PETRONAS

Sustainability Report
2009

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Corporate Statements

Vision

To be a Leading Oil and Gas Multinational of Choice

Mission

We are a business entity

Petroleum is our core business

Our primary responsibility is to develop and add value to this national resource

Our objective is to contribute to the well-being of the people and the nation

Shared Values

Loyalty

Loyal to nation and corporation

Integrity

Honest and upright

Professionalism

Committed, innovative and proactive and always striving for excellence

Cohesiveness

United in purpose and fellowship

Corporate Profile

PETRONAS is Malaysia's integrated petroleum multinational corporation with a strong ranking on the FORTUNE Global 500® and a presence in more than 30 countries around the world. Our business activities range from upstream oil and gas exploration and production (E&P) to downstream oil refining; marketing and distribution of petroleum products; trading; gas processing and liquefaction; gas transmission pipeline operations; marketing of liquefied natural gas (LNG); gas infrastructure and logistics; petrochemical manufacturing and marketing; shipping; and property investment.

Established in 1974, PETRONAS first ventured into the international arena at the turn of the 1990s, in line with its business integration, value-adding and globalisation strategy. As a responsible corporate citizen, PETRONAS is committed to managing our petroleum resources and operations responsibly by balancing commercial, environmental and social objectives to ensure sustainable development for the benefit of the people and local community in the host countries where we operate.

President & CEO's Message

It gives me great pleasure to present the PETRONAS Group Sustainability Report for the year ended 31 March 2009. This report provides an account of our performance and initiatives in the seven key result areas of our Corporate Sustainability Framework.

Over the last 35 years since our formation in 1974, we have always committed ourselves to conducting our business in an ethically, socially and environmentally responsible manner. For us, achievement is measured not only within the narrow confines of business growth and financial returns, but also in how we strive to contribute to the well-being of the many lives we touch. This goal of contributing to the people and to nations wherever we operate reflects the essence of our Corporate Mission.

As Malaysia's national oil company, we have been entrusted with the ownership of the nation's hydrocarbon resources and the responsibility of developing and adding value to the depleting resources. We recognise that our responsibility to society begins with ensuring a sustainable and reliable supply of energy to drive economic progress. This entails working effectively with key stakeholders to oversee the orderly and efficient development of our oil and gas resources, as well as placing a strong emphasis on operational excellence to ensure the efficient conduct of our operations, consistent with the goal of returning greater value to our stakeholders.

While operating as a profit-oriented business, we recognise the need to balance our commercial objectives with that of contributing to the socio-economic development of the nation. Over the years, we have supported various education and capability-building, as well as outreach programmes, covering a wide range of human development needs, as a way of ensuring that the fruits of our efforts are returned in a manner that will improve

the lives and well-being of both present and future generations.

We are always mindful of the fact that being in a position of trust requires us to conduct our business ethically and in an environmentally- and socially-responsible manner. Our strong emphasis on individual and organisational integrity not only reflects our commitment to discharging our obligations as trustee, but also helps ensure our operational and financial success. Building on this focus on integrity and ethical conduct, we helped found the World Economic Forum's Partnering Against Corruption Initiative (PACI) in 2004, aimed at promoting rigorous anti-corruption principles in the private sector worldwide, and in which we continue to participate actively.

This sense of 'amanah' or trust bestowed upon us has been the driving force behind our transformation from a national oil company into a fully integrated oil and gas multinational with a presence in more than thirty countries. Ever since embarking on our globalisation journey in the early 1990s, we have extended these values to our overseas ventures. As we continue to grow our business globally and face greater expectations from a more diverse spectrum of stakeholders, we believe it is these same values that will continue to earn us the trust and respect that distinguishes us from our peers, in our pursuit of becoming a leading oil and gas multinational of choice.

> The balanced approach that we have adopted in conducting our business has been driving our objective to serve the nation and its people while striving to maximise shareholders' returns at all times.

Today, sustainability is no longer simply an industry byword but has become an integral part of how it operates. Issues associated with the extraction, transport and use of energy – from climate change to the preservation of biodiversity to safe disposal of wastewater – are increasingly coming under greater scrutiny from both policymakers and the public at large, who are in turn looking to industry players for leadership. To be successful tomorrow, therefore, we need to build on our strong foundations today and lay the groundwork for the future to find solutions that will help us overcome these challenges, in keeping with stakeholders' expectations at large.

To this end, we have established our Corporate Sustainability Framework and Guidelines on Business Conduct as an affirmation of our commitment to enhancing our business performance in a sustainable manner.

We are increasing our emphasis on health, safety and environment (HSE) in all aspects of our operations and leveraging on technology to provide us with the right solutions. We have put in place a comprehensive HSE Management System to integrate vital HSE practices into our business

activities in line with international standards and practices.

Further emphasising the importance of health, we have intensified efforts to promote a healthy lifestyle as well as managing occupational health risks among our employees. We have taken steps to prevent spills by putting in place appropriate preventive and control measures especially in high probability areas.

