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## **Chevron Thailand and Environmental Education for Sustainability of Garbage**

### **Management: The Case of Twelve Allied Schools in Southern Thailand**

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## **Chevron and Environmental Education for Sustainability of Garbage Management: A Case of 12 Allied Schools in Southern Thailand**

### **Abstract**

Chevron Thailand Exploration and Production, Ltd.(Chevron Thailand)'s Corporation Social Responsibility (CSR) is to promote education of youth and environmental conservation in Thailand. Its target group includes 12 primary and secondary schools in its service areas of Singha Nakorn and City Districts in Songkhla Province, Southern Thailand. To solve garbage problems in the schools, a number of teachers and core-team students attended a workshop for participatory solid waste management skills in 2004.

Although Chevron Thailand had previously funded garbage bank projects and other activities in the schools, the achievements were minimal and short-term, due to a range of limitations at the individual and organizational levels. Consequently, Chevron Thailand decided to support action research to promote sustainable garbage management in the schools. A team of academics and experienced teachers worked together to assist 40 teachers to develop curriculum concerning garbage management to be integrated in subjects and activities from 2007 – 2008.

Qualitative research methods, including interviews and observations, were employed in the research. Through a process of consistently monitoring and supervising, as well as workshops to enhance the teachers' environmental knowledge and teaching skills, the project was able to achieve a high level of learning. Its contribution was significant to all the stake holders in the schools and their communities. Networks of the schools and their communities were strengthened through their interactive involvement in the learning process. The research finding is similar to the survey of environmental education in more than ten thousand schools in Thailand that factors contributing to the school success are the development of teachers' environmental education competence, support of headmasters and school policy, together with the teachers' voluntary mind and networking capabilities. Based on the author's engagement in environmental education and the promotion of education for sustainable development in Thailand, her recommendation is that Chevron Thailand moves its CSR forward from community investment and social marketing to enhance a model of eco-schools in the area due to strong partnerships of potential stakeholders.

**Key words:** Chevron Thailand, social marketing, community investment, environmental education, Southern Thailand.

This paper is based on my long-standing involvement with environmental education at the local and national levels, including the development of learning processes for participatory garbage management of 12 allied schools in Southern Thailand during 2004 – 2008. My research team created projects with sequential activities to promote knowledge, skills, awareness and behavioral changes in garbage management among teachers and students in 12 schools, as well as for their parents in nearby communities. The collaborative project was comprised of university academic and educational officials, a team of active primary and secondary school teachers, and Chevron

Thailand's community relations staff and supported by Chevron Thailand Exploration and Production, Ltd. (Chevron Thailand).

Qualitative research methods included focus group discussions, interviews and participant observations. A group of about 40 teachers were involved in the research process, which included workshops, school visits and discussions. This paper begins with a brief discussion of the concept of corporate social responsibility (CSR) at the global level, which is linked to the CSR trends in Thailand and at Chevron Thailand. An elaboration and analysis of the project's implementation and outcomes in Thailand highlight its CSR. This concept of CSR can potentially contribute to education for sustainable development. In my opinion, this is one of the most challenging global and national agendas for the 21<sup>st</sup> century.

### *Corporate Social Responsibility and Chevron Thailand*

Corporate social responsibility is the duty of a corporation to create wealth in ways that avoid harm and to protect or enhance social assets. Without precise and operational meaning, the term was commonly used in the 1960s in academic literature (Steiner & Steiner, 2006). Most definitions of CSR say it constitutes actions of enterprises which integrate societal concerns into their business policies and operations, including environmental, economic and social concerns. The minimum standard for enterprises is compliance with the law (UN Conference on Trade and Development, 2004). The originators of CSR tended to define the concept in terms of obligations to restrain corporate power within a pluralistic system, particularly in America. But its definition has evolved from the 1980s to 2000s to be a political process of societal governance and role setting.

The newer CSR literature from continental Europe, Asia, Latin America and Africa has very different definitions of CSR, including elements of legal obligation, political participation, and social development. These new trends differ greatly from the American model. However, the broadest and least controversial definition of CSR is that it is about the social obligations and impact of business in society. Beyond this, there is a great deal of contestation over the nature and extent of these obligations (Crane & Matten, 2007).

