

Green Mission, Greener Vision

Building A Business With A Conscience



A Presentation by Trienekens (Sarawak) Sdn. Bhd.
"Your Powerful Partner in Environmental Management"

Trienekens is a service company working towards environmental protection



the Trienekens Group Mission Statement :

“We are responsible for
our Customers, our Environment
& Each Other”

Primary Areas of Operation



Kuching
DBKU / MBKS / MPP



Mambong
15KM from Kuching's city centre



Bintulu
BDA



CONCENTRATION AREA

EFFORTS

1. Environmental Preservation

- Tree Planting
- Public awareness & education

2. Environmental Education

- Support & participation
- “Wise Up To Waste”
- Recycling

3. Community Development

- Kuching / Mambong / Bintulu
- Philanthropy





Environmental Preservation

- Tree Planting
- Public awareness

Tree Planting activities



Participation in tree planting programmes organised by local agencies and organisations eg. Local Councils / other institutions

Tree Planting activities

Organising in-house tree planting activities, as well as for local agencies and organisations





Public awareness & education

Participation in ecological preservation and awareness programs by local agencies and organisations e.g. NREB / DOE / other institutions





Public awareness & education

Public relations campaigns on environmental awareness



THE AMAZING GREEN HUNT
Trienekens
"Greening The Earth, Conserving Our Environment"
a media appreciation event in support of Earth Day 2010



CSR Concentration environmental preservation



the Green Journal

A weekly information resource and guide to environmental management, energy efficiency, ecological conservation and green education.

Managing municipal solid waste - sustainable solutions through ISWMS

BY JULIYANU ABIT
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Municipal solid waste (MSW) typically includes waste generated from households, offices, shops, and other institutions with major components comprising of food waste, paper, plastics, glass, metal and alloys, besides construction debris and small quantities of hazardous waste like batteries, bulbs, automotive parts, medicines and chemicals. Last week, we took a look at the development of MSW management in Sarawak over the years, in particular the transformation that came with the implementation of the State's Integrated Solid Waste Management System (ISWMS) and how Trieneks revolutionized the collection process through variable frequency resulting in waste collection being more efficient and hygienic in its areas of service.

So where does the waste go? Trieneks (Sarawak) Sdn. Bhd., as the appointed operator to develop, implement and operate the ISWMS, carries the responsibility to collect, transport, treat and dispose of municipal and scheduled waste across the State. Today's article will explore the receiving end of collected MSW - Trieneks' Kuching Integrated Waste Management Park (KIWMP)' sanitary landfill and its compelling process.

The difference between an open dumpsite and a sanitary landfill. Prior to the opening of KIWMP in 2004, MSW in Kuching went to a 23-year-old dumpsite in Matang, some 23km east of the city centre. The Matang dumpsite has since been closed in-line with National Resources and Environmental Board (NREB)'s Environmental Guidelines for the Safe Closure and Rehabilitation of Municipal Solid Waste Landfills Sites in Sarawak.

Star-of-the-art, the Kuching Integrated Waste Management Park is the only of its kind throughout East Asia

The rehabilitated old Matang Dumpsite

In open dumps, refuse is left in low lying areas bathetically on open land. Such dumps are a hazard because of the potential for producing leachate (water generated by the waste) which may be flowing down or dew that has come into contact with waste, becoming runoff and direct breeding grounds, besides other general health and safety dangers.

A common misconception that many Kuching folk have of waste management is the assumption that all waste ends up in open dumpsites. In reality, open dumps of the past are at the most, a very distant relative of the technically-engineered sanitary landfills constructed in KIWMP. These modern sanitary landfills were designed to protect the environment by containing and isolating waste and required extensive planning, engineering by design, and rigorous controls, deposit collection systems, groundwater monitoring and gas collection equipment backed by stringent environmental observations.

The landfills in KIWMP were equipped with modern designed methods to meet environmental standards meticulously to meet environmental standards and while taking into account the locality and corresponding environmental climatic conditions, including the extraordinarily high amount of rainfall experienced in Sarawak, made the engineering of the landfill and its subsequent operations a challenge - the management of surface water and minimization of leachate being the key issues that needed to be addressed. Landfill leachate is a potentially potent polluter of soil and groundwater. In open dumps, the material that leached would be absorbed into the ground and potentially move into surface water, groundwater, or aquifer systems.