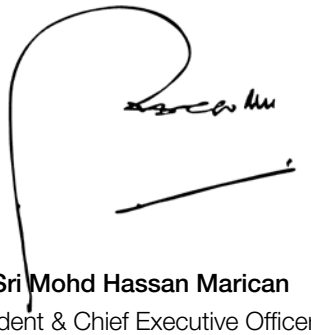
We believe these efforts are vital not only in safeguarding our employees' lives and to ensure the safety and well-being of our stakeholders and the community at large, but also to protect our assets, investments and stakeholders' interests.

We are promoting the efficient utilisation of energy in our operations not only as a means of improving our operational efficiencies, but also as a way of making a contribution towards addressing concerns on global warming and climate change. We are also stepping up efforts to reduce the carbon footprint of our operations through our 'Towards Zero Flaring and Venting' policy for upstream activities and Energy Loss Management (ELM) efforts in the downstream sector. Initiatives to reduce energy consumption in our non-process facilities such as office buildings and fleet operations are also being implemented.

In addition, we will continue to explore opportunities to leverage on the Kyoto Protocol's Clean Development Mechanism (CDM), as well as identify appropriate technology applications that have the potential to enable us to tap society's growing demand for clean energy, including renewable energy.

We will also strive to meet increasing consumers' expectations on product safety through a structured and systematic implementation of product stewardship across the Group as part of our Responsible Care® initiative.

Moving forward, we will continue to focus on improving our business performance, strengthening our resilience and enhancing our capabilities to confront the challenges facing us in delivering a sustainable energy future for all our stakeholders. In doing so, we will continue to be guided by our objective to serve the nation and its people with high standards of ethics and integrity while at the same time maximising shareholders' returns.



Tan Sri Mohd Hassan Marican
President & Chief Executive Officer
August 2009

KEY SUSTAINABILITY INDICATORS

TOTAL ENERGY SAVINGS DOMESTIC DOWNSTREAM PLANTS

2009	2008
17.9 million mmBTU	13.7 million mmBTU

▶ Refer to page 17

EFFLUENT DISCHARGES

2009	2008
0 Cases	5 Cases

▶ Refer to page 37

LOST TIME INJURY FREQUENCY

2009	2008
0.44	0.35

▶ Refer to page 41

FATAL ACCIDENT RATE

2009	2008
4.96	5.80

▶ Refer to page 40

PETRONAS DOMESTIC GHG EMISSIONS

2009	2008
32.7 $MtCO_2e$	36.1 $MtCO_2e$

▶ Refer to page 27

HYDROCARBON SPILLS

2009	2008
167 Spills	41 Spills

▶ Refer to page 36

Indicators are discussed in more detail in relevant sections within this report.

FIVE-YEAR FINANCIAL HIGHLIGHTS

31 March

RM billion

	2009	+/-	2008	2007	2006	2005
Revenue	**264.2**	18.4%	223.1	184.1	167.4	137.0
Profit Before Tax	**89.1**	(6.7%)	95.5	76.3	69.4	58.0
EBITDA	**105.5**	(4.0%)	109.9	88.7	80.9	68.1
Net Profit	**52.5**	(13.9%)	61.0	46.4	43.1	35.6
Total Assets	**388.1**	14.4%	339.3	294.6	273.0	239.1
Shareholder's Funds	**232.1**	15.1%	201.7	171.7	147.0	119.7

	2009	2008	2007	2006	2005
Return on Revenue	**33.7%**	42.8%	41.4%	41.5%	42.3%
Return on Total Assets	**23.0%**	28.1%	25.9%	25.4%	24.3%
Return on Average Capital Employed	**37.1%**	45.4%	40.8%	41.6%	38.5%
Total Debt/Total Assets Ratio	**0.11x**	0.11x	0.12x	0.16x	0.22x
Reserves Replacement Ratio	**1.8x**	0.9x	1.8x	1.7x	0.7x

For further information on PETRONAS' financial results for 2009, please visit www.petronas.com.

About This Report

This report presents the results of PETRONAS' performance for the financial year ended 31 March 2009 in the economic, environmental and social areas within our sustainability reporting framework. The framework is based on the International Petroleum Industry Environmental Conservation Association (IPIECA) guidelines on sustainability reporting with reference to the Global Reporting Initiative Sustainability Reporting Guidelines (GRI-G3).

This report is available on our website: www.petronas.com.

For comments and queries, please send us an email: sustainability@petronas.com.my

Cover Rationale

The cover of the PETRONAS Sustainability Report 2009 depicts a leaf from the *Kelumpang* tree (*sterculia foetida*), an indigenous species found throughout much of Southeast Asia.

The *Kelumpang* tree is a local source of timber for boat-building while its leaves and bark are often used as ingredients in folk remedies throughout the Southeast Asian region.

The *Kelumpang* is one of the indigenous species found in the KLCC Park, a purpose-built park located within the ambit of PETRONAS' headquarters, the PETRONAS Twin Towers.