In 21<sup>st</sup> century a greater number of corporations in Thailand have focused on CSR. Diverse corporations have promoted their CSR activities in various forms, such as philanthropic charities for impoverished children, educational funds, healthcare programs, environmental projects and camps for children and villagers.

A number of organizations were established in Thailand to promote CSR. For example, the Thailand Business Council for Sustainable Development (TBCSD) was set up in 2006 to promote CSR for businesses in the country. In addition, the Corporate Social Responsibility Institute (CSRI) was established in 2007 by the Stock Exchange of Thailand (SET) to promote CSR awareness and performance among entrepreneurs in Thailand.

On the topic of the environment, the recent public awareness of global warming has resulted in more attention on CSR and the environment. According to a survey of business sectors, corporations which deal with energy and public infrastructure sections are most active in campaigning for the environment, including Chevron Thailand. It is because their productions and operations are directly related to the extraction of natural resources and the environment. Most of their centers are also located in communities. From their perspectives, environmental promotion is a win-win approach. Sponsoring environmental activities is part of the promotion of organizational images, contributing to the business investment and reducing risks of social pressures (Department of Environmental Quality Promotion, 2008).

Chevron Thailand Exploration and Production, Ltd. is one of the country's largest oil and gas producers. The company operates more than 180 platforms in the Gulf of Thailand and most of

its natural gas is used for electricity generation, serving one-third of the country's demand. The company has been involved in community activities around the country, and particularly in two locations where it has operating bases – Sattahip in Eastern Thailand and Songkhla in Southern Thailand. Chevron Thailand's CSR projects focus on "3Es" – education, environment and energy conservation. However, it is also noted that Chevron has been strongly criticized and legally charged for its ecological destruction and violation of human rights in a number of countries in almost all regions of the world, as well as in the USA (<http://www.wikipedia.org>, 2008)

*The 12 Allied Schools and the Environmental Learning Processes*

Chevron Thailand's base in Songkhla Province – a province on the coast line of the Gulf of Thailand about 800 kilometers southeast of Bangkok - is comprised of five stations with different projects. Due to its policy to take care of target stakeholders located within five kilometers of its station, the target area covers Singha Nakorn District where the Chevron Thailand's pier is located. The population of Singha Nakorn Subdistrict is about 40,000 or 8,000 households, most of which earn their living mainly from rice and fish farming, fishing and daily waging. Although the area is semi-rural, the communities are faced with the problem of increasing amounts of garbage, like almost all communities in Thailand. According to the Thai Department of Pollution Control (2008), the amount of garbage in 2007 in Thailand was 14.72 million tons or 40,332 tons/day. On average Thai people produce 0.65 kg of garbage a day. Only 15 – 22 per cent of garbage is reused, whereas the other 85 – 90 per cent has potential of reuse and recycling.

Due to the scale and seriousness of solid waste and hazardous waste in Thailand, representatives from a wide range of sectors all over the country suggested that solid waste and hazardous waste management is one of the most urgent and critical national agendas. In order to achieve sustainable development, the national administrative strategies (2007 – 2011) are to integrate systematic practices and operations of all concerned parties at policy making and local levels (Khaosa-ad, 2006).

According to the Regional Environmental Office # 16 (2008), the garbage in Singha Nakorn area is comprised of 60 % organic waste and 10 % recyclables. A participatory garbage management program at the household level could significantly reduce the amount of solid waste at the source. Examples of this are making compost and producing liquid compost from organic waste and selling recyclables.

The community relations staff of Chevron Thailand in Songkhla began working with coastal communities for mangrove reforestation in 2003. The Singha Nakorn municipality and community members stated that the increasing amount of garbage was one of the key environmental issues in the area. The staff search for the solution by identifying key stakeholders. Twelve schools - 2 secondary and 10 primary schools - were included in the project of participatory garbage management due to their locations in Chevron's service areas. The staff visited the school headmasters to discuss the project and the schools' participation. A few representative teachers were assigned from each school to be core-team members of the network of "12 allied schools". Their job was to coordinate the project planning and implementation in their schools. Some teachers were consistently and actively involved since the outset, whereas others did not play key roles and later left for different reasons. They were replaced with other teachers assigned by the school headmasters. The project is a collaborative effort of Chevron Thailand, the network of 12 allied schools and the Research Unit of Environmental Education (RUEE) in the Faculty of Environmental Management at Prince of Songkla University. This is the first university established in Southern Thailand and it is located about 30 kilometers from Singha Nakorn District.