Construction of a landfill begins with an excavation of the necessary amount of soil and the preparation of the soil. If the natural subsoil is permeable to water, it is sealed with the help of appropriate measures. Thisals to minimize contamination, sanitary landfills have lower problems with odours with very robust flyng away. As soon as a landfill is full, it is carefully sealed. Occurring in several phases, a plastic covering can also supplement the various layers of natural barrier materials. A basic sealing system is constructed using impermeable natural materials such as clay, completing the multi-layer system. Alternatively, depending on the locally available and statutory regulations, other proven best sealing materials are used to best fulfill the requirements.

The purpose of well-designed and properly constructed best sealing system is to contain the highly polluted leachate and/or avoid any seepage into groundwater. Safely draining through layers of gravel and geotextiles in which perforated pipes have been embedded, the collected leachate runs down through multi-level leachate collection and treatment before being discharged to the environment in a safe quality.

Leachate treatment - advanced single-stage, multi-stage biological treatment process, with a polishing stage using activated carbon ensures that released water is safe for the environment. The picture at the far right shows the contrasting difference of treated leachate by different stages.

In our tropical region, decomposition begins much faster than in temperate Europe. Due to the nature of diverse waste, chemical reactions can occur in landfills over extended periods of time. Sanitary landfills are designed in such a way that gases and moisture can be drained off in a controlled fashion. Landfill gases mainly consisting of methane and carbon dioxide are produced by decomposition of organic MSW. In the sanitary landfill, an extensive pipeline system maintained under a vacuum removes these gases. The methane is alternatively flared off and can be used to provide thermal energy and electricity.

Trieneks' responsibility for nature and the environment continues even after operation of the landfill ceases. Once the last protective layer has been laid, reclamation of the entire expanse of the landfill begins. While vegetation benefits, regular watering of the drainage and degeneration system ensures safe conditions of the former site. Groundwater is continuously tested, ensuring that natures are still safe.

MSW management is an integral part of the urban environment and planning of consequent infrastructure development to ensure a safe and healthy urban environment while considering the promotion of sustainable economic growth. Trieneks' facilities for MSW disposal management, from landfill engineering, construction and licensing, to interception of leachate generation and its treatment, besides controlling methane release from waste decomposition take into account all fully environmental impacts by fully regulating the pollution of air, water and soil. Continuous economic growth, urbanisation and industrialisation are, however, just expected to fuel a further steady increase in volume and complexity of MSW unless changes in attitude and habits are made. It is the company's vision that eventually, waste treatment and waste prevention approaches and education will develop a truly sustainable Sarawak.

In the sanitary landfills, an extensive pipeline system maintained under a vacuum collects gases. The methane is subsequently flared off and can be used to provide thermal energy and electricity

NEW SARAWAK TRIBUNE

THURSDAY, JULY 20, 2011

Dear Reader,

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Each week, our guest writers will contribute articles covering topics ranging from environmental management systems, facilities and processes, to energy efficiency, ecological conservation, green education, related human-interest stories, issues surrounding sustainability, and more. Also included are fact-facts and green tips related to the featured topic we hope you'll find informative and insightful.

The Editor
TRIBUNE TWO
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Municipal solid waste - Frequently asked questions

Household:
 Where can I collect my Mobile Garbage Bin (MGB) / wheel bin?
 Bins can be collected at Trieneks' Logistics Depot (Monday to Friday from 8.00 am to 6.00 pm).

What documents should I bring when collecting the wheel bin?
 Plans being along the following documents for verification purposes:
 -Utility bill either MESCO, Telekom or KWA (HDA)
 -House ownership bill or Sale & Purchase agreement for new houses
 -Identity Card

What should I do if I lose my wheel bin?
 Kindly contact Trieneks' hotline for the necessary action and lodge a police report immediately. A copy of the police report will be obtained for a replacement of the wheel bin and a minimal administrative charge will also be applicable. Failure to provide a police report will result in the full price of the bin being charged to the tenant.

How should I pack excessive household waste?
 Excessive household waste which can't fit into the wheel bin should be properly packed in biodegradable garbage bags, tied up to prevent exposure to rainwater, sunbake and pests such as flies, rats, etc, and placed next to the wheel bin for collection.