The establishment of the park as a major city green lung and the urban home of numerous indigenous plant species is a physical manifestation of PETRONAS' commitment to sustainability and the conservation of biodiversity.

Our Corporate Sustainability Framework

For PETRONAS, sustainability means carrying out business in a socially responsible and holistic manner to ensure continued growth and success for the benefit of both the present and future generations. In pursuing this philosophy, we are guided by the PETRONAS Guidelines for Business Conduct and our Corporate Sustainability Framework which set out the principles and key elements to be adhered to in order to ensure integrity and consistency in all our business undertakings.

The PETRONAS Guidelines for Business Conduct addresses the challenges of sustainable development as a core focus of our business approach:

It outlines the general principles that govern how PETRONAS conducts its business, stipulating the requirements to which all employees must adhere to business integrity; quality; health; safety and environmental protection; human rights; commitment to the community; employment practices and compliance with the local law. It also provides for periodic review and audit to ensure the continued relevance of and conformance to the guidelines.

The PETRONAS Corporate Sustainability Framework focuses on seven key result areas across the social, economic and environmental dimensions in which our activities have a material impact to facilitate Group-wide implementation, measurement and reporting of our economic, environmental and social performance.

The seven key result areas are:

Shareholder Value
Sustaining the company's profitability through value creation, and efficient extraction and manufacturing processes.

Natural Resource Use
To promote efficient use of energy and water and supporting the use of renewable energy.

Climate Change
Limiting emissions of greenhouse gases into the atmosphere.

Biodiversity
Ensuring projects and operations do not have significant impact on the diversity of humans, animals and plants.

Health, Safety and Environment
Preventing and eliminating injuries, health hazards and damage to property and conserving the environment.

Product Stewardship
Ensuring that products conform to quality and HSE standards and meet the needs of society.

Societal Needs
Safeguarding human rights within our sphere of influence, contributing to community needs, investing in training and education, promoting arts and sports and conducting our business in a transparent manner.

Shareholder Value

Sustaining the company's profitability through value creation, and efficient extraction and manufacturing processes.

1st

The Angsi project is the first chemical EOR offshore pilot project in the region

PETRONAS pursues sustainable development as an integral part of our growth philosophy. We believe that sustainable development enhances our competitiveness and profitability, and brings us closer to our employees, customers and other key stakeholders. In turn this helps us to understand and reduce our operational risks and promotes opportunities for new markets, operational efficiency and innovation.

Enhancing financial performance and business resilience remain our core focus to ensure our sustainabilty in these challenging times. We place importance on growth with value creation.

Enhanced Oil Recovery (EOR)

PETRONAS has played a critical role in developing solutions to improve recovery through the Enhanced Oil Recovery (EOR) technology. EOR is strategically important for the protection of shareholder value in the longer term.

In Malaysia, the deep water areas offer good prospects for new oil and gas discoveries while existing oilfields are depleting.

Since 1996, PETRONAS has embarked on the screening and feasibility studies to identify potential fields and EOR projects to be implemented in Malaysia. Thus far, two EOR pilot projects have been implemented, namely the Dulang Water-Alternating-Gas and Angsi Chemical EOR projects offshore Terengganu, Malaysia, with potential to increase the recovery factor significantly. The Angsi project was the first Chemical EOR offshore pilot project in the region. Another project is at the Tabu Field, offshore Terengganu.

Overseas, we are currently evaluating the EOR potential in our fields in Sudan. EOR workshops and briefings with our partners and host authorities had also been conducted in order to get their understanding on what we plan to do for those fields. The plan for the first EOR pilot programme for one of our fields in Sudan is expected to be piloted in 2011.

Operational Review and Enhancement

Our sustainable development framework is implemented in all our upstream and downstream operations group-wide. Our internal processes and systems are continually reviewed and enhanced to create and maintain a culture of superior performance. We believe this will continue to create value for all our stakeholders.

To support our business expansion, we continue to promote talent development to realise our employees' full potential by creating opportunities for their professional and personal development. Our investments in various capability and leadership development programmes through our own learning institutions and our education sponsorship scheme are aimed at strengthening the core competencies and deepening the leadership attributes of our people to establish a culture of superior performance and excellence for sustainable business growth.

The Angsi project is the first Chemical EOR offshore pilot project in the region

Operational Performance Improvement (OPI)

Many of our plants are performing at world class levels. Our domestic gas processing plants and pipeline network achieved reliability rates of 99.5 per cent and 99.99 per cent respectively in 2009.

This was achieved through the application of the OPI methodology which has repeatable processes to drive continuous improvement. OPI embraces leadership development, capability building and mindset and behaviour change to drive sustainable performance improvements.

The challenge ahead is in ensuring that our achievements continue to be sustainable. A capability-building programme using the OPI 12 modules training was successfully conducted for upstream and downstream between 2005 and 2008. In 2009, an enhanced iOPI (integrated OPI) learning series, integrating the OPI 12 modules with the company's quality principles and corporate values, was rolled out. The iOPI learning series also includes OPI ACE (Accelerated Capability-Building Engine) Academy which consists of workshops and on-the-job assignments.