The Faculty of Environmental Management is a graduate school focusing on interdisciplinary approaches to studying environmental management. It offers related courses to serve social needs for tackling environmental issues in the region.

From 2000 – 2006, the Faculty's Master's Program of Environmental Education played an outstanding role in producing graduates well-equipped with environmental education knowledge and skills to mobilize learning processes for schools and communities. It encouraged students to conduct action research to collaboratively promote environmental learning processes with concerned schools and communities to be part of local environmental movements. The students' dissertations were also sponsored by UNOCAL (Thailand), Ltd. (which merged with Chevron Thailand in 2005). (The faculty was restructured in 2007 by merging three Master's Programs and it does not play such an active role as in the past).

In these action research projects, one of the key environmental issues was participatory garbage management both at schools and the community level. Consequently, the faculty helped develop student experiences, skills and resources through dissertation supervision and networking with concerned parties. Due to an increasing demand for environmental learning processes, the faculty's RUEE was set up to serve social needs of environmental education activities and projects under the program. It also provided various opportunities for the students and graduates to practice and enrich their environmental education insights, skills and experiences.

In August 2004, with Chevron Thailand's sponsorship, my research team organized a day workshop for about 20 core-team students and a few teachers from each of the 12 allied schools to provide them with basic understanding, knowledge and skills in garbage management. Consequently, the participants took initiatives in planning a number of activities and projects about participatory garbage management in their schools, namely garbage separation, garbage bank (buying recyclables from students and selling them to junk shops) and composting and liquid composting (from organic waste). Chevron Thailand gave in-cash and in-kind support to the school projects, including garbage bins for separating, seed money for garbage banks and arranging study visits to schools with successful participatory waste management projects.

The projects were consistently implemented through 2005 in different styles depending on each school's conditions and potential. A number of active teachers took the initiative in involving students and parents in different garbage management activities. In the meantime, the core-team members of the twelve allied school learned to work closely together using their available time after working hours.

Meanwhile, a student of the Program was sent to conduct action research for his dissertation in one of the twelve allied schools with UNOCAL sponsorship in 2005. He worked collaboratively with a few core-team teachers and students to promote learning processes of participatory garbage management both in the school and its nearby community where no action concerning garbage management was ever taken. It was found that at the first half of the research project, the extent to which the school projects achieved the objectives was mediocre due to the teachers' time constraints and the school's involvement in excessive extracurricular activities in the first semester.

In contrast, apart from a 50-percent decrease in the garbage amount in the community, a number of housewives were voluntarily organized into a group after learning about the garbage management methods. They took action by promoting participatory garbage management activities in their community. With funding from the governmental organization, in 2006 they set up a small-scale community business to produce household products – liquid compost and multipurpose liquid made from fruit skins and soap made from agricultural products (Klangtaen, 2006). Until 2008 by networking with the school, the group remained active in promoting participatory garbage management methods to their community members, as well as disseminating the approaches to other communities and schools in the province.

In 2006 RUEE was invited to investigate the trend of sustainability of the 12 allied schools' projects. The researchers gained entry by setting up a small workshop for a number of core-team students in each school, as well as taking part in the activities organized by the twelve allied schools. Consequently, the schools were classified into three groups – high, medium and low - based on the levels of their potential and achievements.

The projects made different changes from zoning the school area into different parts for the students' tasks to setting up garbage management clubs and garbage banks. These different changes were due to factors relating to individual core-team teachers and different school policies and support of the headmasters

One of the key recommendations about the development of the project's sustainability was to promote the integration of the participatory garbage management approaches into the various school curriculum and student clubs. Chevron Thailand considered this and funded RUEE to put this into practice.

