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Sustainable Development Initiatives in Malaysia

MALAYSIA PRODUCTIVITY CORPORATION



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Preface

At the turn of the century, there have been intense cries for the human race to address the issue of global warming and the impending melt down of earth! Are these mere lip services or anybody, somebody yet nobody's issue? Are we doing our bit to save the environment? In relation to this, MPC undertakes the initiative to share, inform, update and remind ourselves of our responsibilities in taking care of Mother Nature and understanding the environment that we live in. The global focus is now on sustainable development. This is a crucial factor as we all strive for continuous productivity, quality and competitiveness.

Sustainable development is pursued so that we all can have a preferable future that includes a cleaner environment, a sustained level of economic development without excessive waste and pollution, and the protection of natural resources and biodiversity. To achieve this, we need to develop a sense of citizenship in the sustainable development process through the delivery of quality education, a reappraisal of our core values systems, and the empowerment of communities to make their own decisions on the future that they want to see - both for ourselves and our children. At individual level, each one of us could contribute to a better environment such as taking public transport, cycling, walking, using energy efficient items, recycle wastes and changing our lifestyles! At the organization level, the ever-increasing demand for products and services is taking a toll on the environment. Exploitation of resources and manufacturing by-products are increasing the stress on the natural world. As consumers, we also tend to eat too much and use too much energy and water. Along these processes, we also produce too much food and waste products!

With these in mind, MPC has conducted research on sustainable development initiatives in four organizations to understand their green practices. The four organizations that have participated in this research initiative are Panasonic Malaysia, GE Malaysia, GreenTech Malaysia (PTM) and Toyota Malaysia. This report also shares on the views of these companies towards sustainable development.

Chapter 1: Understanding Sustainable Development

1.1 Introduction

The 1992 United Nations Conference on Environment and Development or “Earth Summit” that was held in Rio de Janeiro, Brazil had established Agenda 21. The Agenda 21 contains the blueprint for sustainability in the 21st century. It is also a commitment to sustainable development as agreed by many Governments of the world. This Agenda, monitored by the International Commission on Sustainable Development, addresses the development of societies and economies by focusing on the conservation and preservation of the environment and natural resources. Through this Agenda, everyone has roles to assume to achieve sustainable development as well as involved in the process of deciding on the environment that affects all of us. Accordingly, to record any success stories of sustainable development, issues must be tackled on local, national, and international level where nations must work towards solutions agreeable by all and to protect the integrity of the global environmental and developmental system.

Besides, the United Nations Population Fund has noted that world population had grew from 1.6 billion to 6.1 billion during the course of the 20th century. During that time, emissions of Carbon Dioxide (CO²), the leading greenhouse gas grew 12-fold. With worldwide population expected to surpass nine billion over the next 50 years, environmentalists are worried about the ability of the planet to withstand the added load of greenhouse gases and their impact on eco-systems. Environmental think tank Worldwatch Institute says the over-riding challenges are to curtail climate change and slow population growth. Success on these two fronts require other challenges such as reversing the deforestation of Earth, stabilising water tables, and protecting plant and animal diversity more effectively.

1.2 Defining Sustainable Development

The Antarctica ozone hole was discovered in 1985 by British scientists, Joseph Farma Brian Gardina and Jonathan Shanklin. They realised that this was due to the build-up of **chlorofluorocarbons (CFCs)** – chemicals used in aerosol sprays, packaging and air-conditioning systems. One molecule of CFC can remove up to 100,000 ozone molecules. Life on the planet will not be sustainable if the ozone layer is destroyed because damage caused to plants will severely reduce the global food supply. International action has been taken to relieve the problem. The 1987 Montreal Protocol required countries to take steps to eliminate CFCs and other substances that cause ozone depletion. If CFC levels are reduced considerably, particularly in the developing world, the ozone layer will probably fully repair itself by around 2050. Agenda 21 suggests that ozone layer can be viewed as a vital resource for life, and should be protected for the achievement of sustainable development. As such, sustainable development means inculcating the process of maintaining human needs while preserving the environment for future generations. It also means we must use the available resources efficiently so that they will be available for many years to come. Brundtland Commission that coined the term defined sustainable development as meeting “the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). This is important because failure to do so would bring about problems to others and reduce each other’s ability to create new things.

The underlying issue of sustainable development is that companies must move beyond mere “green” that indicates relentless pursuit of short-term profitability towards long-term sustainability. According to Werbach (2009, p.3), “society increasingly holds global businesses accountable as the only institution powerful enough to respond at the scale of the challenges that our planet faces. There is no multinational Government but there are many cross-border corporations that witness how resource constraints affect markets, customers, communities and natural habitats. This situation gives companies special opportunity to lead.”

Chapter 2: Sustainable Development Initiatives at Panasonic Malaysia Sdn Bhd

Panasonic was first established on 29 March 1976 under the name of Matsushita Sales & Service Sdn Bhd (MASCO) producing home appliances and audio visual products under the National brand. Panasonic Corporation based in Osaka, Japan, is a worldwide leader in the development and manufacture of electronic products for a wide range of consumer, business, and industrial needs. In 1992, MASCO was renamed National Panasonic Malaysia Sdn Bhd (NPM) promoting National brand for home appliances and Panasonic brand for audio visuals. On 1st October 2003, NPM was officially called Panasonic Malaysia Sdn Bhd (PM) promoting one brand Panasonic for all products range. Panasonic Malaysia Sdn Bhd is operating as a sales, service and marketing company for the Panasonic brand of electrical and electronic consumer products ranging from home appliances, air conditioners, business systems & solutions, telecommunications, professional broadcasting cameras, digital cameras, audio-visual, health and beauty care to batteries and lightings.