How can I dispose of my green garden waste, bulky electrical appliances, and broken furniture, renovation waste, etc?
 Normally, a separate collection date will be arranged for the collection of these waste. Trieneks' Helpline Assistant will advise you on the exact collection date. Charges may be applicable depending on the volume and nature of waste. Call 082-612300 (Kuching) or 086-235959 (Bintulu) for more information.

Commercial:
How can I apply for a bigger bin or more collection frequency?
 Request for bigger bins or additional collection frequency will be assessed on a case to case basis, and is only applicable to commercial entities. A request form has to be completed which requires approval by relevant local authority before being submitted. Such request are only applicable for commercial waste, and disposal of bulky items like wood, metal, stones are strictly prohibited from using these bins. Call 082-612300 (Kuching) or 086-235959 (Bintulu) to arrange for a site assessment.

How do I dispose of bulky items?
 For disposal of bulky items or even construction waste, call 082-612300 (Kuching) or 086-235959 (Bintulu) to arrange for an inspection.

What should I do with the bins if I move?
 All bins should not be removed as bins are registered to the address. New tenants are required to ensure that previous tenants have not removed the bins.

How much does it cost to rent a container?
 Prices per container depends on volume of waste, size of container, type of waste, length of container usage and manpower requirement. Special waste like used oil, chemicals or paint waste are considered as hazardous waste, and needs to be collected separately. Call 082-612300 (Kuching) or 086-235959 (Bintulu) for more information.

the Green Journal

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Earth's drying well ~ controlling and preventing water pollution

BY DEANG-SHIBRY NAZRA
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Water is essential as all living organisms. With two third of the earth's surface covered by water and the human body consisting 75% of it, water is arguably the most precious natural resource that exists in our planet. Water regulates and redistributes through evaporation, making it seem inexhaustibly renewable. However, the fact is only 1% of water in the world is usable. Approximately 97% of the earth's water is only sea water while 2% is frozen in glaciers and polar ice caps.

Water provides the Earth with the capacity of supporting life. An organism doesn't have to be told how imperative water is to their endurance. An amphibian such as frogs lays their eggs in water and even mosquitoes seek water in which to lay their eggs. Sadly, the only organisms that doesn't appreciate the importance of water enough is humankind, especially in industrialized and developing countries. Although we as humans recognize this, we continue to disregard it by polluting our ecosystems, rivers, lakes and oceans. The assumption that water is plentiful makes it often taken for granted, abused and allowed being repaired without a thought of care. Subsequently, we are slowly harming our planet to the point where organisms are dying at a very alarming rate. We have largely forgotten our custodial responsibilities to ensure sustainability so that future generations may live and prosper. In order to combat water pollution, we must understand the problems and become part of the solution.

Sarawak is fairly well-off in water resources - in fact water has been a basis for the socio-economic development of not just the State, but throughout Malaysia over the past decades. Lately though, water pollution has become an issue that has changed from one of relative abundance to scarcity. Population growth and urbanization, major structural transformation moving from agriculture to manufacturing-based economy and industrialization are demands for natural resources, besides contributing to rising pollution levels. Development cannot confer lasting profits unless environmental considerations and related ecosystems are declared as integral parts of development planning and decision making. The way forward to a progressive and sustainable future is to keep developing at a level that is within the carrying capacity of the river basin while protecting and restoring the environment. In addition, formulating appropriate policies and programmes are also crucial to ensure development proceeds hand in hand with management of the environment.

Water pollution occurs when a body of water is adversely affected due to the addition of large amounts of contaminants to the water. Two types of water pollutants are: point source and non-point source. Point source of pollution occurs when pollutants are emitted directly into a watercourse whereas a non-point source delivers pollutants indirectly through environmental changes. Generally, controlling non-point source is more difficult than controlling point source pollution. Pollution arising from non-point sources accounts for a majority of the contaminants in rivers, streams and ponds. Polluted rivers, as we all know, affect the health of living organisms including plants, animals and human beings. According to data from Ministry of Natural Resources and Environment, there has been a consistent deterioration in the water quality of rivers throughout the country, and the Ninth Malaysia Plan 2006-2010 has set aside a huge allocation for river reformation. The Ministry of Natural Resources and Environment has also classified eight Sarawak rivers as polluted, with one of them being the Batang River in Miri.