In 2007 the research team included other two members. One is a retired headmaster of a primary school who has long-term experience in promoting the participatory garbage management approaches in schools and communities; the other one is a senior educational official with long-standing experience in environmental educational supervision in schools. Two sequential workshops were organized to equip about forty teachers from the 12 allied schools with how to design a learning plan and a course for a student club – a compulsory activity for student development. They were to focus on the participatory garbage management approaches and how to evaluate the students' learning achievements.

The plan was comprised of ten topics, beginning from the composition and classification of garbage, its impacts on ecosystems and human beings, methods of participatory garbage management and the economic values of recyclables. They could be integrated into different subjects in both primary and secondary school curriculum, particularly science and social studies. Some of the topics could also be integrated in other subjects, including English language, hand crafting and occupational activities. The plan and the course were drafted by the participants based on their experience and creativity. In the first semester of the 2007 academic year, they were expected to employ the drafted plan and course in their classes. The research team members also visited the teachers in all schools to monitor their teaching and give them morale support. However, the teachers in most schools claimed that they could not fully implement the plan due to their time constraints as they were overwhelmed with excessive extracurricular activities in the first semester.

Then, the project was carried on to the second semester of the 2007 academic year. Two additional workshops were introduced in late 2007 to mid 2008 for the teachers to enrich their knowledge and skills of how to design a comprehensive learning activity with compatible evaluations. It was not surprising to find that most teachers had limited pedagogical and knowledge management skills. However, they were inspired with the workshops and expressed strong intentions to apply what they learned in their classrooms.

Consequently, after discussing with the teachers about their needs and limitations, the research team suggested to Chevron Thailand to incorporate another project. This would develop the teachers' pedagogical competence as well as motivate them to upgrade their teaching positions by creating an environmental learning innovation with the acquired competence. The learning innovation project was implemented in parallel with the learning plan project. This was in the form of organizing sequential workshops and small group discussions for the teachers to learn about how to create a learning innovation together with conducting classroom research to evaluate the learning achievements. They were held in line with the workshops to monitor the implementation of the learning plan and course.

At the beginning, about forty teachers showed keen interest. But after a while the number of active participants gradually dropped. The project ended with about ten determined teachers who painstakingly learned to formulate their research frameworks, conduct literature reviews, implement the learning plans, conduct classroom research, and write up their project reports to be submitted to the Ministry of Education. The approval of the Ministry on their innovation work will upgrade their teaching positions with a certain amount of monthly honorarium. In addition to the material incentive, the teachers concluded in a focus group discussion with the research team that they have acquired a great deal of significant pedagogical competence. This knowledge came through their learning processes of doing a lot of literature review, planning and working as planned, submitting their written pieces of work to the research team, receiving critical comments from the team, correcting the work, handing it in back to the team, over and over again.

It was a valuable learning opportunity for teachers who have been overwhelmed with routine errands and teaching timetables, though it was a struggle because of their limited time and capabilities. A number of them emphasized that the competence of creating learning innovations will be of great use to their students, as well as coaching other teachers who aim to develop themselves to be more competent teachers. This group of teachers became valuable resources for the development of pedagogical competence for their colleagues in the 12 allied schools. From the teachers' points of view, it is costly and difficult to obtain professional guidance from experienced educational resource persons to develop their work for the upgrading of teaching positions. In fact, the issues drawn from the project processes can be related to the overview of environmental education in Thailand.

#### *The Outcomes of the Learning Processes in the Contexts of Thai Environmental Education*

With regard to the implementation of learning plans and course projects, the final workshop highlighted a range of project outcomes. The basic level of project achievements in all schools includes 1) the strengthening of garbage banks which are incorporated into the student club activities in some schools. This brings about greater numbers of participants in the bank activity, as well as its sustainability. 2) The higher levels of garbage management involvement among students and school staff in terms of proper littering, garbage separation, and zoning for garbage pick-up among student groups caused higher degrees of cleanliness in the school areas. 3) The integration of the learning plan of participatory garbage management approaches into a number of subjects, especially science, social studies, hand crafting, and occupational activities for students varied with the conditions of the schools and the teachers. But at least the integration was evident in a few subjects in each school which also gives rise to the sustainability of the project.