As a manufacturer of electronic products, Panasonic takes responsibility on the importance of preserving the natural environment that sustains life on earth for future generations. Mr. Cheng Chee Chung, Panasonic Associate Director of Consumer Product Marketing shared on Panasonic Malaysia's green sustainable activities for the public especially the 'eco ideas'.

Sustainable Development and Eco Ideas

Sustainable Development is an effort to save the natural resources through efficient usage of electricity, water and paper from our daily activities. Panasonic Malaysia are also encouraged to manage daily activities including business activities from hazardous substances, emission of carbon dioxide (CO₂), disposal of wastes, safety and health. The awareness should go to everybody and everywhere which engage society to carry out the green environment. Through this effort, Panasonic Group leads the way with 'eco ideas'.

'Eco ideas' is originally initiated by the Panasonic group in Japan. This global direction is inculcated by implementing and projecting Panasonic as a manufacturer of electronic products while preserving the natural environment for sustainability of the future generation. For future products, Panasonic takes initiatives to produce environmental friendly products that minimise noise and air pollution as a continuous effort to enhance the logistics-related activities. At the same time, the principle of 'eco ideas' is also to educate and train employees as well as to ensure that the Panasonic plant is environmental friendly.

The practice of 'eco ideas' in Malaysia started in October 2008. Since early 2009, Panasonic Malaysia has embarked as an organisation-wide showcase on 'eco ideas' to introduce Eco activities to the nation. There are three main parts or declarations on 'eco ideas': Eco ideas" for Products which produce energy-efficient products, "eco ideas" for Manufacturing which will reduce CO₂ emissions across all their manufacturing sites, and lastly "eco ideas" for "Everybody, Everywhere" to encourage the spread of environmental activities throughout the world. 'Eco ideas' for products are crucial to make products energy-efficient that facilitate the convenience and comfort of a modern lifestyle. These three declarations centred on reducing CO₂ emission globally, factory energy conservation, and reducing wastes from factories. Examples of the clear environmental performance of the 'eco ideas' products are:

- (i) Washing machine – saving 110 liters or using 70% less water in every wash due to the front-load technology as well as 20% less electricity with the Intelligent Inverter Technology;
- (ii) Refrigerator – uses 40% less electricity through the Intelligent Inverter Technology that uses only the exact amount of power needed;
- (iii) Air conditioner – the Intelligent Inverter Technology coupled with "Eco Patrol" enable up to 60% energy savings on air-conditioners with precise power adjustments and compressor that maintain a set temperature for comfortable airflow and reduce energy consumption; thus cutting CO₂ emissions; and

- (iv) An almost 80% energy savings of the Panasonic energy saving bulb compared to the normal bulb through the Inverter Ballast Technology that lasts 15 times longer.

'Eco ideas' for manufacturing promote various activities that reduce environmental impact in manufacturing processes starting from product planning and design to production, distribution, sales and recycling. The ideas emphasize on the reduction of CO₂ emissions globally, factory energy conservation and waste from factories. 'Eco ideas' for "*Everybody Everywhere*" emphasize on sustaining life and existing in perfect harmony with the environment. As an initiative for the third 'eco ideas', Panasonic Malaysia has adopted an area in Perhentian Island, Terengganu, for marine conservation project to preserve one of nature's endangered resources. The aim is to create coral reef garden through artificial reefs.

Other sustainable development activities in Panasonic Malaysia

After the introduction of 'eco ideas' in October 2008, Panasonic Malaysia have taken a step further to heighten this activity. In 2009, this initiative does not only focus on the Panasonic employees, they also share this awareness with the public especially children. The use of an elderly lady as the mascot is to "drive home" the advice on "*Mottainai*" – a Japanese expression that means "what a waste!". "*Mottainai*" is when something of value is being wasted or used without careful consideration.

This concept was promoted by [Kenyan](#) environmentalist Honorable Professor [Wangari Maathai](#) who was awarded the [Nobel Peace Prize](#) in 2004, and who educates children not to waste. Using the same concept of "Mottainai", Panasonic Malaysia have conducted our corporate responsibility activities for pre-school children to embrace 3: "[Reduce, Reuse, Recycle](#)". Panasonic Malaysia also promoted "Mottainai" concept through their products and also in recent eco exhibitions.

Challenge(s) in promoting sustainable development in Panasonic Malaysia

The most challenging task is the pricing of environmental-friendly products. To produce environmental friendly products is costly as consumers have to pay higher for these products compared to the non-environmental friendly products. Apart from that, there is still the need for people to change their lifestyles and acceptance to things that are more environmental friendly. The changing of mindset to be eco-conscious must be continuous. There must be a concerted effort from individuals to group and to society before we can have a full “green” cycle.

Contributions to green the environment

Panasonic Malaysia is involved in many environmental related initiatives to help conserve the environment in various aspects. Some of the environmental friendly efforts include Go Green Campaign, Computer Recycling project, and World Forestry Day sponsorship. Basically, the sustainable development practices at Panasonic Malaysia focus on 4Rs: reuse, reduce, recycle and respect. The campaign for the 4th R, **respect** that emphasizes on the respect for nature, the respect for the environment, and respect for the elderly will soon be launched. The company takes all these initiatives as their CSR (Corporate Social Responsibility) which includes educating the young in schools through the Mottainai Grandma learning activities.

Chapter 3: Sustainable Development Initiatives at General Electric in Malaysia

General Electric (GE) is a 132-year old American grown company that is driven by its four pillars strategy: **Be Global** (*connects locally, scales globally*), **Drive Innovation** (*leads with technology and content innovation*), **Build Relationships** (*grows customer and partner relationships worldwide*), and **Leverage Strengths** (*use GE's size, expertise, financial capability, and brand*). GE began its presence in Malaysia in 1975. Within a span of 35 years, GE has invested more than RM1billion and the employer to more than 1200 Malaysians through GE Infrastructure, GE Healthcare, as well as GE Consumer and Industrial.