Expanding the OPI initiatives into our international business and non-plant operations requires commitment from all levels of staff in the company. As OPI is extended to our overseas operations and to non-plant locations, we are hopeful that the new integrated OPI learning programme will continue to nurture credible leaders with the passion to drive transformation and continuous improvement across the PETRONAS Group.

Operational Excellence

Within our Corporate Sustainability Framework, the main target of our focus on shareholder value is to sustain profitability through value creation and process efficiency. Our OPI initiative was launched with this objective in 2002.

OPI integrates business strategy with human resource development. It focuses on significant improvements in operational, capability and leadership functions.

The targets are set for three phases of OPI as summarised below:

Year	OPI Stage	Focus
2002 - 06	Reliable	Improve reliability and build momentum
2007 - 08	Repeatable	Ensure sustainability and propagate production system
2009 - 12	Replicable	Transfer OPI concepts to new businesses or functions

Figure 1.1

OPI embraces leadership development, capability building and mindset and behaviour change to drive sustainable performance improvements

Local Sourcing

As a national oil company, PETRONAS invests in the oil and gas industry domestically as well as internationally to augment Malaysia's crude oil and gas reserves and add value to our core business.

At the same time, as part of our objective to contribute to the well-being of the people and the nation, PETRONAS places high importance on developing local capability in our domestic petroleum operations. Local companies are provided with ample business opportunities, while foreign companies are encouraged to provide local companies with long term support.

In 2009, the total awarded contracts for domestic upstream and downstream sectors was RM38.7 billion. Of this value, about 75 per cent went to Malaysian companies.

Currently, there are about 2,500 local companies listed as PETRONAS vendors. This list encompasses the entire spectrum of petroleum operations that range from upstream activities going all the way down the value chain.

In PETRONAS' international operations, local capability development efforts are also carried out through the utilisation of local contractors. This forms part of PETRONAS' efforts to contribute to the well-being of our host nations.

For instance, in Vietnam, fabrication and installation works for the Pearl Development Project were done completely by local companies. Pearl is the third successful offshore project after Ruby A and Ruby B. The Project Management Team and staff are all Vietnamese and have vast experience in numerous other projects for oil and gas companies operating in Vietnam. The quality of the work and compliance to health and safety standards were in line with stringent regulations meeting local, international and PETRONAS standards.

In Turkmenistan, a fabrication yard was constructed in Kiyanly by Malaysia Marine and Heavy Engineering Sdn Bhd (MMHE) to maximise local vendor development, reduce costs as well as generate economy for the local industries and communities. Construction works were carried out with participation of the local workforce. The yard has a fabrication capacity of 25,000 metric tonnes (MT) a year. A drilling platform has been completed among other facilities to date.

Magtymguly Drilling Platform - A (MDP-A) topside in Turkmenistan being offloaded from the fabrication area to the transport barge for offshore installation in the Caspian Sea

Natural Resource Use

To promote efficient use of energy and water, and supporting the use of renewable energy.

6.8%

Reduction in energy costs at domestic downstream plants

4.2

million mmBTU

Total energy savings at domestic downstream plants between 2008 and 2009

50%

Reduction in external lighting at the PETRONAS Twin Towers

56, 142

MT of fuel saved by MISC

PETRONAS has made a long-term commitment to improve energy efficiency through an Energy Loss Management (ELM) Framework. The ELM Framework sets out medium and long-term targets for reducing energy consumption and improving energy efficiency across our upstream and downstream operations. Through this Framework, we have also committed to nurturing skilled leaders who are capable of designing and implementing effective energy management programmes across our operations.

Energy Loss Management (ELM)

PETRONAS' Energy Loss Management (ELM) was established in 2006 and rolled out across the Group in 2007. The objective is to improve energy efficiency and reduce greenhouse gas (GHG) emissions. The ELM team, based in the Group Technology Solutions Department of our Research and Technology Division, has developed a structured approach to transforming PETRONAS into an energy efficient organisation.

Objectives of the ELM:

- To reduce PETRONAS' purchased electricity cost by 5-10 per cent from baseline levels (2005 energy consumption and prices);
- Reduce GHG emissions in line with PETRONAS' environmental conservation goals and Corporate Sustainability Framework; and
- Enhance PETRONAS' standing on energy efficiency to achieve above industry standards.

We have exceeded our target to reduce energy costs by 5 per cent by the end of 2008 (using 2005 as baseline year), with significant reduction in flaring achieved through process improvements and optimisation of equipment performance in our upstream operations. In downstream plants, ELM has reduced energy costs by 6.8 per cent in 2009.

We have achieved these results by:

- Measuring and benchmarking energy use, and creating site-specific implementation plans;
- Increasing energy management capability across all PETRONAS plants;
- Increasing energy accountability and reporting;
- Implementing initiatives to improve energy savings and conservation; and
- Monitoring and tracking energy performance of our plants against our baseline.

