

# WETLANDS CONSERVATION THROUGH EDUCATION AND RESTORATION IN SABAH, MALAYSIA

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## ABSTRACT

Sabah Wetlands Conservation Society (SWCS) is a Non-Governmental Organisation based in Kota Kinabalu, Sabah, Malaysia which advocates for environmental conservation and awareness of wetlands ecosystems found in the State of Sabah. Currently, SWCS is managing its only centre, namely Kota Kinabalu Wetlands (KKW) as the tool to achieve its wetlands conservation mission. It is located in the heart of the City of Kota Kinabalu within a 24-hectare mangrove swamp. A lot of efforts are being put to provide good facilities at KKW for the public to enjoy the nature and at the same time learning to appreciate its values. Since its official opening in March 2000 up to December 2012, KKW has received more than 130,000 local and international visitors. Environmental education (EE) programmes is one of the core activities in KKW. Apart from its own EE packages, SWCS is also committed with sponsored projects by government agencies and corporations. More than 34,000 students and 6,450 volunteers have participated in the EE programmes conducted by SWCS and Environmental Voluntary Works (EVW) at KKW since year 2003. When KKW was first established, mangrove replanting was the priority to restore the badly degraded mangrove swamp due to encroachment by illegal settlers in KKW. With KKW as the successful model, SWCS will embark on restoration of degraded mangrove sites throughout Sabah. Other activities by SWCS include water quality monitoring in KKW, developing networks with government and other agencies through involvement as committee member in Bornean Biodiversity and Ecosystems Conservation (BBEC) Programme and Sabah Environmental Education Network

respectively, and running of research studies and internship. Future perspectives of SWCS are to be a self-sustainable wetlands society with strong financial stability to run KKW. SWCS together with the relevant State Government agency, namely Sabah Biodiversity Centre, are currently working towards obtaining RAMSAR designation of KKW as Wetland of International Importance.

## **INTRODUCTION**

### **Sabah Wetlands Conservation Society**

Sabah Wetlands Conservation Society (SWCS) is a non-governmental organisation based in Kota Kinabalu City which advocates for environmental conservation and awareness of wetlands ecosystems found in the State of Sabah, Malaysia. Formed in August 2005, the vision of SWCS is “conservation and sustainable management of Sabah’s wetlands”. Derived from this vision, the mission of SWCS is to ensure protection and wise use of all wetlands in Sabah, through education, research and advocacy.

Sabah Wetlands Conservation Society has three objectives which are (i) to promote the conservation of wetlands in Sabah and the variety of plants, birds and other kinds of living organisms found in them; (ii) to raise public awareness and appreciation of wetlands and public involvement in protecting wetlands; and (iii) to manage Kota Kinabalu Wetlands as a model wetland centre for the purpose of conservation, education, recreation, tourism and research.

Sabah Wetlands Conservation Society is managed by a 17 Management Committee members that include community groups, governmental agencies and local NGO, thus forming a unique collaborative partnership meant to benefit the larger urban and suburban

Wong (30)

community of Kota Kinabalu. It took over the management of Kota Kinabalu Wetlands from Likas Wetland Sanctuary Management Committee (LWSMC) in January 2006 which was initially formed under the directive of Sabah Chief Minister back then in 1996 to manage Kota Kinabalu Wetlands. Most of the Management Committee members in SWCS are former LWSMC members volunteering in the society. Since its formation and up to December 2012, SWCS has 113 members.

### **Kota Kinabalu Wetlands**

Managed by Sabah Wetlands Conservation Society, Kota Kinabalu Wetlands (KKW) is a 24-hectare mangrove swamp located in the heart of the City of Kota Kinabalu. It was designated as a Bird Sanctuary in September 1996 and named as Kota Kinabalu City Bird Sanctuary. In 1999, it received another layer of protection when it was declared as State's Cultural Heritage Site for Conservation. The change of name from Kota Kinabalu City Bird Sanctuary to Kota Kinabalu Wetlands is to more accurately reflect its importance as a wetland ecosystem.

Kota Kinabalu Wetlands supports abundant aquatic life and other wildlife including more than 90 species of resident and migratory birds. It houses more than ten species of mangroves with *Rhizophora apiculata* being the dominant species.

A lot of efforts are being put to provide good facilities at KKW for the public to enjoy the nature and at the same time learning to appreciate its values. Since its official opening in March 2000 up to December 2012, KKW has received more than 130,000 local and international visitors from various countries such as Singapore, Japan, Korea, Australia, United Kingdom, United States, South Africa and India. As KKW is strategically located,

thus it is highly accessible and affordable for students, teachers, families and volunteers for appreciation of wetlands habitat.

## **ACTIVITIES**

### **Environmental Education**

Environmental education is one of the core activities in KKW since its establishment. Up-to-date, KKW has educated more than 34,000 local and international students, teachers and communities through its environmental education activities. World Wetlands Day is a highlighted event celebrated at KKW annually.