In the aspect of GE infrastructure, the company's presence can be noted in the areas of aviation, commercial aviation services, traditional and renewable energy systems, oil & gas, transportation, as well as water and process technologies. The company has built its business cooperation with TNB, Petronas, KTM and the local water authorities. The cooperation can be seen in the local infrastructure developments, equipment supplies and technical expertise services.

In GE Healthcare, the local private and public hospitals have value-added their services through GE's diagnostic imaging equipment and health care information systems. Through the commitment on **Early Health™** and the theme "*Healthcare ReImagined*", GE has opened up their opportunities for medical practitioners in Malaysia to leverage technological and biological breakthroughs to transform healthcare delivery from treating "late disease" to a focus on "early health". Among the partners of GE Healthcare in Malaysia are University of Malaya Medical Centre, Penang General Hospital, Ministry of Health (MOH) Putrajaya Hospital, Universiti Sains Malaysia, Sunway Medical Centre and Subang Jaya Medical Centre.

As for GE Consumer & Industrial, and it have been in Malaysia since the early 1970s. GE Consumer and Industrial is a synergy of the previous GE Lighting, GE Appliance, and GE Electrical Distribution & Control businesses. Some of the products that we can associate with are GE refrigerators, freezers, washing machines, microwave ovens, room air-conditioners as well as water filtration, softening and heating systems.

Sustainable development to GE

In helping businesses grow profitably and responsibly, GE has been propagating **Ecomagination**. What this means is that, while “GE facilitates the needs of business by providing products and services that improve the bottom line for our customers, we are also helping the world by reducing the effects our products have on the environment. Be it turbines that harness wind power or purification systems that create fresh water from the sea, GE provides solutions that protect the world that we live in. This is sustainable development to us.”

Ecomagination concept

In addressing the dynamic global needs, GE has decided on proactive measures through ecomagination. Ecomagination was launched in May 2005. This concept is about business initiative to help meet customers’ demand for more energy-efficient products and to drive reliable growth for GE. Ecomagination also reflects GE’s commitment to invest in a future that creates innovative solutions to environmental challenges and delivers valuable products and services to customers while generating profitable growth for the company.¹

The support for sustainable development at GE is through ecomagination. Some of the initiatives undertaken are:

- Increase revenues from ecomagination products;
- Double investment in R&D;
- Reduce Greenhouse Gas (GHG) emissions and improve the energy efficiency of GE’s operations;
- Reduce water use and improve water reuse; and

¹ 2008 ecomagination Annual Report

- Keep the public informed.

Through the first initiative above, GE has increased its ecomagination portfolio from 17 products in 2005 to more than 80 products in 2008. This progress brought about an increase of revenues by 21% reaching USD17billion in 2008. In terms of R&D, GE has increased the investment in cleaner technologies from USD750million in 2005 to USD1.4billion in 2008. In addition, GE has also reduced GHG by about 13% in 2008 compared to the 2004 baseline. Accordingly, GHG and energy intensity have been reduced by 41% and 37% respectively compared to 2004. In May 2008, GE has planned to reduce freshwater consumption by 20% reduction by 2012. This aim is being carried out through desalination where seawater is converted into drinkable water. In addition, GE has been keeping the public informed of its ecomagination progress through numerous channels such as ecomagination website, global conferences, stakeholder events, as well as public-policy engagements. Besides, in walking the talk, GE's Greenville facility in South Carolina, uses solar panels for power.

Sustainable development activities at GE

In strengthening environmental awareness and implementations among employees, the company has inculcated the policies into its business practices with set targets. As for the public, GE has ongoing discussions, dialogues, and communications on the Ecomagination efforts. The company has the website www.ecomagination.com where the public can learn more about GE ecomagination. GE also engages the public through advertisements that focuses on Smart Grid, GE's vision for a more efficient and sustainable electrical energy grid, as well as through sponsorships in the Olympic Games and the Asia Basketball League (ABL).

At work, GE have achieved improvements by having recycle bins in each division, using GE's Energy Savings lights throughout the office, using one out of two CF tubes in the entire office and operating the air-conditioning during office hours only. Through volunteerism, we participated in a Park Cleanup activity in FRIM and also a Tree Planting activity in Nusajaya.

As a complement to ecomagination that is for healthy planet, GE has also gone into healthymagination that was launched in May 2009. The latter focuses on healthy people. The company is very much into reducing its own carbon footprint and green energy to generate electricity. One possible avenue is by converting waste into energy as it is being used in India. The other possibility is saving 20% fuel from jet engines with carbon credits. All efforts to sustain a healthy environment and body are guided by the theme “GE imagination at work.”

Chapter 4: Sustainable Development Initiatives at Malaysia Green Technology Corporation

Malaysia Green Technology Corporation (GreenTech Malaysia) formerly known as Pusat Tenaga Malaysia (PTM) was established on 12th May 1998. GreenTech Malaysia, registered as an independent and non-for-profit organization for energy research in Malaysia under the Ministry of Energy, Green Technology and Water. GreenTech Malaysia functions are:

- Implementing Agency in Green Technology
- National Lead Manager in the development of Green Technology
- Promoting green technology initiatives and programs
- Focal point to set standards and database
- Coordinating the research, development and application related to national Green Technology development

The new scope was the expansion of one-stop centre functions previously carried out.

Green culture or previously known as sustainable development should be practiced by all public and private sectors. The world now is moving towards Green Growth which refers to the same topic. GreenTech Malaysia with the above functions will play the role of facilitator to all stakeholders and beneficiaries. The newly restructured organization tasked to assist Malaysia in achieving sustainable development using green technology as the new economic driver. All this while it has successfully play its role as the repository for the national energy database and promoter of national energy efficiency and renewable energy programmes. In supporting and enhancing awareness on sustainable development among various the communities, MGTC has undertaken numerous initiatives to reduce electricity usage, CO² and gas emission. As green environmental issues have become critical to the sustenance of the planet that we live on, MPC interviewed MGTC on their initiatives towards sustainable development in Malaysia. The networking and information exchange

took place on 29th April 2010 with Mr. Hishamudin b. Ibrahim of the Building Energy Efficiency Unit.

