

Sabah Wetlands
Conservation Society
(SWCS)

A Non-Government
Organization working on
Conservation of
Wetlands in Sabah

Established on
22 August 2005

OBJECTIVES

- ◆ To promote the conservation of wetlands in Sabah and the variety of plants, birds and other kinds of organisms found in them.
- ◆ To raise public awareness and appreciation of wetlands and public involvement in protecting wetlands.
- ◆ To manage Kota Kinabalu Wetlands (KKW) as a model wetlands centre for the purpose of conservation, education, recreation, tourism and research.

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Society)

Visit our Website:

www.sabahwetlands.org

Visit us today : Tue-Sun

(including PH)

8.00am–6.00pm

THE LIGHTNING BUGS: Beautiful bioluminescent beetles but will it survive?

INTERESTING FACTS ABOUT FIREFLIES

Fireflies, which often known as the “lightning bugs” are neither flies nor bugs. It is actually a bioluminescent beetles, which same as any other beetles they have hardened forewings called *elytra*. This forewings is what they rely for during flight and upon movement, they would rely on the hindwings. Underside of the abdomen, located a specialized light organs that glow in luminous flashes. Bioluminescent on the other hand, means the production and emission of light by living organisms.

Fireflies is known as the world’s most efficient light producers. Compared to light bulb, average light bulbs gives off



almost 90% of the energy as heat and only 10% as light thus the burnt effect is from the heat released. This is because they produce almost 100% light through the chemical reaction that occurs in the specialized organs.

Why would they lights up? The light is actually to communicate with each other. Male fireflies looking for mates by flashing a species-specific pattern to attract the females. An interested female would reply to the flash and helping the male to locate her where she’s perched. Did you know? Firefly can be identified based on their flashing beats.

Fireflies are bioluminescent throughout their lifecycles. They are bioluminescent from the eggs, larvae, pupae and up until the adult. Of course some fireflies are not bioluminescent however, mostly are.

Imagine being in a very dark place in a middle of a forest, then being surprised by thousands of synchronized low light flashes for a period of time. This phenomenon, as called by scientists, occurs in just two places; Southeast Asia and Great Smoky Mountains National Park, U.S.A.

WHAT ARE THE CONCERNS?

In People’s Republic of China, houses more than 300 species of fireflies and it is considered to be among the top places for fireflies watching in the world! Amazing eh? However, according to some reports on the year 2015, almost 10 million fireflies were harvested from the wild. 10 million guys! That was almost half of the population of Malaysia. What are they doing with the fireflies? Well, China harvested that enormous amount of fireflies for fireflies release during an event. Instead of releasing balloons and birds, they are using fireflies now. It is concerning as the fireflies are sensitive and adults fireflies actually don’t live long. They are very sensitive to any pollution and fireflies are known for a good bioindicator to measure the health of a river.



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Last two segment of the abdomen lights up, flashing bright yellow-green.

Resources:

Malaysian Nature Society, (2016), Malaysian Naturalist (Volume 72): *Lighting Up The Night, Adventure to the East Coast in Search for Congregating Fireflies.*, Page 24-25, 46 – 47, December 2016.

Environmental Activities in December 2016

MANGROVE EXPERIENCE PROGRAMME

1st Dec 2016:
Science of Life Studies (SOLS) 24/7,
Borneo Youth Development Centre



ENVIRONMENTAL VOLUNTARY WORK

3rd Dec 2016:
Tunku Abdul Rahman University College, Kota Kinabalu

21st Dec 2016:
Syonai-machi Yamagata, Japan and local volunteers



OUTREACH – PAPER MAKING DEMONSTRATION AND

10th–12th Dec 2016:
My First Green Step Carnival organized by Popular Book co. (M) Sdn Bhd