The ELM Strategic Framework was formulated detailing the policies and strategies for implementing upstream and downstream energy management. Appropriate systems and procedures were identified and put in place, including the publication of ELM Manuals for both our upstream and downstream operations, standardising calculations for energy indicators, and establishing a monitoring process.

A best technology benchmarking was carried out in 2007 to compare actual energy usage with best technology energy usage. This helped identify several areas where gains could be made quickly through operational improvements with minimal investment.

We have made efforts to reduce our energy consumption at our domestic downstream plants through effective energy management practices assessing and benchmarking energy performance, setting energy-savings goals, implementing best practices and monitoring processes regularly. Between 2008 and 2009, the total energy savings at our downstream plants was 4.2 million mmBTU (refer to Figure 1.2).

Energy Loss Management (ELM)

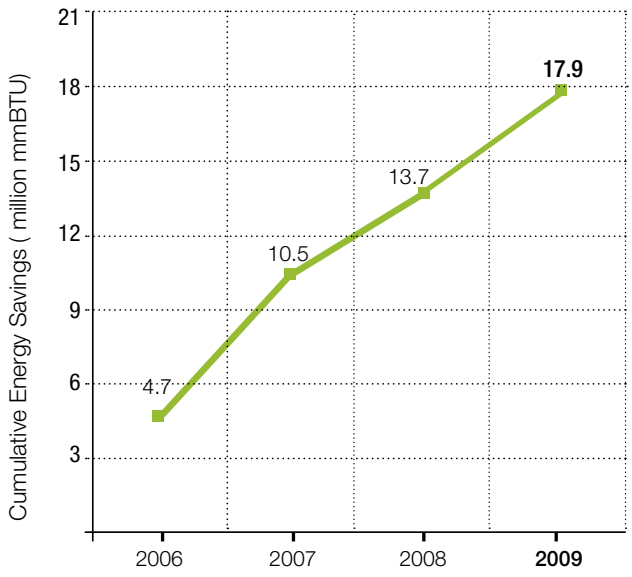


Figure 1.2

Recognising that employees at all levels need to be involved in our energy conservation efforts, we have engaged technical experts to provide customised training to engineers on different energy parameters. Awareness-raising programmes, such as Energy Forum, Energy Day, and the establishment of a Community of Practice (CoP) enabling the engineers to network and share best practices, were also rolled out. A dedicated ELM website and a newsletter were also launched to allow the dissemination of information.

The ELM Build-Up phase has largely been completed for our downstream plants. Most PETRONAS plants now have dedicated engineers to facilitate continuous tracking of energy performance and implementation of energy saving initiatives.

Some examples of ELM initiatives that were implemented include:

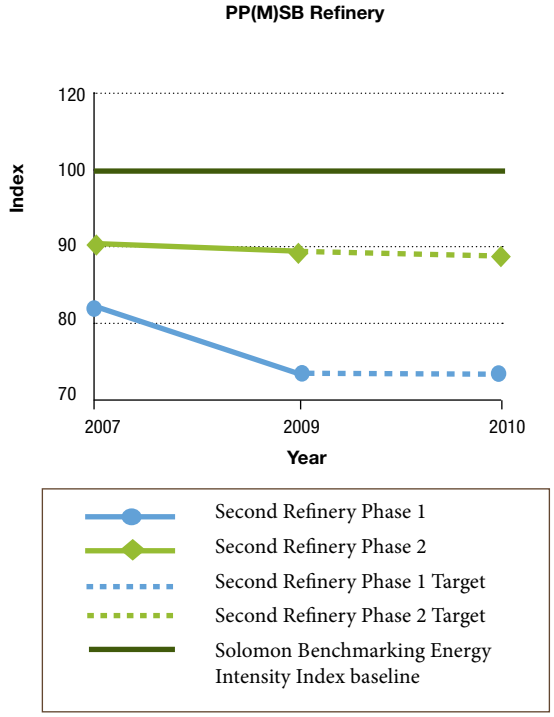
- Improved operational oversight and control systems for furnaces, boilers, turbines and incinerators at PETRONAS Gas Berhad's (PGB) gas processing plants in Kertih, Terengganu and PETRONAS LNG Complex in Bintulu, Sarawak;
- Optimising steam generation and usage, and minimising steam-line leakage;
- Maximising waste heat boiler capacity;
- Improving the heat exchange of air coolers by periodic cleaning operations;
- Minimising flaring and steam venting;
- Recovery of ammonia gas from the separator and routing the gas back to the process units at Asean Bintulu Fertilizer Sdn Bhd (ABF) plants in Bintulu;
- Improving CO_2 feedstock control at ABF's urea plant, minimising losses and improving the control system of relevant units; and
- Improving the heat-exchange efficiency by using a proprietary water-spray technology for airfin cleaning, optimising the circulation rate of cooling water and improving anti-surge control for synthesis gas compressors in ABF plants.