Definition on sustainable/green development

On 24th July 2009 National Green Technology Policy was launched by the Prime Minister, Datuk Seri Najib Tun Razak. Green Technology is defined as the development and application of products, equipment and systems used to conserve the natural environment and resources, which minimises and reduces the negative impact of human activities. Therefore sustainable development is the development that uses green technology or give priority to it.

Importance of sustainable development in Malaysia

Sustainable development practices are crucial to enable Malaysia in becoming a leading nation in the 21st century. One way to sustainable development is through green technology. The Malaysian Government realises that in the 21st century, renewable and sustainable energy as well as green technology will be the core of economic growth for all countries. This, in turn, minimises degradation to the environment and promotes healthy and improved environment for all forms of life. Developed countries learned through the hard way by experience on the importance of green technology to protect the environment. We should not repeat the same mistakes by generating wealth first and repair later as it will be very costly.

Greedy human activities on resources consumption have negative impacts to the natural ecosystem. There is a need to minimise growth of resources consumption while enhancing economic development. GreenTech Malaysia illustrate this importance through the two diagrams on human activity: conventional and sustainable.

- Conventional way of development entails a lot of wastages and creates hazardous environment to living things. Furthermore, consuming limited

and depletable resources will steal future generation's opportunity to enjoy them in the future.

- Adoption of sustainable development reduces virgin resources consumption to optimum level. This method creates opportunity to convert waste to wealth through reuse and recycle which contributes to improve GDP. According to recent studies, 80% of waste could be recycled and this in turn reduces demand on landfill. Curing hazardous waste before sending to dump sites reduces their impact on the environment.