Moreover, the project obtained cooperation from school food sellers to use environmentally-friendly food containers. In addition, the higher level of the project accomplishments in a few schools meant that the learning activities designed for students could promote the community's participation in the garbage issues by raising their awareness of the seriousness of the problem in their communities through the students. Methods of producing liquid compost made from organic garbage and the products were distributed to the students' parents and other villagers to promote the awareness and skills of garbage management. The villagers were also informed of organic farming using the compost made from organic waste in households. In this respect, the communities were gradually involved in the learning processes of participatory garbage management and gained benefits from the processes.

In addition, four schools located nearby a plot of mangrove forest and a canal collaborated to design a learning plan about the conservation of mangrove forests and canals to be integrated into

different subjects in their schools. The process involved a number of villagers in terms of planning for the forest restoration and making the forest a learning resource for both schools and communities.

In sum, the projects have significantly brought about different degrees of achievement in the schools, as well as their nearby communities. According to the core-team teachers, the cleanliness of school areas increased by 90 per cent. The students now are aware of how to consume with the least waste production and have linked their learning processes to their households. The teachers play a leading role in providing knowledge and skills of participatory garbage management approaches to their nearby communities and other schools. In some schools the implementation processes have been extended from the school to cover other environmental issues in the areas, particularly organic farming and natural resources conservation, though the extent of the outcome is different from one school to another.

A group of teachers are regularly invited to coach on the approaches to different organizations, communities and schools. The core-team teachers of all schools were asked to identify the percent of achievements of the garbage management projects in their schools by comparing the current conditions to the ones in 2004. Most of them indicated more than 70 per cent improvement.

However, there was a school with an obvious low degree of improvement in spite of the leading role of the core-team teachers in 2004 - 2006. The main cause was the change of the school headmaster from a supportive and understanding one to the one with his own personal agenda of promoting specific learning activities for the upgrading of his position. The original core-team teachers in this school resigned due to their conflict with the headmaster. They were replaced with other enthusiastic teachers, but they could not play an initiative role in school projects and could only comply with the headmaster's demands.

With reference to the above-mentioned cases and the variations of the project outcomes, I can make some conclusions about factors facilitating the project achievements. In addition to Chevron Thailand's in cash and in kind sponsorship, factors facilitating the project achievements include the development of the teachers' environmental education competence, the supportive role of the school headmaster, and the capabilities of the core-team teachers in coordinating with other colleagues and networking with the communities. It is evident from the three most successful schools that in addition to an increase in the teachers' environmental education competence, they were highly supported by their school headmasters by allowing them to put efforts into implementing the project, providing school resources for the project. The other school members were also motivated by the school executives to get involved in the projects as they are parts of the school policy.

According to the survey findings of 11,524 schools and qualitative research of about 100 schools in different regions of Thailand conducted by the Department of Environmental Quality Promotion, 53 per cent of the schools did not gain support for their environmental education activities. Almost all of the environmental education activities (99 %) were in the form of boy and girl scout projects. Problems and constraints in the promotion of environmental education in most schools include the lack of school policy and inadequacies of teachers' competence in environmental education and related teaching resources. In addition, the development of teachers' environmental education competence, support of the school executives and the school policy of promoting environmental education projects are identified as key factors of success in environmental education projects in schools (Laorith, 2006). A number of action research results conducted by the graduate students of the Master's Program of Environmental Education, Faculty of Environmental Management, PSU also highlight these issues in their analyses of the contributive factors of the achievements of the environmental learning processes in schools.

Regarding the characteristics of the enthusiastic teachers, the qualitative research findings also indicate the same points identified from the project outcomes. With their voluntary mind, the teachers have been actively involved in obtaining and managing new knowledge, particularly environmental issues, as resources for creating learning processes for their students. They are keen in building up good relationships with school colleagues, as well as promoting coordination and participation for the project implementation. For those with tight community networks, they tend to have vision and skills in relation to community development (Laorith, 2006).

In sum, the projects significantly developed the capabilities of the core-team teachers by engaging them in the ongoing learning processes of planning and implementing the plans of participatory garbage management in the schools and communities, as well as networking with their colleagues, concerned parties and community members. In addition to the garbage issues, the enhancement of their environmental education competence brought about innovative learning processes linking to issues of environmental conservation, organic farming, as well as sufficiency economy – an innovative philosophy recommended by the King - for their students and community members.

