaters		Teaching Staff		Non-Teaching Staff	
					Total	Girl	Total	Girl	Total	Female	Total	Female
<i>Whole Kingdom</i>	6,449	574	57,547	1,144	2,447,235	1,083,438	536,180	230,179	62,647	22,562	10,879	2,899
<i>By Area of Location:</i>												
Urban Area	1,094	39	16,255	211	718,415	316,044	122,967	51,158	21,337	10,246	4,954	1,935
Rural Area	4,605	417	37,602	831	1,576,190	699,177	371,1556	160,221	38,727	11,965	5,720	956
Remote Area	750	118	3,690	102	152,630	68,217	41,657	18,800	2,583	351	205	8
<i>By Type of School & Edn. Level:</i>												
- Pre-School	806	32	14,14	61	45,068	22,186	0	0	1,793	1,777	190	173
- Primary School	51,56	532	48,370	958	2,094,000	956,084	514,363	224,892	43,530	16,148	5,870	1,284
- College	355	10	3,506	125	127,247	42,186	10,102	2,412	8,114	2,015	2,221	572
- Lycee	132	0	4,257	0	180,920	62,982	11,715	2,875	9,210	2,622	2,598	870
- Lower Secondary Level	480	10	5,903	125	226,057	77,714	19,327	4,729	13,769	3,820	3,813	1,109
- Upper Secondary Level	132	0	1,860	0	82,110	27,454	2,490	558	3,555	817	1,006	333
Disadvantaged school (All Levels)	574	574	3,090	73	126,019	57,370	32,745	14,582	2,773	800	265	41

Source: Education Statistics and Indicators, EMIS Center, Department of Planning, MoEYS, 1999

8.3 Appendix 3: Organizational Structure of the Ministry of Environment



8.4 Appendix 4: Organizational Structure of the IMSCEE



8.5 Appendix 5: List of National and International NGOs in Cambodia

No	Organization	Abbreviation	Remark
1	Angkor Center for Conservation of Biodiversity	ACCB	
2	Biodiversity and Protected Areas Management Project	BPAMP	MOE's project
3	Cambodia Volunteer for Community Development	CVCD	
4	Center for Education and Development Agriculture in Cambodia	CEDAC	Government institution
5	Coastal Zone Management Project	CZM	MOE's project
6	Concern World Wide	CWW	
7	Conservation International		
8	Culture and Environmental Preservation Agency	CEPA	
9	Danish International Development Agency	DANIDA	
10	Fauna and Flora International	FFI	
11	Food and Agriculture Organization	FAO	
12	Japan Volunteer Conservation	JVC	
13	Lutheran World Service	LWS	
14	Mlup Baitong	Mlup Baitong	
15	NGOs Forum on Cambodia	NGO Forum	
16	Non Timber Forest Products	NTFP	
17	Osmoses	Osmoses	
18	OXFAM America	Oxfam America	
19	OXFAM GB	Oxfam GB	
20	Phnom Penh Pedagogy Faculty		Government institution
21	Royal University of Phnom Penh	RUPP	Government institution
22	Santi Sena Organization		Religious sector
23	Save Cambodia's Wildlife	SCW	
24	SEILA	SEILA	Government program
25	Soutien à L'Initiative Privée pour L'Aide à la Reconstruction des Pays du Sud-Est Asiatique	SIPAR	
26	The Cardamom Project		
27	United Nations Educational, Scientific and Cultural Organisation	UNESCO	
28	University of Fine Arts		Government institution
29	WildAid	WildAid	
30	Wildlife Conservation Society	WCS	
31	World Conservation Union	IUCN	
32	World Education	WE	
33	World Wide Fund for Nature - Cambodia	WWF	
34	Youth Resource Development Project	YRDP	