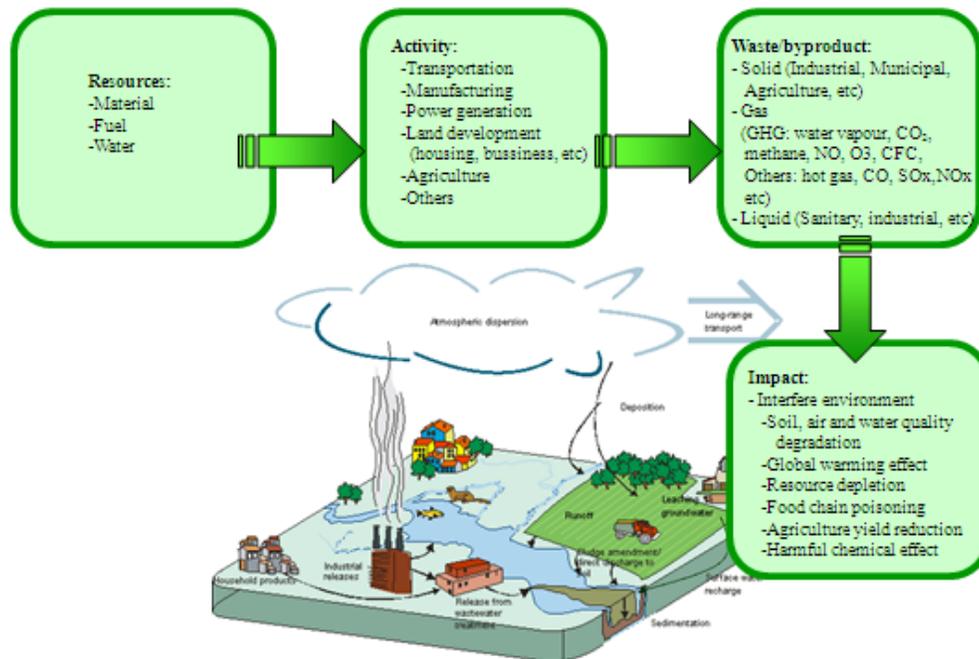


Diagram 1: CONVENTIONAL Human Activity

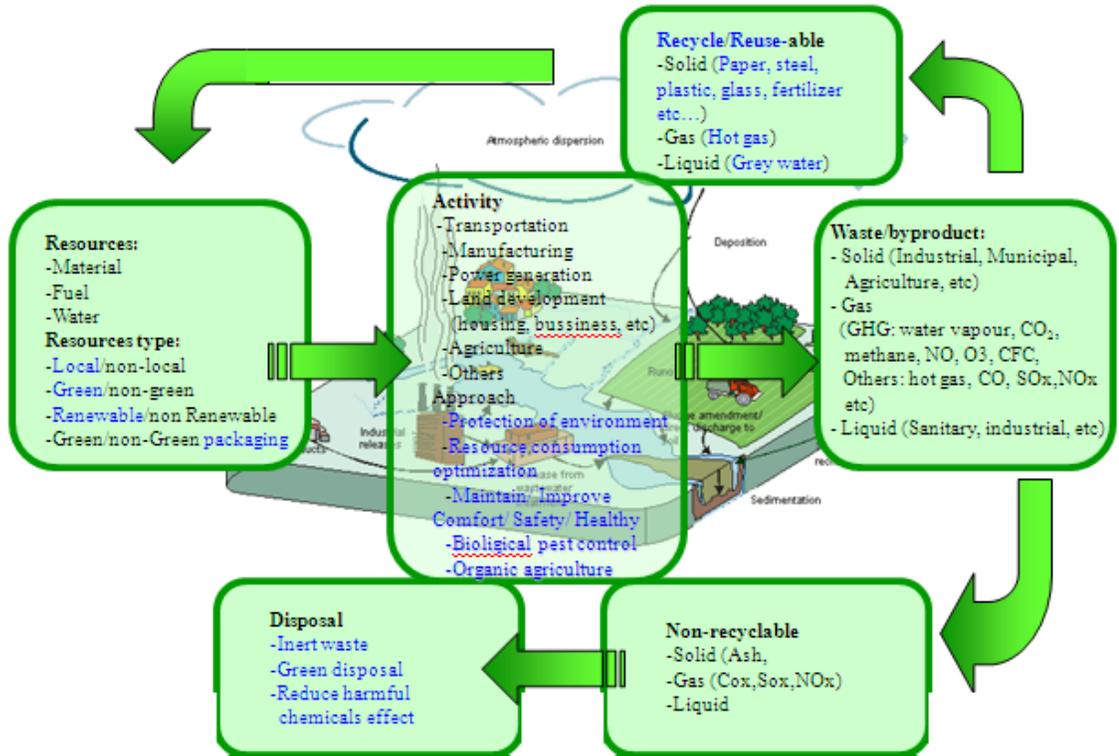


Diagram 2: SUSTAINABLE Human Activity

Source: Malaysia Green Technology Corporation

Activities that MGTC has undertaken to support green environment in Malaysia

A living example of environmental friendliness at MGTC is its Green Energy Office (GEO) in Bangi. MGTC pushed renewable and energy efficiency as key inputs for the design of the building. Through the National Green Technology Policy, MGTC has been restructured as Malaysia Green Technology Corporation or better known as GreenTech Malaysia with the focal points on green technology developments. Among the focal points are development Green Technology Roadmap, standards, promotions, research coordination, and at the end we promote the adoption of environmental friendly living culture or green lifestyle.

GreenTech will also be organising international green technology exhibition and conference in 2010. A scheduled event is the International GreenTech & Eco Products Exhibition & Conference Malaysia to be held on October 14-17, 2010 at Kuala Lumpur Convention Centre. This seven-in-one event covers exhibition, conference, interaction program between local and international universities, workshops and demonstrations, documentary / video presentations, business matching sessions, and business networking.

A third initiative is the plan to convert Putrajaya and Cyberjaya as Green Township. Some of the enabling factors in achieving this initiative are the Green Township Guideline, Green Rating System, the target saving of 10% on the usage of energy and water among the Government buildings in Putrajaya, and carbon footprint baseline for Putrajaya and Cyberjaya. Another initiative in the process is Green Procurement. Preference will be given to products and services that are environmental friendly and fulfil the green technology standard.

GreenTech Malaysia is also engaged by the Ministry to be an agent for the preparation of the Energy Efficiency Masterplan for the country. The corporation organises Energy Efficiency and Conservation (EE&C) programmes to promote EE & C practices in Malaysian industries for example on the use of energy benchmarking of commonly-used equipment. This programme provides guidelines for industries to establish their respective standards for efficient use of energy and internal benchmarking. The guidelines are used as a reference document for energy efficiency and conservation activities/programmes. GreenTech Malaysia also has the role to prepare the Second National Communication (NC2). This document reports on the country's greenhouse gas (GHG) inventory, vulnerability and adaptation measures and mitigation strategies in addressing impacts of climate change.

The other activities include designating November as the annual energy month. This initiative helps create national awareness on simple EE measures that can be effectively implemented and to encourage the practice of minimizing energy wastage among public and private sectors. MGTC organises awareness

campaigns, exhibitions, seminars, workshops and road shows to promote green environment. In 2000, GreenTech Malaysia had implemented the Malaysia Industrial Energy Efficiency Improvement Project (MIEEIP). The project is funded by Global Environmental Facility (GEF), the Government of Malaysia and the private sector. The project aims to remove barriers and encourage implementation of EE improvements in eight energy intensive manufacturing industries such as cement, ceramic, iron & steel, food, glass, wood, pulp and paper, rubber & oleo chemical, plastics and textile. It audited 54 companies and noted potential energy savings in the range of 5 – 34% in these industries.

In 2002, Biomass-based Power Generation and Cogeneration in the Malaysia Palm Oil Industry (BioGen Project) was organised. The main objective of this event was to reduce the growth rate of GHG emission from fossil fuel combustion processes and unutilised biomass waste through the acceleration of the growth biomass-based power generation and combined heat & power (CHP). Besides, the Malaysian Building Integrated Photovoltaic (MBIPV Project) was implemented in 2005 to achieve 30% BIPV market growth annually. This is to lead further cost reduction and generate solar electricity that will directly offset natural gas utilised to meet peak energy demand and directly reduce Government cost in energy subsidy.

Last year, the Government accepted the new project funded by GEF in promoting energy efficiency in residential and commercial buildings through Buildings Sector Energy Efficiency Project (BSEEP). This project was designed to improve the energy utilization efficiency in Malaysian buildings especially in the commercial and public sectors. Other than that, this project promotes energy conserving design of new buildings and improves energy utilization efficiency in the operation of existing buildings.

Industry players were more receptive of Green Technology (GT). We received many applications to implement GT projects. Up to now, MGTC have certified 27 Green Projects under Green Technology Financing Scheme which was launched on 1st January 2010. Most of them were energy and waste management of the

GT. The Government will also put more priority to green products by adopting Green Procurement. In any country, Government is the biggest consumer. If Government buys green, there will be huge market demand for it, hence it spurs the industry growth.

There will be standards developed for green products to ensure market confidence on green products and seeps non-genuine ones from entering or misleading the market. In the future, green products will be labelled to assist the public especially non-technical citizens to choose the products that have minimum impact to the environment and safe for health. Developing countries in the future may use green labels as another market barriers to the industries to penetrate their market. Germany is the world leader in green labels. In this region, Thailand is in the lead country in preparing their industries for green practices.