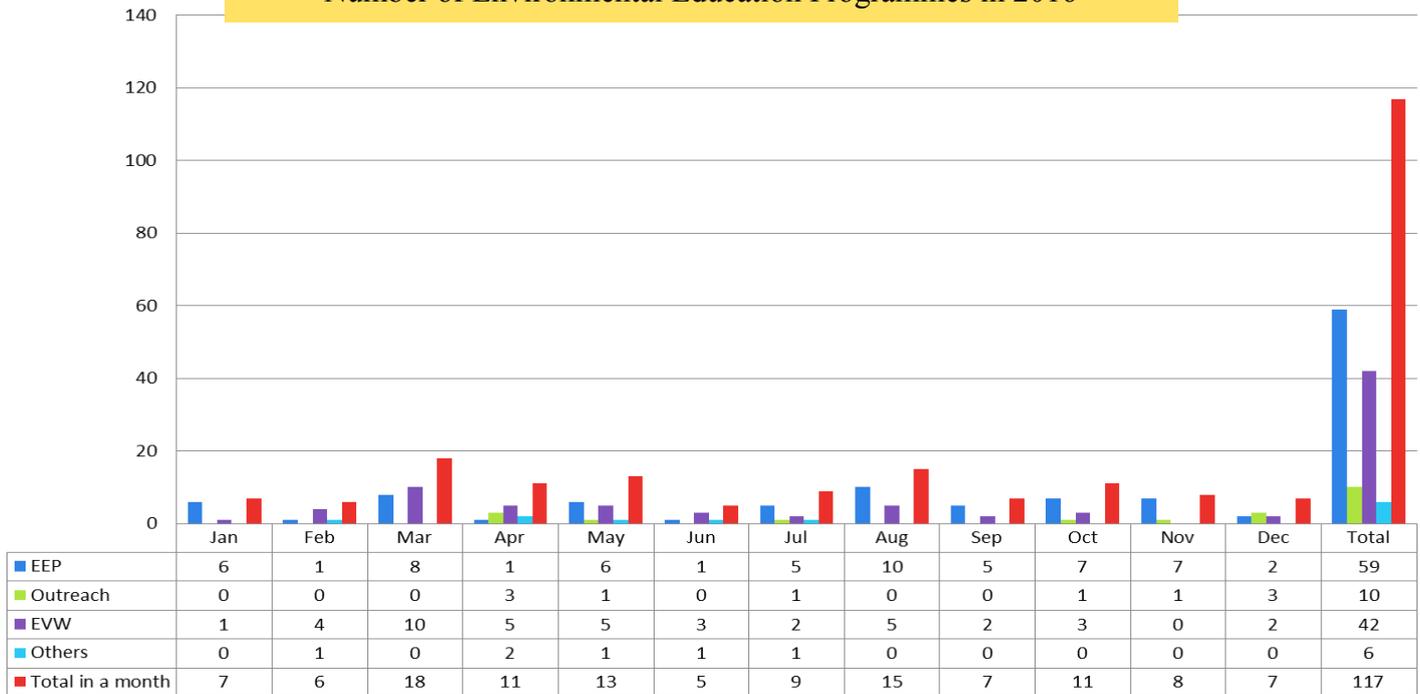
MANGROVE CONSERVATION EXPERIENCE PROGRAMME