With reference to the model of learning proposed by Scott & Gough (2003), the learning processes - for both the core-team teachers of the 12 Allied Schools and the ones they took initiative for their students - moved from information (one-way transmission/instruction of learners) to communication (two-way exchange/engagement of learners) (Figure 1). In other words, a potentially powerful tool for communication concerning sustainable development is “social marketing” – an increasingly cited mechanism to help people adopt particular sustainable behaviors. However, its long-term evidence is not yet clear and certain. Therefore, Scott & Gough (2003) argue that in order to achieve capacity building for sustainable development, the learning process is to be mediation (multiple-way exchange/facilitation of learning). Such an approach of education for sustainable development necessitates a much further step of actions from all concerned partners and CSR in the years to come.

### *Chevron Thailand’ CSR and Education for Sustainable Development in Thailand: the Challenging Efforts of the 21<sup>st</sup> Century*

According to the six types of corporate social initiatives classified by Kotler & Lee (2005), Chevron Thailand’s contribution to the projects of the Twelve Allied Schools can be categorized as corporate social marketing due to its focus on campaigns for behavior change. In particular, the campaign efforts include awareness building and educational components. In alignment with recommendations for keys to success (Kotler & Lee, 2005), factors of the projects can be related to the keys as follows. It focuses on the issues of education and environment in line with Chevron Thailand’s 3Es focus. The projects are based on strong partnerships with organizations with common goals and interests, particularly the core-team members of twelve allied schools and the experienced academic and educational officials with environmental education processes. The development of collaborative partnerships has proven to be effective in addressing problems in education and other civic concerns.

Partnerships offer an effective model of shared responsibility in which businesses and the public and nonprofit sectors can draw on their unique skills to address complex social problems (Lawrence & Weber, 2008). With reference to a framework of an integration of corporate social and environmental responsibilities for promoting greater value (Clarke, 2007) (figure 1), the projects have highlighted Chevron Thailand’s CSR to the level of community investment. Given that Chevron Thailand takes further steps to take initiatives in promoting education for sustainable

development (ESD) in the twelve allied schools, it is likely that its CSR will move upwards to the level of creating new value of sustainable development in a schooling model.

In fact, corporate social responsibility is closely linked to the concept of “sustainable development”. In 1987, the Brundtland Report stated that the current model of economic development could not be sustained in the long term due to its depletion of natural resources and social degradation. It defined “sustainable development” as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The concept of being sustainable is based on three key components: environmental protection, economic growth and social equity. Consequently, at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, the leaders of over 100 countries adopted Agenda 21, a blueprint for achieving sustainable development in the 21<sup>st</sup> century. Transnational corporations were identified in Agenda 21 as playing a key role in the social and economic development (UN Conference on Trade and Development, 2004). Meantime, critics of transnational corporations have called for new laws and regulations to set standards for international operations. The efforts of the coalitions of international nongovernmental organizations (NGOs) and the UN contributed to the emergence of a new wave of global corporate social responsibility, particularly a set of 10 principles of global corporate citizenship (Steiner & Steiner, 2006).

Later on, the World Summit on Sustainable Development in Johannesburg in 2002 underscored the need to integrate sustainable development perspectives into educational systems at all levels, in order to promote education as a key factor for change. The General Assembly proclaimed the UN Decade for Education for Sustainable Development (2005-2014) in December 2002 (Wikenberg, et al. 2004). ESD is fundamentally about values, with respect at the centre: respect for others, including those of present and future generations, for difference and diversity, for the environment, and for the resources of the planet we inhabit.

ESD mirrors the concern for education of high quality, demonstrating certain characteristics, including interdisciplinary and holistic approaches, values-driven, critical thinking and problem solving, multi-method pedagogy, participatory decision-making, and locally relevant agendas. The DESD at the national level aims to provide an opportunity for refining and promoting the vision of and transition to sustainable development – through all forms of education, public awareness and training, as well as enhancing the important role of education and learning in sustainable development (UNESCO, 2008). International and national networks of ESD have been established in different regions of the world with a variety of plans and implementations of ESD approaches in schools. The School Development through the Environmental Education (SEED) network, which facilitated the European COMENIUS school partnerships for ESD, identifies three levels of school initiatives: the pedagogical level to create stimulating and meaningful learning experiences, as well as involving students in sustainable ways of thinking; the social/organizational level to build and cultivate a culture of communication and decision making, and developing a social climate of mutual recognition and respect; and the technical/economic level to be an ecologically sound and economic use of resources (Espinet, et al., 2005).