Focus

Beginning our benchmarking exercise in 2004, PETRONAS Penapisan (Melaka) Sdn Bhd (PP(M)SB), our refinery in Melaka, Malaysia, took the necessary steps to improve its energy consumption in order to surpass the benchmark industrial standard for energy consumption (the Solomon Benchmarking Energy Intensity Index). The refinery's Technology Department and Six-Sigma Team from the Operational Performance Improvement (OPI) and Production Department, Asset Management Team and all support groups jointly undertook a broad range of projects to improve energy efficiency as part of the ELM initiative. The initiative was designed to reduce the refinery's fuel consumption and reduce energy losses throughout the refining process.

Our Melaka refinery complex was developed in two phases, namely the PETRONAS Second Refinery Phase 1 (PSR-1) and PETRONAS Second Refinery Phase 2 (PSR-2). The implementation of energy efficiency initiatives

Solomon Benchmarking Energy Intensity Index



has resulted in PSR-1's current placing within the first quartile of the Solomon Benchmarking Energy Intensity Index (EII). PSR-2 ranks within the second quartile of the Solomon Benchmarking EII, and has also demonstrated better energy efficiency.

In 2007, the EII figure for PSR-1 was 81; PSR-2 was 90. These figures have improved to 73.4 and 89.8 respectively in 2009. Our 2010 EII targets are 73 for PSR-1 and 89 for PSR-2.

Under ELM, our Melaka refinery operations were assessed against energy conservation targets, and key performance indicators (KPIs) set. Energy conservation project selection and implementation then takes place, depending on an assessment of priority areas.

One example of an energy conservation project under ELM is the steam trap management system put in place at the refinery in 2004. Steam traps help with condensate recovery by trapping steam and releasing the condensates to the condensate header. A well-functioning steam trap can save 107 mt/year of steam. By managing the steam trap failure rate, steam loss can be limited and condensate recovery can be increased.

There are 5,803 steam traps at the Melaka refinery. The majority of these are the DISC/Thermodynamic types. The rate of condensate recovery in 2009 was 60.1 per cent, an improvement from 51.2 per cent in 2006. Our target for 2010 is 65 per cent.

Prior to the rollout of ELM efforts, electricity used at the refinery was purchased from the national grid, and steam was generated by gas-fuelled boilers. We have since installed a cogeneration plant to supply the Melaka refinery with electricity and steam. Compared to a conventional plant, a cogeneration plant requires less fuel to produce the same amount of power and steam. The cogeneration plant's gas turbines generate electricity, and exhaust heat from the turbines is used to generate high-pressure steam. The higher efficiency of the cogeneration plant also results in not only lower emissions of nitrogen oxides (NOx), sulfur oxides (SOx), carbon dioxide and particulates but also enhances operational uptime. It is estimated that the switch to the cogeneration system has helped reduce NOx and SOx emissions by approximately 2,000 MT per year as part of the carbon management initiative.

Improvements were also made to the refinery's furnaces and heat exchangers, which reduced the quantity of fuel required to operate the plant. In an oil refinery, normally over half of the total fuel consumption is attributable to the firing or heating of such furnaces. PETRONAS' Melaka refinery has installed carbon monoxide (CO) analysers in its furnaces. CO analysers and their associated controllers are used as an override controller, thus maintaining excess oxygen at the optimum level. This increases the efficiency of the furnaces, reducing the quantity of fuel that is required to generate thermal energy.

The installation of the CO analysers in the refinery furnaces has resulted in a reduction in fuel gas consumption by 18.1 per cent, from 3,412 cubic metres per hour (m^3/h) to 2,793 (m^3/h).

"We take energy efficiency as seriously as we do with quality and our refinery products," says Ahmad Sazali Mudzakir, Senior Manager, Technology Department, PP(M)SB.

Maintenance work on a steam trap at PP(M)SB

Energy Conservation and Efficiency for Non-Process Buildings

In our continuous effort to promote energy conservation and efficiency, we have been tracking energy consumption and efficiency in our Malaysian downstream operations.

For instance, a preliminary study was conducted in July 2007 to evaluate and analyse existing energy consumption levels at our non-process buildings. Areas covered included the chilled water consumption for the air conditioning units in PETRONAS offices.

Findings of this study:

Total annual Group energy consumption for domestic non-process facilities was 275 million kWh, with 70 per cent of this attributable to the operation of the PETRONAS Twin Towers and Universiti Teknologi PETRONAS.

The average Building Energy Index (BEI) for PETRONAS' non-process buildings was 217 kWh/yr/m^2.

We plan to conduct detailed energy audits for targeted buildings, and identify initiatives to reduce energy consumption and carbon footprint from PETRONAS' non-process buildings.