23rd Dec 2016:
Petronas Carigali Sdn Bhd



SWCS ENVIRONMENTAL EDUCATION PROGRAMME IN 2016

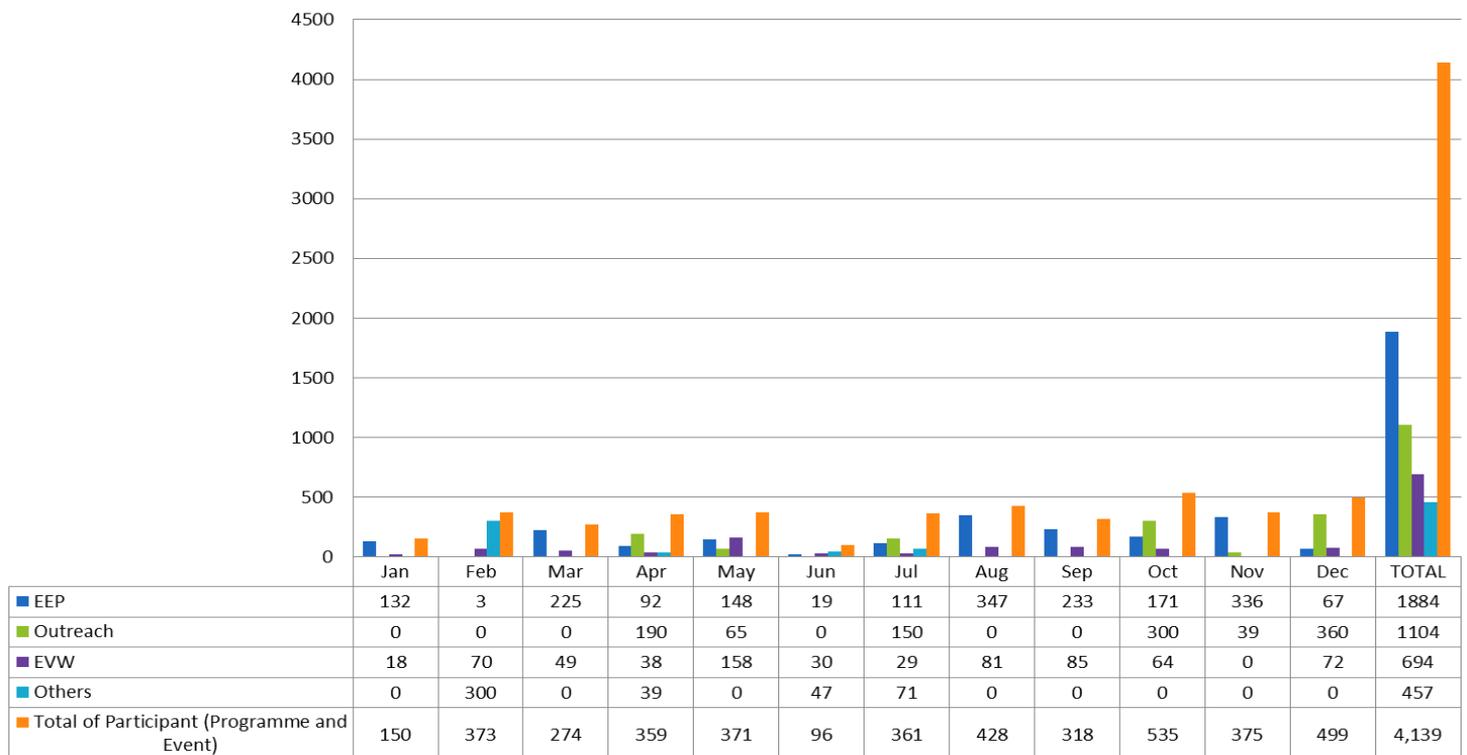
Number of Environmental Education Programmes in 2016



EEP: Environmental Education Programme, EVW: Environmental Voluntary Programme, Others: Events such as World Wetlands Day, Voluntary Guardian Activity and other CSR programmes.