Logging activities is a major factor that contributes to deterioration in turbidity, and suspended solids (TSS) and dissolved oxygen (DO) levels in the main rivers of Sarawak. Such activities not only pollute water resources but also require massive costs to restore. Realizing this, the government has since as early as 1974 taken concrete steps by introducing an enabling legislation called the Environmental Quality Act 1974 under the administration of the Department of Environmental, with two standards of effort quality of Standard A and Standard B. After following this, effluent that is discharged upstream of a water supply intake should meet Standard A while effluent that is discharged downstream has to meet Standard B. The main objective is to prevent, abate and manage pollution through the quality of the environment in this country so that future generations will continue to enjoy a healthy living environment, even with the nation's development. The key to curb water pollution can therefore be said to be enforcement and monitoring of programmes in place: environmental awareness, education and communication; river pollution prevention and water quality improvement programmes; Cleaner Production (CP) and Environmental Protection Assessment (EPA).

In support of environmental protection and awareness, Trieneks (Sarawak) Sdn. Bhd. conserves and manages its water resources to ensure adequate and safe water for the country. The company's initiative in achieving the key objectives towards a better water future is through managing water resources efficiently and effectively addressing aspects of both quantity and quality with top class wastewater treatment technology. Surface water and groundwater monitoring done quarterly by a third party professional body is just one of Trieneks' efforts to protect and detect water quality changes and identification of potential pollution sources. Water samples are collected from designated stations for tri- and ex-ortho analysis to determine its physico-chemical and biological characteristics. The Water Quality Index (WQI) is used as a basis for assessment of a watercourse in relation to pollution load categorization and designation of classes of valuable uses as stipulated in the National Water Quality Standards for Malaysia (NWQS). In addition, effluent that discharge from the Kuching Integrated Waste Management Park (KIWMP) facility is also sampled on a daily basis and tested to ensure that it meets the standard requirements. Leachate water from landfill is treated biologically and chemically before being released. Further analyses are carried out as part of a monitoring programme to ensure efficient operations of treatment process.

Discharged effluents from KIWMP are mainly regulated under the Environmental Quality (Control of Pollution from Solid Waste Transfer Station and Landfill) Regulations 2009. Regular reviews on the requirements of non-compliance, discharge conditions and prevention in treatment systems have served to improve environmental control and have abated pollution particularly in COD parameters. Stringent monitoring by the Department of Environment to the premises requires a written approval by the Director General as a prerequisite for the changes of any structure that affect the source of effluent discharge, for the installation of an effluent treatment facility and for the modification of an existing source of effluent that is expected to result in a change of its effluent quality and quantity.

Trieneks has also taken a holistic approach in promoting environmental awareness largely through formal and informal education, wide distribution of environmental information through environmental publications, seminars, workshops, conferences and through mass media. In short, public awareness of the environment can be seen as the ultimate solution to environmental pollution problems. With appropriate discipline, concern and awareness, most of these detrimental impacts can be eliminated so we can enjoy and preserve the utility and beauty of our environment.

next week... "AIR: Environmental pollution, control and prevention"

NEW SARAWAK TRIBUNE

THURSDAY, NOVEMBER 17, 2011

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Controlling and preventing water pollution

There are solid and defensible techniques in existence that can help to control water pollution, but in order for them to work, we must be aware of what they are, why they are important and how to properly enact them.

Tips on reducing water pollution:

1. Control water pollution in your home by using non-toxic soaps, detergents and cleaning products. Refrain from the use of chemical fertilizers and pesticides on your lawns and gardens. Always dispose of paints, motor oil, gasoline, antifreeze and other harmful chemicals in accordance with local laws and safety regulations.
2. Protect groundwater, which is critical for drinking water, irrigation systems and natural ecosystems. If you are using chemicals that may be harmful to the environment, store them correctly. Improperly stored chemicals can slowly seep into the groundwater system, so keep them in tightly sealed containers, inside of structures with cement floors, to avoid groundwater contamination.
3. Prevent polluted runoff and soil erosion. Polluted runoff is caused when rain washes toxic pollutants into surface waters from sources that include city streets, farms, or logging and mining sites. Plant bushes and trees along roads and natural water sources. The roots of trees and bushes can slow the speed of runoff and erosion, protecting surface water.
4. Take initiative to inform others about the harmful effects of polluting water sources. Throwing rubbish into drains (over seas is one of the most common reasons for water pollution).
5. Report water pollution concerns to local authorities. Remember, littering and indiscriminate waste dumping is against the law!