MGTC planning to sustain environmental health in the future

To sustain environmental health is not an easy task to implement. The initiative should come from both the public and industries. GreenTech Malaysia is developing Green Technology Master Plan to streamline all the plans to create a holistic and sustainable approach to the country's national economic development with respect to green technology.

Learning energy conservation activities there was a survey on the level of practice in energy conservation. The survey revealed that MGTC are not too far behind in technical but management aspect. GreenTech Malaysia is promoting the use of Sustainable Energy Management concept by a project under ASEAN initiative named Establishment of the ASEAN Energy Manager Accreditation Scheme (AEMAS). AEMAS promotes use of management principles as a tool to implement energy conservation. The system will organize all parties in any organization to work together to achieve a goal which is energy conservation. GreenTech Malaysia confident that trainees from the scheme shall easily support the newl Efficient Management of Electrical Energy Regulation by Suruhanjaya

Tenaga introduced in 2008. The system helps industry to improve energy efficiency and perhaps generate better profits for industries. Energy Management (EM) in the context is an activity organised to optimise the use of energy by avoiding waste or recovering unused energy in processes or facilities. EM primarily seeks to utilise energy (electricity and fuel) more efficiently without reducing production levels or lowering product quality, safety and environmental standards.

Chapter 5: Sustainable Development Initiatives at TOYOTA Assembly Services Sdn Bhd

ASSEMBLY SERVICES SDN BHD (ASSB) is a subsidiary of UMW Toyota Motor Sdn Bhd. The company started operation as Champion Motor (M) Sdn Bhd in January 1968. The name was subsequently changed to ASSB to reflect the changing business alignment at Toyota. It is the local assembler/manufacturer of Toyota passenger and commercial vehicles like Vios, Innova, Hiace, Hilux, Fortuner as well as Hino and Daihatsu commercial vehicles. ASSB in aligning itself with UMW Toyota Motor's plans to make Vios its core model. It is focused on enhancing the model's quality and improving overall productivity. ASSB embarks on regular quality and improvement projects backed by strong support from TMC in improving quality and productivity in all of the plant's operations such as the welding, paint shop, assembly line and logistic areas.

As manufacturing is a key contributor to environmental issues, Toyota as a corporate company has taken many green initiatives to ensure that their products and services are environment friendly. In this aspect, MPC has had the opportunity to discuss on sustainable development initiatives at TOYOTA with Mr. Zainal Jaini, Head of Department Human Capital, Mr. Yoon Kim Kitt, Manager for the Environment, Safety & Health and Utilities Department, Ms. Manjula Murugesan, Manager of Environment Department, En. Rosli A. Malik, Manager of HR Communications and Administration and Mr. Nurelyz Jamil, Supervisor of Environment Department on 15th December 2009.

Sustainable development to TOYOTA

TOYOTA's philosophy is to build cars that are environmental friendly to the people and the earth. Globally, Toyota is very much aware of the tremendous impact this will have on the environment. As TMC President Watanabe said in his message to all Toyota employees commemorating Toyota Global Environment Month this June, "there is no future for motor vehicles unless there is a focus on issues related to the environment, particularly energy and global warming". It is based on the keen awareness that Toyota strives to achieve a harmonious

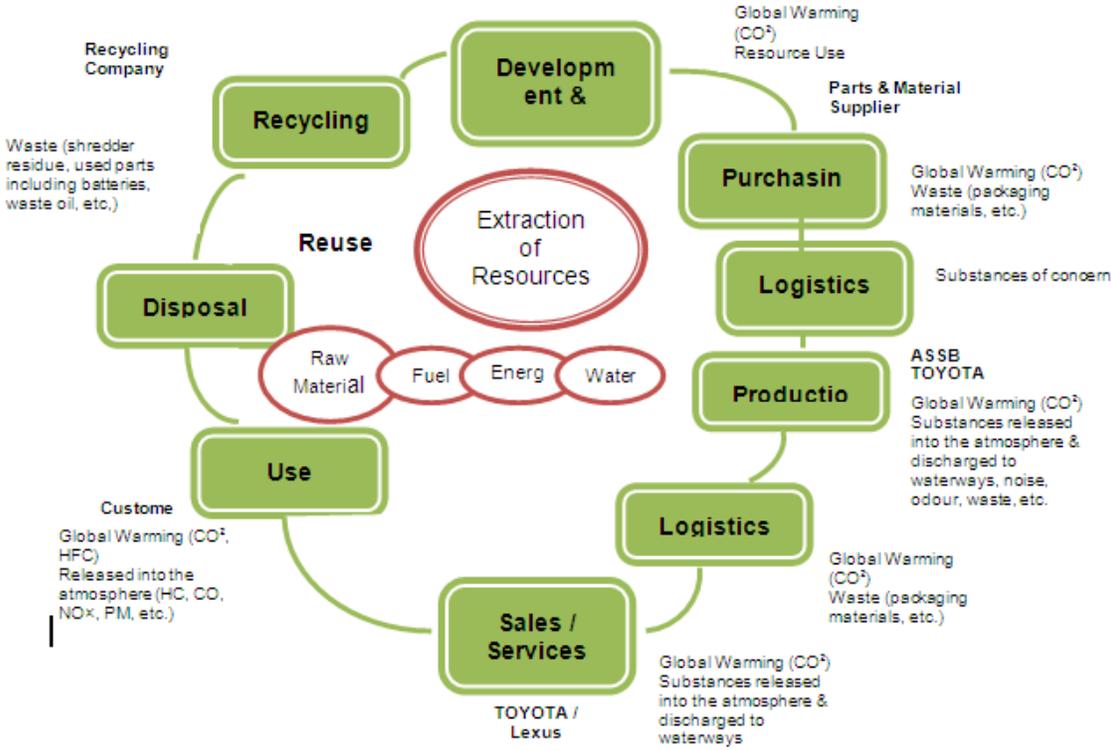
co-existence between vehicles and the environment. Toyota engaged in active pursuits to manage environmental issues across the life cycle of automobiles, from design to production, sales, distribution and finally disposal and recycling.