Since July 2008, we have implemented a variety of energy saving initiatives in the PETRONAS Twin Towers. These cover air-conditioning, lighting, escalator systems and water heating systems:

- The set-point temperature for our air-conditioning system was increased from 21-22°C to a higher temperature of 23-24°C (varying within this range, depending on headcount density);
- Lighting is monitored and controlled by the Building Control System. There is an automatic lighting shut-off during lunchtime daily (1-2 pm on Mondays to Thursdays, 12.30-2.30pm on Fridays) and after 5.30pm;
- External lighting of the towers has been reduced by 50 per cent. Since September 2008, the operational hours for the lighting of the PETRONAS Twin Towers have been rescheduled to 7.30 pm to midnight;

External lighting at the PETRONAS Twin Towers has been reduced by 50 per cent as part of our energy efficiency initiative

- All semi-enclosed and fully-enclosed rooms (e.g. meeting rooms, managers' offices and pantries) are being fitted with motion sensors which switch off the lights automatically when the rooms are unoccupied;
- Escalators at the Sky Lobby of Level 40 to Level 43 are operated with Escalator Speed Control motion detectors: the escalators run at low speed when there are no passengers boarding; and
- All hot water heaters are switched off automatically at 8.00 pm.

Prior to the implementation of the above energy saving measures, the average energy usage for each Tower was approximately 2.6 million kWh per month at PETRONAS occupied floors.

Since the introduction of these measures, there has been a 7 per cent reduction in energy consumption from August to December 2008, compared to the same period in 2007.

The increase in the air-conditioning set-point temperature of 1-2°C has produced monthly savings of 6 per cent refrigerant tonnes per hour (RTH) for chilled water consumption.

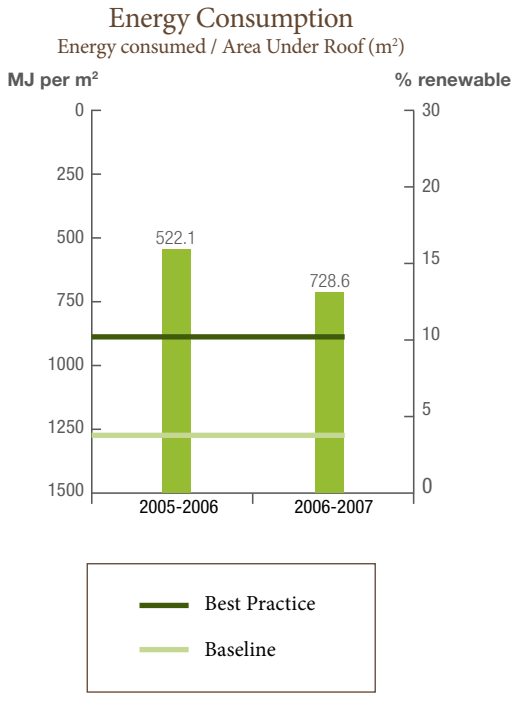
We will continue to explore more ways to conserve energy and improve energy efficiency going forward.

Focus

The Kuala Lumpur Convention Centre, a facility owned by a subsidiary of PETRONAS, continues to be recognised as a Green Globe Benchmarked Centre under the internationally-recognised Green Globe programme. The recognition is based on the Centre's adoption of a coherent and viable sustainability policy, as well as exceeding the baseline level of all 10 assessed Earthcheck indicators.

The Kuala Lumpur Convention Centre also performed better than the Green Globe Best Practice levels for energy consumption. In 2006-2007 (1 November 2006 - 31 October 2007), the Kuala Lumpur Convention Centre consumed 728.6 MJ per Area Under Roof (m^2), 17.8 per cent better than the best practice level.

The Kuala Lumpur Convention Centre also performed better than best practice levels in water consumption (7 per cent better) and waste sent to landfill indicators (47.8 per cent better).



Source: Benchmarking Assessment Report, Convention Centre Benchmarking, Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia. EC3 (28 July 2008)

Waste and Residual Materials

There were no reported incidences of non-compliance linked to our waste management practices in 2009. PETRONAS complies strictly with local and national regulations on waste disposal.

PETRONAS plans to identify existing waste products which may potentially be used as feedstock within the Group's operations. Whilst our first priority is waste reduction at source, we intend to identify measures aimed at reducing, reusing and recycling waste generated from the Group's activities, wherever possible. Remaining waste will be either treated to be rendered non-hazardous, or disposed of in compliance with local regulations. Waste management data will be tracked under our iHSE system.

Water Conservation

We are expanding our efforts to include water conservation by limiting our impact on the access to and use of water supplies by the communities within which we operate.

Wastewater from one of PETRONAS' petrochemical plants, Vinyl Chloride Malaysia Sdn Bhd (VCM), has a concentration of up to 20 per cent of hydrochloric acid (HCl). Previously, this wastewater was neutralised and treated in a wastewater treatment plant before it is safely discharged. This process requires large quantities of chemicals for treating the wastewater to comply to the discharge standard.

In order to minimise the total wastewater generated by VCM, the plant undertook the *33 per cent HCl Project*, which processed the 20 per cent HCl wastewater into commercial grade 33 per cent HCl solution which is sold domestically. This project successfully avoided the discharge of 26,000 m^3 per year of treated wastewater into the surrounding water bodies. In addition, it reduced the consumption of caustic soda and other chemicals which would have been used to treat this wastewater. VCM's project was able to reduce waste generation, minimise chemical utilisation while creating a valuable commercial product.