A school engaged in ESD is engaged in learning for the future, by inviting students and teachers to enter a “culture of complexity”, using critical thinking to explore and challenge, in clarifying values, reflecting on the learning value of taking action and of participation, revising all subjects and the pedagogy in the light of ESD (Breiting, et al., 2005). Similarly, with an emphasis on the term “learning”, by and between institutions, organizations and communities, Scott and Gough (2005) suggest that in order to facilitate the change in terms of the purpose and practice of learning in line with the process of sustainable development, there is a need for two factors. They are (1) new ways of conceiving and operationalizing learning with shifts in curriculum, pedagogy,

and in institutional management practice; and (2) novel approaches to the professional development of teachers, trainers and non-formal education across the field.

Ten countries in the South East Asian region collaborated in developing the ASEAN Environmental Education Action Plan 2000 – 2005 (AEEAP) to provide the framework for coordinated action on environmental education in all the ASEAN Member Countries (AMC). The plan was reviewed in 2002 in terms of the status of implementation at both national and regional levels, and the strategies of UN's DESD was also taken into account. Consequently, the Second Plan (2006 – 2010) focuses on strategies and actions in accordance with the ASEAN Vision 2020 aiming for a clean and green ASEAN with established mechanisms for sustainable development to protect the region's environment, sustain its natural resources, and maintain a high quality of life for its peoples.

For Thailand, the participatory process of drafting the Master Plan of Environmental Education for Sustainable Development (EESD) was completed in early 2008 and is in the enactment process. Due to the SWOT analyses of environmental education in Thailand, EESD in Thailand is still in the beginning stage of development. One of the strategies is to enhance the gradual development of EESD to provide alternative models of schools with ESD focus from the available resources. They include academic institutions with environmental education expertise, schools and teachers with some basic environmental education resources, strong partnerships and potentials, and large corporations with environment-related CSR experiences (Department of Environmental Quality Promotion, 2008). These supportive factors are also evident in the case of the 12 Allied schools and Chevron Thailand.

According to the author's involvement, such a strategy has been implemented since 2006 with the RUEE development of eco-school guidelines for the DEQP based on the concepts of ESD, covering the dimensions of school policy and administration, design and implementation of learning processes and resources, systems of school resources and environmental management, and networking and participation of stakeholders. In early 2008 forty pilot schools all over the country were included to be involved in the project of eco-school development in collaboration with the DEQP and a number of academics with EE expertise, including the author.

From the author and the academic team's perspectives and experiences, as well as the above-mentioned research findings about environmental education in Thailand, it will take a long time and great efforts of all concerned parties to achieve the common goals due to the bureaucratic constraints of governmental organizations and the budget limitations. Provided that Chevron Thailand takes the challenge of ESD promotion in relation to eco-school models as one of its alternative CSR in the 21<sup>st</sup> century, the environmental education resources of the 12 Allied schools in terms of the school policy and support of the school executives, the teachers' environmental education competence and networks of community and other parties, are of great value for the beginning of the development process of eco-school models. In fact, the learning process of collaboration among various levels of partners in developing the eco-school models in different contexts of Thailand will be invaluable knowledge for Thai society in the long run.

