



United Nations  
Educational, Scientific and  
Cultural Organization



## Success Stories

### Environmental education in action: a story from the Tonle Sap Biosphere Reserve in Cambodia

by Keat Kunthea



© UNESCO/Keat Kunthea

In 1997, Tonle Sap Great Lake was recognized as the first Biosphere Reserve in Cambodia. The Tonle Sap Biosphere Reserve has an open lake at its center, a freshwater swamp forest surrounding it and seasonally flooded grasslands at its margins. The area is fed by the hydrological regime of the Mekong River. In the dry season, the submerged area is five times less than in the rainy season and the flood water reverses direction between seasons. Swamp forest is the most abundant habitat, which is critical for the ecosystem's productivity (fisheries) and biodiversity (particularly water birds and reptiles).

The least disturbed and botanically most diverse areas have been gazetted as core areas: Prek Toal (Battaming Province), Moat Khla / Boeng Chhma (Siem Reap/Kompong Thom Provinces) and Stung Sen (Kompong Thom Province). Prek Toal is critical for the survival of several species of endangered water birds, to which the key threat is large-scale egg and chick collection by villagers. Surrounding the core area lie several fishing villages comprising of 1,200 families which live on houseboats or in houses which float on bamboo rafts; an adaptation to the ebb and flow of the lake.

Osmose is a not-for-profit association linking community-based conservation, ecotourism and environmental education in Prek Toal. Osmose has been supported by UNESCO in Phnom Penh in many projects including: production of a poster depicting the flooded forest and plants of the Tonle Sap Biosphere Reserve, handicraft, and particularly, environmental education (EE). EE was initiated in 2000 when Osmose realised there was an increase in the child population and that education was therefore needed in order to protect their natural resources. Presently, there are three teachers who are working part time with Osmose. What follows is the story of an EE project, described by Miss Choem Pechrot, who has been working with Osmose for more than 10 years.

"I started working with Osmose in 2000 when I finished teaching grade six at a primary school in Prek Toal. I did not have a working contract in the beginning. I was working like a volunteer. My task

was to take children out of school to the office of environment in Prek Toal and to teach children about drawing pictures of animals, painting and playing games about natural resources. After six months, children were taught about protecting the environment, but we still did not have textbooks on the environment yet. There were between 10 to 15 children coming to the EE classes. The class was once per week and we provided them with lunch. Children were enjoying our one hour classes.

About one year later, in 2001, Osmose bought a floating school for classes in order to raise awareness of environmental issues. Furthermore, I received a work contract and salary. We continued to pick up children who did not go to public school. There was about 50 percent of children in the community who did not go to public school. However, since 2004/2005, more children attended public school.

We have two approaches for teaching. One, for two to three hours, we have indoor classes where we play games with cards which have pictures of different animals and ecosystems of the Tonle Sap on them. We also teach students with text books prepared by Osmose, information from training courses, and sections on the environmental found in a textbook produced by the Ministry of Education. The other are outdoor classes. Early on, we took around twenty children at a time to FAO's platform for environment education for children (Geckos), in Prek Toal. Since 2003/2004, we have organized study trips to see and observe a bird sanctuary where students could see different kinds of birds, animals, and trees and could better understand what they had learned in class. We also took students to see a floating garden so they could learn about how to build one and, lastly, we took them to see waste management so that the students could understand the impacts of throwing garbage irresponsibly.

Before the EE project; children, local people and I, did not know about the meaning of "Environment". And in the first few years, people did not fully know about the education activities done by Osmose in cooperation with the government environmental office in Prek Toal. Children's parents did not encourage their children to come to EE class because they thought that it was useless.

Presently, students have more knowledge of the environment. They now realise the illegal activities related to natural resources and the environment. Students even try to tell their friends and their parents not to poach and not to throw away waste irresponsibly. Students participate in collecting rubbish, especially in dry season. Their parents are also aware of the environment and they support their children in coming to EE classes because they have seen that their children have learnt about the environment and have gained literacy skills. Parents do not force their children to go fishing with them or do other works for making income. Moreover, local people are also aware of managing waste and do not litter as they used to.

To date, there have been about 1,200 students who have participated in our EE classes. Our new strategy is to work in partnership with public primary schools. EE teachers will go to teach students in their classes for a few hours per month. We expect that more students will learn about the environment.

Of course, education for children and raising awareness about the environment is important, but creating more job opportunities for local people living in Prek Toal is also necessary to sustain natural resources and the environment today. For example, Osmose's ecotourism and handicraft (weaving water hyacinth) projects provide extra income for local people, both men and women. And it contributes in reducing the exploitation of natural resources."

---

**Further information:**

- <http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=CAM+01&mode=all>
  - [http://www.unesco.org/new/en/phnompenh/about-this-office/single-view/news/new\\_educative\\_tool\\_on\\_biodiversity\\_of\\_the\\_tonle\\_sap\\_biosphere\\_reserve](http://www.unesco.org/new/en/phnompenh/about-this-office/single-view/news/new_educative_tool_on_biodiversity_of_the_tonle_sap_biosphere_reserve)
  - <http://osmosetonlesap.net/www/english/accueil.php>
- 

As lead agency for the UN Decade of Education for Sustainable Development (2005-2014), UNESCO promotes an education that allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future.

Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development.

It engages people through innovative ways of learning about biodiversity by focusing on education and training to address the interlinking issues of ecosystems and livelihoods, the interactions of nature with culture, society and economy, and the actions we can take without affecting our quality of life.

Biosphere Reserves are sites recognized under the UNESCO's Man and the Biosphere (MAB) Programme which innovate and demonstrate approaches to conservation and sustainable development. The Decade offers an opportunity to develop and enhance the concept of Biosphere Reserves as learning sites for sustainable development, and strengthen their education and outreach programmes.

\*\*\*

**Contact:**

**Section of Education for Sustainable Development**

esddecade@unesco.org

www.unesco.org/education/desd

---

With the kind support of

