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## Malaysia

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Left: Teachers and students dropping the mud balls into a monsoon drain near the school.

Right: Goh (in red shirt) briefing the students on how to use the mud balls.

Below: La Salle students making the mud balls.



Tackling environmental pollution

# School 'adopts' mud ball metho

## Special Report



Hotel staff tossing EM mud balls into a drain near the resort.

# Tossing mud balls for



Hotel staff tossing EM mud balls into a drain near the First Beach

### Avila Geraldine Samuel

**S**HANGRI-La's Tanjung Aru Resort and Spa (STAR) guests can now get a hands-on experience tossing mud balls in the effort to help create a clean water environment.

Being the first resort in Sabah to adopt and utilise the Effective-Microorganism (EM) mud balls, the project is implemented as part of the resort's Corporate Social Responsibility (CSR) and environmental initiatives to clean up bodies of water such as rivers, lakes, drains, etc where there are concentrated deposits of sludge and slime.

Its communication director, Tulip Noorazyze, said STAR adopted the mud balls method after knowing about its benefits from their sister property in Penang.

"As far as I know, we are the first in Sabah to do the mud ball programme and we have brought the concept to some of the schools in Kota Kinabalu.

"We approached Mesra Alam International Sdn Bhd, an environmental company who have been working closely with us in Sabah to assist in the demonstration and getting the ingredients for making the mud balls.

"The Penang Council also implemented this mud ball concept by throwing thousands of mud balls at the Gurney Drive waterfront," she said, recently.

It is said that tossing mud balls will help keep drains, sewers, and streams clean as they have been enriched with EM, a consortium of good microbes that can degrade pollutants that continue pouring into rivers.





Children getting their first hand experience in making EM mud balls.

## clean water environ



EM mud balls made by the children.

In Penang, Sungai Pinang and Sungai Mas are said to be less murky and smelly after thousands of mud balls were thrown in.

In Sungai Kelian in Tanjung Bungah, Penang, the transformation appears almost miraculous; after three months of mud ball treatment between March and June at the estuary, the metre-thick black sludge

"shading off, gradation" (rice bran fermented with EM and molasses) and EM that is mixed together and allowed to ferment.

"As a result the mud balls are enriched with EM and when applied to rivers or lakes will slowly break down, allowing EM to escape into the water.

"EM *bokashi* mud balls inhibit the growth of algae, and break down any sludge and silt in the water, resulting in clear and healthy water," explained Tulip.

In August last year, STAR tossed around 50 EM *bokashi* balls into the Tanjung Aru drains that lead to the ocean.

"Led by the resort's general manager, Andrew Steele, the mud balls were thrown into two drains at Zero Beach and close to the hawker stalls near first Beach in Tanjung Aru.

"As the mud ball can last only a week after fermentation, we have been making only small quantities of between 50 and 100 mud balls each time for the drains outside our resort. However we plan to do more mud balls with the schools," said Tulip.

She said mud ball project is only one of the programmes and STAR has a lot more initiatives from school adoption to water village adoption, adoption of underprivileged children and so forth.

The mud balls project is specially organised weekly for hotel guests and their children.

## Special Report

# Cheapest method to clean up rivers

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**T**his programme is part of the STAR Kids Club activity ... children love to play with mud and it is also educational. We have also demonstrated the concept to UiTM students, students from La Salle as well as Stella Maris at the resort," she said.

Tulip said the resort aims to make the drains cleaner and more pleasant as they are very visible to the public during their jogs by the beach and evening walks by the roadside.

"We have sent our water sampling of the drain (before we toss the mud balls) to Chemsain Path Laboratory and we will be sending our second water sampling to check on the improvement and the effectiveness of the mud ball usage."

She also said that STAR would be working

with its adopted schools to make 5,000 mud balls to throw into a river in its attempt to clean the river.

"So far, we have not tossed any mud balls in any river but we are planning to and Sembulan river is our target," she said, adding that STAR's adopted schools include SM La Salle, Sabah College, Institute Sinaran, St. Francis Convent Secondary School, Stella Maris and SK Tanjung Aru.

It is said that the mud balls project is a costly exercise but Tulip refused to comment on how much STAR has spent so far on the project. "We have not been billed yet, so I cannot estimate how much we have spent."

In a national newspaper article, it was reported that Johor had spent RM1.5 million on EM in the last two years and will spending another RM1.5 million this year.

See Lee Choo of EM admins, a consultancy in Penang, said the EM solution costs RM22 per litre and can be mixed to form up to 20 litres.

"Using EM technology is among the cheapest methods to clean up rivers ... and by relying on volunteers to make the mud balls, costs are further reduced."

The Sungai Kelian project had used up 40,000 mud balls and 12,000 litres of EM solution at a cost of RM100,000, which was covered by corporate sponsors.

For EM mud balls to work it should be continuously tossed into the river and without long-term viability, the river would revert to its polluted state.

In December 2006, the Drainage and Irrigation Department spent RM100,000 dumping EM mud balls into Taman Aman Lake in Petaling Jaya, Selangor.

However, it was not followed up with more mud balls treatment, causing the lake to revert to its previous condition.

Tulip said the mud balls project is STAR's own initiative without any support from the government or relevant department, adding that they are confident about the effectiveness of EM mud ball usage based on the results shown at places where the technique had been utilised.



Children working on their mud balls.



Tulip showing  
to make mud ball



UiTM student  
experience in



# School goes 'green'

## Students make mud balls to heal the environs

By RUBEN SARIO  
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**KOTA KINABALU:** Students of a secondary school here are learning how they can make a difference in helping to tackle environmental pollution.

SM La Salle is among the first few schools in Sabah to use the microbe-infused mud balls to treat water in drains around the school compound thanks to the know-how from staff of the Shangri-La Tanjung Aru Resort.

Since August, groups of La Salle students have been learning to make the mud balls at the resort that has "adopted" the school.

Since then, teachers and students have learned to make their own mud balls and began dropping them in the drains around the school last week.

La Salle cleanliness and school beautification co-ordinator Goh Siew Goh said this would serve as the basis of bigger things, with the school planning to make enough of *bokashi* mud balls to treat clogged drains and water-logged monsoon drains at the nearby Tanjung Aru town.

"Our students are learning that they can make a difference in cleaning the environment just by making these mud balls," she said.

Goh said the use of the mud balls had been proven to reduce water pollutants while improving water quality in rivers and drains.

She said the dense mud balls would sink into the sludge and the microbes would remove the ammonia in the water, thus reducing the foul smell in the drains and rivers.

Goh also said the mud balls were essentially made of *bokashi* or composted rice husks, mineral powder, effective micro-organisms, soil, molasses and sea salt.

She said the school bought the materials from local suppliers and the students had learned to make their own effective micro-organisms by fermenting *gula Melaka* (palm sugar) with the composted rice husks.

Based on the school's experience, the materials for making 100 mud balls would cost about RM144.

"Through this project the students are learning that it does not cost much to lend a helping hand to clean our environment," Goh added.



**Cleaning the earth:** (Top) SM La Salle students making the microbe-infused mud balls which were then tossed into the drains by teachers and students in Tanjung Aru recently (bottom).