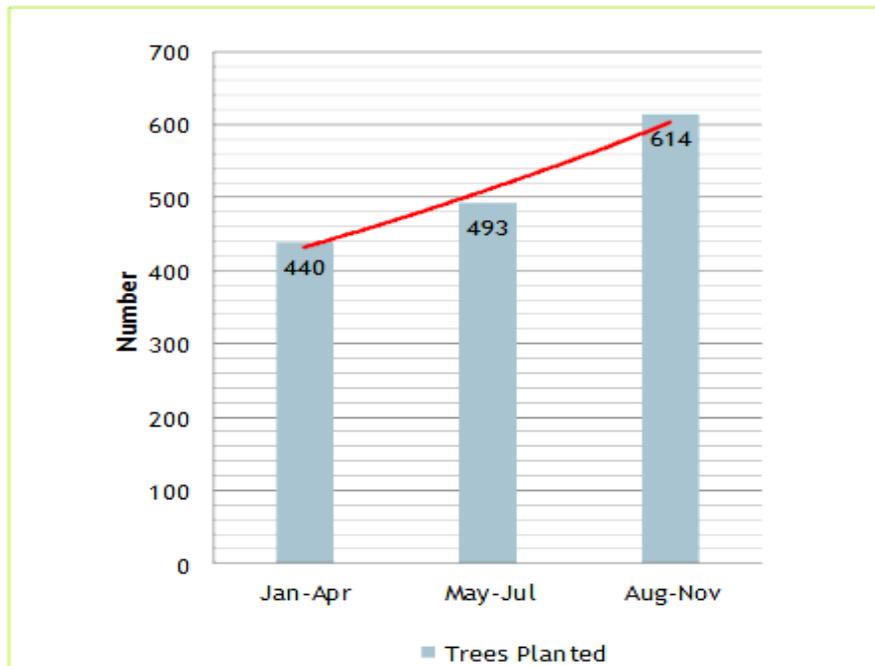
Graph 1 shows the recorded number of Environmental Education conducted by SWCS in the year 2016 which comprises of the 3 core programmes; EEP, EVW, Outreach programmes and others. The diagram shows the highest number of programme in March (18 programmes) which includes 8 EEP and 10 EVW. Over the year, the cumulative number of programmes shows the highest number of the programme is EEP (59), followed by EVW (42), Outreach (10) and Others (6). The total number of environmental programmes in the year 2016 is 117 programmes.

Number of Participant in SWCS Environmental Education Programmes in 2016



Graph 2 shows the recorded number of environmental education programmes conducted by SWCS in the year 2016 including the 3 core programmes which are the EEP, EVW, Outreach programmes and others. The diagram shows the highest number of programme in March (18 programmes) which includes 8 EEP and 10 EVW. Over the year, the cumulative number of programmes shows the highest number of the programme is EEP (59), followed by EVW (42), Outreach (10) and Others (6). The total number of participants for the whole year is 4,139 participants.

Numbers of Mangrove Trees Planted in 2016



Total Trees Planted in 2016: 1,547 mangrove trees

Graph 3 above shows the total number of mangrove trees planted in the year 2016 within the degraded mangrove area in Sulaman Lake Forest Reserve, Tuaran. The graph shows an increasing trend of trees planted throughout the year with the total number of 1,547 mangrove trees. The number of participating students and volunteers were also increased from the January to December.

Kota Kinabalu Wetlands

This is a 24-hectare mangrove forest reserve right in the heart of the city of Kota Kinabalu that has been designated as a State Cultural Heritage site since 1998. It is managed by SABAH WETLANDS CONSERVATION SOCIETY.

This environmental education centre on the site has been in operation since 2000. It has an administrative building with an exhibition hall, a 1.5 km boardwalk, a bird hide, observation tower and outdoor class room.

Benefits of Being Our Member



- As a member, you will be able to participate in members' events, enjoy free entry to Kota Kinabalu Wetland.
- Eligible for 50% discount for binocular rental*.
- Most importantly, you know you are helping this ecosystem to survive and provide essential services to it.

*Subject to change without further notice

What Can You do to Help?

- Be a member
- Be a volunteer
- Perform Environmental Voluntary Work
- Carry out Corporate Social Responsibility

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SUPPORT US BY JOINING OUR PROGRAMMES:

Environmental Educational

Programmes:

- KK Wetlands Mangrove Experience Programme
- Mangrove Conservation Experience Programme (includes tree planting in Tuaran)
- Handcrafting from Mangrove

Environmental Voluntary Work

(* Contact us for activity booking form)

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