In order to contribute towards a sustainable environment, Toyota introduced a Consolidated Environmental Management System in 2000 for all its affiliates around the globe. In addition, as the assembler and distributor of Toyota vehicles in Malaysia, critical operations of UMWT from the assembly plant to the service centres abide to these strict guidelines set by their principal. These environmental expectations are also extended to their business partners such as our suppliers, logistics providers and dealers in Toyota aim to conserve resources even before our vehicles hit the road.

“Cradle-to-Grave” concept

TOYOTA uses the “**Cradle-to-Grave**” concept to gauge environmental impacts at each stage of a vehicle’s life cycle. Based on this, Toyota developed and implemented structured approaches towards managing these impacts by integrating ‘green’ practices into assembly activities. The model of “Cradle-to-Grave concept is as depicted in Diagram 1.

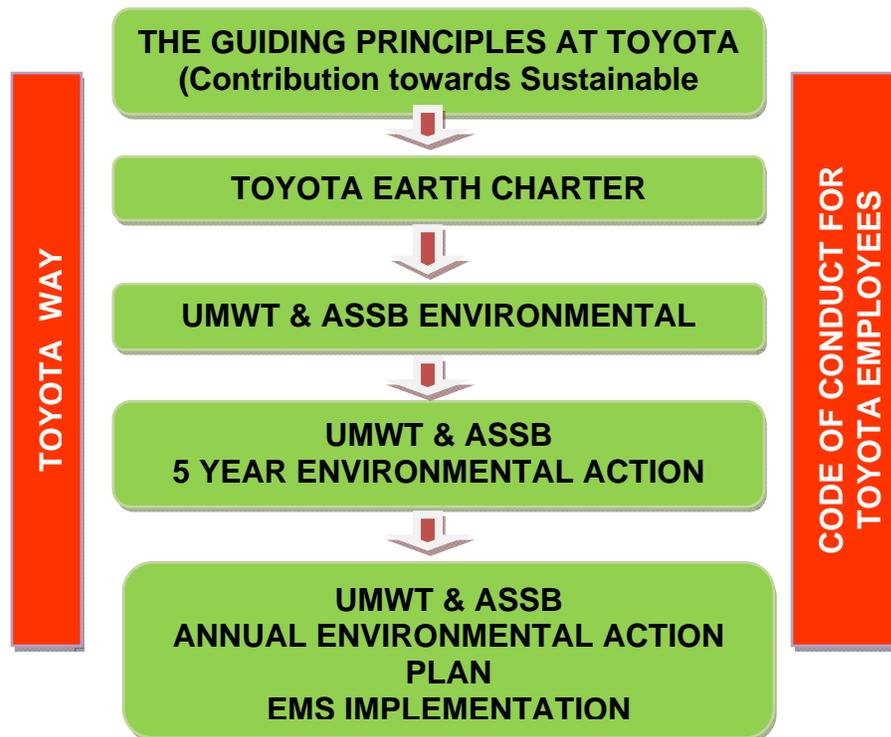
Diagram 1: Cradle-to Grave Concept



TOYOTA initiatives in supporting the sustainable development drive in the country

Environmental protection is viewed as a priority management issue at assembly facilities in ASSB. Thus, 10 years ago, in the month of September 1999, ASSB became the first automobile assembly plant in Malaysia to obtain the ISO 14001 certification, an internationally recognised standard for environmental management system. The consolidated environmental management system practised is as per Diagram 2 below.

Diagram 2: Consolidated Environmental Management System (EMS)



We started implementing the TOYOTA Environmental Management System (TOYOTA EMS) in our business practices along with all the other affiliates around the world. TOYOTA EMS incorporates the Toyota Way into ISO 14001 with the aim at early achievement and continuous improvement of Toyota's 3-Pillar Production Environment Policies. These 3-Pillar Policies (Zero Noncompliance/ Complaints, Minimization of Environmental Risks & No.1 in Environmental Performance) are in line with ISO 14001 core requirements for sustainable implementation and continuous improvement of environmental commitments. However, under TOYOTA EMS, there are at least 27 additional requirements that are more specific compared to ISO 14001 and 11 mandatory actions based on the Toyota Way (which does not exist in the ISO 14001) e.g. setting of internal standards. In simple term, if Toyota comply with TOYOTA EMS, Toyota comply with a level that is beyond ISO 14001 standards.

In line with their 3-Pillar Production Environmental Policy, Toyota have been actively implementing strategies in going beyond national legal requirements, minimizing environmental risks and improving environmental performance in terms of resource consumption and waste generation. This does not stop at assembly activities, Toyota also strongly promote environmental management in processes outside their plant but within influence such as activities of their business partners. The third success recertification to ISO 14001 serves as a milestone indicating long-term commitment to environmental protection.

Over the past years, Toyota have actively engaged in environmental improvement activities to ensure consistent implementation of TOYOTA EMS such as:-

- a) Process facilities upgrading and new installations to improve operational control & emergency response management;
- b) Installation of monitoring facilities e.g. automatic leakage detection system for underground fuel tank and groundwater monitoring wells;
- c) Improvement of operational control by man and/or machine;
- d) Enhanced training and competency evaluation for team members related to high risk processes;
- e) Regular audits and checking systems by team members and Environment staff;
- f) Support from Toyota Motor Corporation (TMC) Japan for promotion of self-reliance & low-investment/high-returns approach in energy management; and
- g) Strong collaboration with suppliers to ensure 100% Substances-of-Concern (SOC) Free in our Toyota vehicles since Jan 2009. Efforts include parts & materials investigation & switchover to SOC-Free alternatives, supplier guidance groups & audits, and random sampling of parts.