Public health through cleanliness

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Wind of change ~ controlling and preventing air pollution

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Pollution is nothing but the resources we are not harvesting. It either flows to rivers because we have lost control of the water, or it becomes rain. It is a human error.

As we all know, air pollution is a global environmental problem that has become a major concern for many countries. Air pollution is the presence of substances in the atmosphere that are harmful to the health of humans and animals, or damage to the environment. Air pollution is a major cause of global warming and climate change. Air pollution is also a major cause of acid rain and smog. Air pollution is a major cause of respiratory diseases and other health problems. Air pollution is a major cause of environmental damage and degradation. Air pollution is a major cause of global environmental problems.

What are the major components of air pollution? How do we know whether our air quality is good?

Air pollution is the presence of substances in the atmosphere that are harmful to the health of humans and animals, or damage to the environment. Air pollution is a major cause of global warming and climate change. Air pollution is also a major cause of acid rain and smog. Air pollution is a major cause of respiratory diseases and other health problems. Air pollution is a major cause of environmental damage and degradation. Air pollution is a major cause of global environmental problems.

How can we control and prevent air pollution?

There are several ways to control and prevent air pollution. One way is to reduce the amount of pollutants that are emitted into the atmosphere. This can be done by using cleaner technologies, such as renewable energy, and by improving energy efficiency. Another way is to control the amount of pollutants that are emitted from vehicles. This can be done by using unleaded gasoline, and by maintaining vehicles properly. A third way is to control the amount of pollutants that are emitted from industrial facilities. This can be done by using cleaner technologies, and by improving air quality monitoring and enforcement.

How can we improve air quality in our communities?

There are several ways to improve air quality in our communities. One way is to plant trees and other vegetation. Trees and other vegetation can help to absorb pollutants from the atmosphere. Another way is to use public transportation, carpooling, and walking or biking. This can help to reduce the number of vehicles on the road, and thus reduce the amount of pollutants that are emitted. A third way is to use energy-efficient appliances and light bulbs. This can help to reduce energy consumption, and thus reduce the amount of pollutants that are emitted from power plants.

How can we encourage others to take action to improve air quality?

There are several ways to encourage others to take action to improve air quality. One way is to educate them about the benefits of clean air. This can be done by using social media, and by holding community events. Another way is to encourage them to use public transportation, carpooling, and walking or biking. This can help to reduce the number of vehicles on the road, and thus reduce the amount of pollutants that are emitted. A third way is to encourage them to use energy-efficient appliances and light bulbs. This can help to reduce energy consumption, and thus reduce the amount of pollutants that are emitted from power plants.

How can we monitor air quality in our communities?

There are several ways to monitor air quality in our communities. One way is to use air quality monitors. These monitors can be used to measure the concentration of pollutants in the atmosphere. Another way is to use air quality index (AQI) reports. These reports provide information about the current air quality in a given area. A third way is to use air quality sensors. These sensors can be used to monitor air quality in real-time, and can be used to trigger alerts when air quality is poor.

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Environmental Education

- Support & Participation
- “Wise Up To Waste”
 - Recycling

CSR Concentration | environmental education



Environmental education

Participation in external programs

environmental education “Wise Up To Waste”