Kota Kinabalu Wetlands offers four environmental education programmes for schools and clubs as part of their complements to the school's curriculum or co-curricular activities. Package 1: Getting to know KKW includes of introduction to the centre and the variety of flora and fauna of the mangroves, whereas Package 2: Explore the Mangrove provides better understanding of the functions and importance of mangrove ecosystem. Bird-watching (Package 3: Birds of KKW) being the most attractive programme in KKW provides learning about the feathered animals at KKW. For study group who wish to be adventurous, walking in KKW's mud trail (Package 4) will provides experience of touching and get the feeling of going down to the mangroves.

In line with the Society's objective to raise public awareness and appreciation of the importance of wetlands, SWCS also approached corporations, government agencies and other non-profit organisations to financially support its environmental education projects. Corporate such as Toyota Motor Corporation, HSBC Bank, CIMB Foundation and Shell Malaysia are some of the strong supporters to SWCS's environment education and awareness programmes.

Governmental agencies and other non-governmental organisations such as Sabah's Ministry of Tourism, Culture and Environment, Ministry of Finance, Environment Protection Department, United Nations Development Programme, Keidanren Nature Conservation Fund (Japan) and Embassy of Finland also pledged funds for the environmental educational activities, and some included the construction and upkeep of educational facilities.

Kota Kinabalu Wetlands also approaches schools and communities through its outreach programmes. Exhibition, talk, distribution of brochures and factsheets, and environmental games are among the outreach interactive activities.

### **Mangrove Restoration**

It has been many challenging years for SWCS to restore the degraded mangroves and raising awareness among the public despite the society's unstable financial situations and facing various complications. When KKW was first established, mangrove replanting was the priority to restore the badly degraded mangrove swamp due to encroachment by illegal settlers in KKW. More than 10,000 seedlings have been planted in KKW by volunteers since year 2000.

The restoration activities were a success as evident now at KKW whereby the swamp is now mostly covered with mangrove trees. Massive replanting activity in KKW was brought to a halt in year 2008. With KKW as the successful model, SWCS will embark on restoration of degraded mangrove sites throughout Sabah. In 2009, SWCS has signed a joint-venture mangroves restoration project with a Japanese real estate company, Mullion Co. Inc., to plant 25,000 trees for 5 years. Later in 2010, SWCS signed a Memorandum of Understanding with Sabah Forestry Department to rehabilitate 7.4 hectares of degraded mangrove area at the

Sulaman Lake Forest Reserve, Tuaran, Sabah, Malaysia. Recently in October 2012, SWCS signed another joint-venture mangrove restoration project with a local investment holding company, Suria Capital Holdings Berhad, to plant 2,200 trees within a year.

Sabah Wetlands Conservation Society has faces many challenges in pursuing its mangrove conservation efforts. Besides vital funding to supports the planting and monitoring costs, mangrove restoration is also labour-intensive and time consuming. In spite of this, SWCS has been approaching groups of students, corporate staffs and individuals to volunteer in mangrove replanting activity.

#### **OTHER ACTIVITIES**

As environmental education and mangrove restoration being the core activities of SWCS, the Society also comprehends the need of Research and Development. Continuous monitoring the water quality of KKW was made possible with Environment Protection Department of Sabah. Through generosity of its donors, purchased of water quality probes and training of rangers were also made possible for water quality monitoring in KKW and SWCS's replanting sites.

Kota Kinabalu Wetlands provides an opportunity for many local and international students to conduct research and industrial training. Up to year 2012, there were 126 students been to KKW for research and industrial training which came from as far as Japan, Australia, Germany, Belgium and France.

Sabah Wetlands Conservation Society is a member of Sabah Environmental Education Network (SEEN), which is a network of people wanting to work together to enhance environmental education programmes in Sabah, Malaysia. For many years, SWCS

has involved in SEEN's programmes such as Environmental Education Race, a course to enhance teachers' knowledge on environmental issues and to encourage them to give more emphasis on environmental education within and outside their schools. SWCS is also a member to another local NGO known as Malaysian Environmental NGOs (MENGO) as well as an international NGO namely International Society for Mangrove Ecosystems (ISME). Apart of that, SWCS also supports government's environmental conservation initiatives and projects such as its involvement as committee member in Bornean Biodiversity and Ecosystems Conservation (BBEC) Programme, a joint project between JICA and the State Government of Sabah.

#### **WAY FORWARD**

Sabah Wetlands Conservation Society together with the relevant Sabah's governmental agency namely Sabah Biodiversity Centre, are currently working towards obtaining Ramsar Designation of KKW as Wetland of International Importance as well as to be a focal point or a centre to disseminate information about Ramsar and wetlands.

On the other hand, SWCS aims to be a self-sustainable wetlands society with strong financial stability to run KKW and other wetland centres in Sabah. SWCS is looking into spreading its wings to the east coast of Sabah by setting up a second wetland centre with probability in Sandakan.