Sustainable development activities at TOYOTA ASSB

In conjunction with Toyota Global Environment Month, ASSB Toyota has organised numerous activities to raise environmental awareness among employees and promote eco-friendly practices in their daily lives both at home and at work. Some of the activities include awareness booths, eco-product booths, awareness talks and special promotions. The awareness booths cover the topics of flora and fauna protection, forest restoration program, waste management and CSR programs. The eco-products booths had the participation of OSRAM on energy saving lights, SHA Hup Aik on organic products, Gerai Orang Asli on handcraft made from forest resources, and DPS Automobil on fuel saving product. The awareness talks include OSRAM on the importance of energy saving, GEC on saving the forest program, MNS on environmental conservation efforts in Malaysia, and Justlife on earth-friendly diet and garbage enzyme demonstration. There were also the environmental quizzes that cover ECO IQ and ECO Dart Game, my Green Suggestion competition, CASH for TRASH program, ECO-Photography contest, loan-a-bag program and forest restoration project.

Improvements from environmental practices at TOYOTA

Some of the said improvements are:

5.1 Increased environmental awareness

- a) Heightened staff awareness on general environmental issues as well as the impacts of their work through training & briefing.
- b) Planning departments build in more environmentally-conscious designs at new facilities. For example, buildings with skylights or glass to reduce the need for more lighting.

5.2 Better systems of work

Environment-related workflow is carefully thought out and documented for standardisation of practice at each work place.

5.3 Better environmental performance

Environmental Key Performance Indicators such as legal compliance are required to be monitored regularly, assessed and continually improved upon.

5.4 Requires foundation of enforceable standards

- a) Applicable legal standards are translated into internal requirements and work instructions;
- b) Internal Audits and Evaluation of Compliance conducted regularly establishes the level of conformance to the system and legal requirements; and
- c) Non-conformance is identified and corrective and preventive actions are taken to address the issue.

5.5 Substantial cost savings

- a) Savings result from more efficient use of resources (energy, water, raw material) during the initial built in design as well as increased operations efficiency; and
- b) Reduction of waste through waste minimization, reuse and recycling.

5.6 Better public information and transparency

We have actively engaged in improving transparency and sharing of environmental information with the government, NGOs.

Toyota Malaysia planning to sustain environmental health in the future

From this point forth, not only will continue to do more than meet industry standards, Toyota will seek to raise them. Their next Environmental Action Plan, to be implemented throughout the years of 2011 to 2016, clearly charts their course of action to face the environmental challenges that lay within not only their own operations, but also those within their influence in 5 key areas – Sales, Manufacturing, Logistics, Communication and Purchasing. Highlights of which include:

- 1) *Improvement in our environmental performance; with increased focus on reducing energy consumption in our production, logistics and service operations, as climate change is our top priority concern;*
- 2) *Strong advocacy of environmental management among our business partners, by using our Toyota Green Purchasing Guidelines and Dealers' Environment Risk Assessment Programme; and*
- 3) *And in terms of communication, strengthening of active information disclosure to the public, and engaging in best practices sharing of environmental initiatives among interested parties. Our corporate social responsibility efforts for promotion of environmental preservation will also continue using the Toyota Eco Youth and Toyota Eco Rangers programmes for school children.*

All of the above activities, along with Toyota policies and business performance, are regularly reviewed by their Joint Environmental Committee to ensure that Toyota are in line with the Toyota Consolidated EMS and expectations of the Government and the public. Despite the current economic downturn, UMWT recognise the need to continue in their pursuit for environmental excellence because, in the long run, such initiatives are not only tools to help Toyota to establish globally respected business practices but also to drive down business costs. As their environmental campaign catchphrase goes, "Think and Act", it is their hope that everyone of their employees, families and friends will continue to consciously make eco-friendly choices in their daily life style. Together Toyota can ensure a better and cleaner future for everyone and generations to come.

Summary

According to Brundtland Commission (1983), sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development has been discussed for many years. It is only when global climate began to change drastically and affect the human race with numerous calamity did it then gets stronger international awareness on the importance of appreciating nature for future sustainability. It also became increasingly crucial for development nations to show the way in living and implementing sustainable development. MPC has had the privilege to talk with three multinationals that are based in Malaysia; namely, PANASONIC, GE and TOYOTA. These companies shared their practices in different ways and thinking of achieving sustainable development.

As a manufacturer of electronic products, Panasonic takes responsibility to preserve the natural environment that sustains life on earth for future generations. As a consumer and industrial products and services, GE looks seriously on green environment in the areas of aviation, commercial aviation services, traditional and renewable energy systems, oil and gas, transportation, as well as water and process technologies. Due to environmental issues, Toyota as a vehicle manufacturer has taken many green initiatives to ensure that their products and services are environmental friendly. TOYOTA introduced the “Cradle-to-Grave” concept to gauge environmental impacts at each stage of a vehicle’s life cycle to manage the impacts of integrating ‘green’ practices into their activities. On the other hand, on the local context, MGTC functions as a national energy research centre that coordinates various activities on energy planning and research, energy efficiency and technological research, development and demonstration (RD&D). The corporation is also a one-stop centre on energy matters and networks with universities, research institutions, industries and various national and international organisations.

In short, the research on sustainable development initiatives in Malaysia has enhanced awareness and understanding on sustainable development practices that are in place and are crucial for a sustainable future. Government has indicated its emphasis on green economy and green tourism in the 10th Malaysia Plan (2011-2015). This plan requires the understanding and support of all Malaysians. Perhaps, we, as individuals, must take up the responsibility to contribute our part to materialise a sustainable green environment for a healthier and cleaner living.

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