Recycling activities

- Office recycling program
- Recycling program for Schools





Community Development

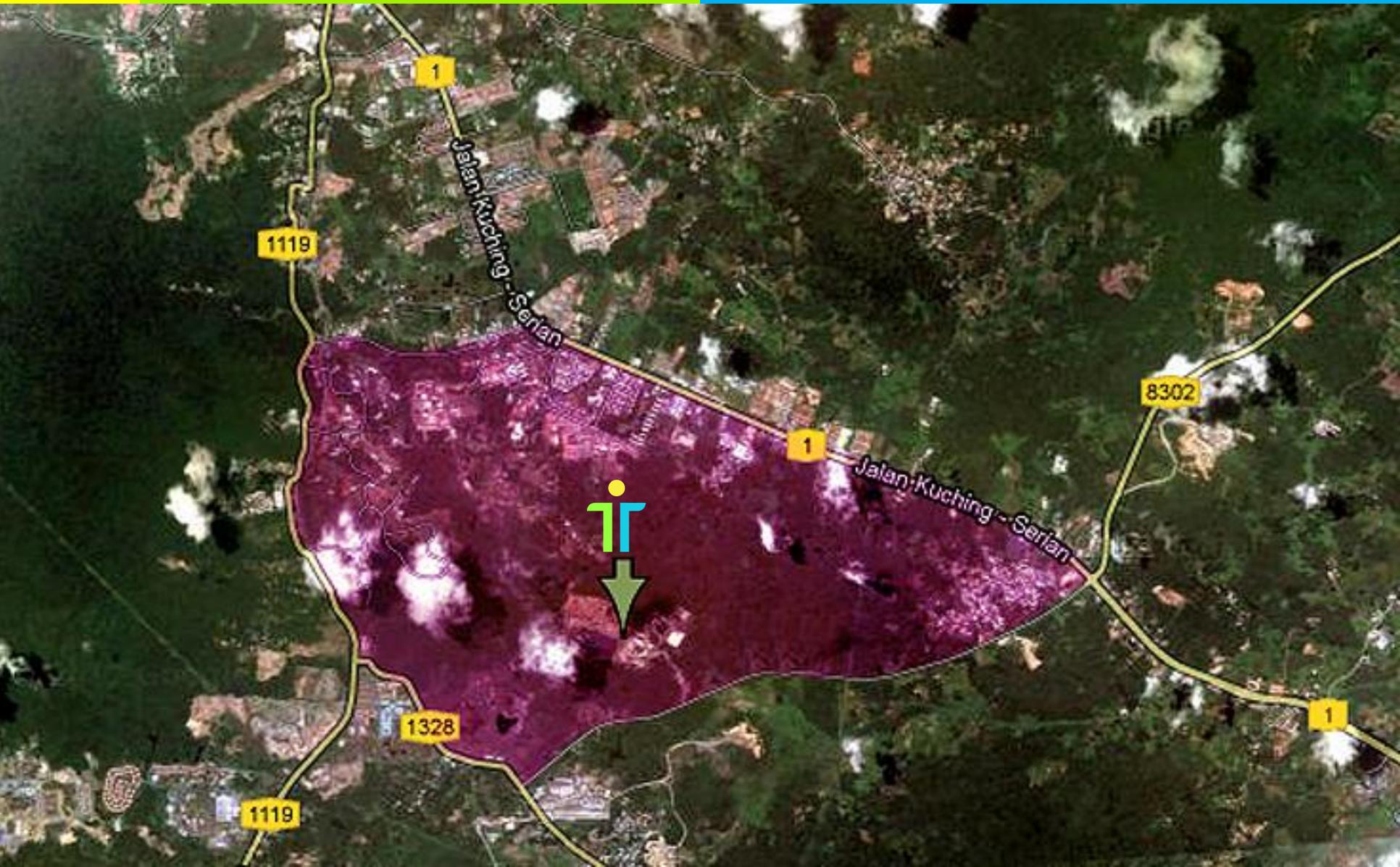
- Kuching, Mambong, Bintulu
- Philanthropy



Public Health & cleanliness

MANGKILAH PANTAI KITA

ANJURAN BERSAMA RAC UNIMAS & KVCHING & TRIENEKENS



CSR Concentration | community development



Kampung Mambong



CSR Concentration | community development



Kampung Seratau





Bintulu
(case sample) Kampung Sg. Plan



CSR Concentration | community development



Philanthropy
donations & sponsorships



CONCENTRATION AREA

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1. Environmental Preservation

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- Public awareness & education

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- 1. Corporate Mission.**
- 2. Annual plan & budget.**
- 3. Localized area of concentration.**
- 4. Employee engagement.**
- 5. A common goal.**

Contact Information



**“Your Powerful Partner In
Environmental Management”**

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