## References

- Clarke, T. (2007). *The Materiality of Sustainability*. In Benn, S. & Dunphy, D. (eds.) **Corporate Governance and Sustainability: Challenging for Theory and Practice**. New York : Routledge.
- Crane, A. and Matten, D. (2007). *Editorial Introduction*. Crane, A. and Matten, D. (eds.). **Corporate Social Responsibility Vol.1: Theories and Concepts of CSR**. London : Sage Publication Ltd.
- Department of Environmental Quality Promotion (2008). **The Master Plan of Environmental Education for Sustainable Development**. Bangkok : Department of Environmental Quality Promotion, the Ministry of Natural Resources and Environment. (in Thai)
- Espinet, M., Mayer, M., Rauch, F. and Tschapka, J. (2005). **Tools for ESD-Schools: Reflective Methods for School Partnerships on Education for Sustainable Development**. Vienna : Austrian Federal Ministry of Education, Science and Culture.
- Kaosa-ad, Mingsan (2007). **Approaches to Managing the Environment and Natural Resources of Thailand in the Next 5 Years**. Chiangmai: Social Research Institute, Chiangmai University.
- Kotler, P. & Lee, N. (2005). **CSR: Doing the Most Good for Your Company and Your Cause**. New Jersey : John Wiley & Sons, Inc.
- Lawrence, A. & Weber, J. (2008) (12<sup>th</sup> Edition). **Business and Society: Stake Holders, Ethics, Public Policy**. New York : McGrawHill/Irwin.
- Laorith, Nanthawan (2006). *Understanding Environmental Education Work in Thai Schools from Research Findings*. In Laorith, Nanthawan (ed.), **Decoding Environmental Education in Schools from Research Findings**. Bangkok: Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment. (in Thai).
- Klangtaen, Phongsathorn (2006). **The Process of Participatory Solid Waste Management from a School to Its Community: A Case Study of Wad Thammakose School and Thammakose Community, Tambon Sathingmor, Amphoe Singha Nakorn, Changwat Songkhla**. Unpublished Master's Thesis in Environmental Education, Faculty of Environmental Management, Prince of Songkla University, Thailand. (in Thai).
- Scott, W. and Gough, S. (2003). **Sustainable Development and Learning: Framing the Issues**. London and New York : RoutledgeFalmer.
- Scott, W. and Gough, S. (2004). *Introduction*. In Scott, W. and Gough, S. (eds.). **Key Issues in Sustainable Development and Learning: A Critical Review**. London and New York : RoutledgeFalmer.

- Soren, B., Michela, M. and Finn, M. (2005). **Quality Criteria for ESD-Schools: Guidelines to Enhance the Quality of Education for Sustainable Development.** Vienna : Austrian Federal Ministry of Education, Science and Culture.
- Steiner, G. and Steiner, J. (2006). (11<sup>th</sup> Edition). **Business, Governance & Society : A Management Perspective, Text and Cases.** New York : McGrawHill/Irwin.
- UN Conference on Trade and Development. (2004). **Current Trends and Issues.** New York and Geneva : the United Nations.
- Wickenberg, P., Axelsson, H., Fritzen, L., Helden, G. and Ohman, J. (2004). Introduction. In Wickenberg, P., et al. (eds.). **Learning to Change Our World ? : Swedish Research on Education for Sustainable Development.** (eds.) Lund: Studentlitteratur.
- Department of Pollution Control (2008). ([http://www.pcd.go.th/info\\_serv/waste\\_wastethai\\_47-48.html](http://www.pcd.go.th/info_serv/waste_wastethai_47-48.html), August 9, 2008 ([http://www.reo16.in.th/document\\_publicize/report\\_bookenv/reportenv\\_47\\_49/report\\_env\\_47\\_49\\_index\\_3\\_2.htm](http://www.reo16.in.th/document_publicize/report_bookenv/reportenv_47_49/report_env_47_49_index_3_2.htm), August 11, 2008).
- Regional Environmental Office # 16 (2008) ([http://www.reo16.in.th/document\\_publicize/report\\_bookenv/reportenv\\_47\\_49/report\\_env\\_47\\_49\\_index\\_3\\_2.htm](http://www.reo16.in.th/document_publicize/report_bookenv/reportenv_47_49/report_env_47_49_index_3_2.htm), August 11, 2008).
- UNESCO (2008). ([http://portal.unesco.org/education/en/ev.php\\_Id=232798&URL\\_Dd=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/education/en/ev.php_Id=232798&URL_Dd=DO_TOPIC&URL_SECTION=201.html), August 12, 2008).
- Wikipedia (2008). ([http://en.wikipedia.org/wiki/Chevron\\_Corporation](http://en.wikipedia.org/wiki/Chevron_Corporation). August 17, 2008).

Figure 1

Information, communication, mediation: contributions to capacity building

Source: Scott & Gough (2003, p.38)