A Task Force on Water Resource Conservation was established in March 2009, comprising technical experts and business managers from across the Group. This Task Force will develop a Water Resource Conservation Plan that will include creating inventories of water consumption, identifying water utilisation areas to be prioritised for the implementation of reduction and conservation measures and developing organisational capability in water conservation technologies.

Water conservation measures will be intensified, with special focus on the manufacturing and service sectors. PETRONAS also hopes to improve the efficiency of its water consumption, through the implementation of new measures and technologies.

The *33 per cent HCl Project* storage and pump facility (in the foreground) at VCM

A reed bed treatment system was constructed at the Heglig project in Southern Sudan

Focus

Through the Greater Nile Petroleum Operating Company (GNPOC), PETRONAS has been involved in the bioremediation project in Heglig, Sudan since 2003. It is currently the largest project of its kind in the world, covering a 600-hectare area around our oilfield operations within the Muglad Basin.

The Heglig bioremediation project was implemented for the Heglig oilfield as an effective way of treating produced water from the oilfield.

Produced water is a by-product of the separation process of crude oil from water. Industry estimates place the volume of total produced water during the economic lifetime of an oilfield at five to 10 times that of oil produced from the oilfield. Finding an efficient and effective method of discharging produced water in an environmentally friendly manner is a challenge for the sector.

Bioremediation is a biodiversity-friendly process that cleans up dissolved contaminants in effluents using the natural microbes living in soil and groundwater.

At the Heglig project, a reed bed treatment system was constructed. Phase 1 comprised settling lagoons, reed beds and small reed beds or balancing canals as well as a forestry area. Phase 2 comprised settling lagoons, reed beds and small reed beds or balancing canals.

The reed species of *Phragmites australis* native to Sudan was planted to facilitate effluent cleaning, ensuring it is free from hydrocarbons and other chemicals. The treatment system has achieved excellent results of less than one ppm total oil content, exceeding irrigation and environmental requirements. The Heglig system currently receives 361,000 barrels of water per day (bwpd) which is treated and discharged to the environment.

Water treated in this manner is subsequently used for irrigating forest trees also creating a sanctuary for birds and plants to thrive.

The diversity and abundance of birds have been observed to have risen significantly over the past six years. To date, over 102 species of birds have been recorded in the area, a positive indicator of the ecosystem's health. It is expected that the avian population will rise in concurrence with the maturing of the system.

The reptilian population in the area has also been observed to have increased. The most visible species around the site include the Nile Monitor Lizard and the Red-Headed Rock Agama. They feed on the increasing number of insects, birds and amphibians.

Mammal populations are usually the last to respond to changes in habitat composition, as the survival of mammalian species tends to depend on a complex and interdependent range of variables. Since the start of the bioremediation system, the mammalian population in Heglig has shown signs of increase. A greater diversity of mammals is being observed such as the Serval Cat, Thomson's Gazelle and Banded Mongoose.

We are encouraged by the success of the bioremediation system and aim to expand our efforts in this area. GNPOC aims to have all produced water from the Heglig field treated by bioremediation and seven new systems are currently under construction to enable GNPOC to meet this target.

Focus

MISC has embarked on a Fuel Efficiency Programme called *i Save Fuel*, for its fleet of ships, which strives for the efficient use of natural resources while at the same time reduce the emission of gases from the fuel burning that generates its ships' propulsion and electrical power. This programme was implemented throughout its fleet of 59 ships.

Some of the elements for improvement in the Fuel Efficiency Programme include enhancements in voyage management, engine efficiencies and hull and propeller improvement programmes. Fuel consumption tracking and monitoring tools were also utilised by the fleet to track the performance of the programme.

For 2009, as a result of this programme, MISC achieved savings of 56,142 MT of fuel oil or 9.70 per cent based on the baseline total fuel oil required for combustion for the ships' propulsion and electrical power. In addition to conserving fuel, this programme was also able to reduce MISC's SOx and NOx emissions by 3,312 and 5,414 MT respectively.

MISC's LNG carrier Puteri Firus

Natural Gas for Vehicles (NGV)

PETRONAS' concern for the improvement of air quality has seen it develop the Natural Gas for Vehicles (NGV) programme in Malaysia. NGV became commercially available in the country in 1992.

The cleaner fuel plays a role in reducing air pollution as the use of NGV contributes towards lowering the level of pollutant emissions; reducing dependency on petrol and diesel; and lowering the engine running cost.

NGV was initially targeted for use by taxies and public transportation concentrated in congested urban areas that have air quality concerns. PETRONAS does not have a monopoly over NGV, which is sold at a subsidised price. PETRONAS has also taken measures to educate the public on NGV including on the safe conversion or installation of NGV kits in vehicles. In 2009, the number of NGV outlets doubled to 118 from 59 outlets in 2007.

NGV station at the Kuala Lumpur International Airport, Sepang

Climate Change

Limiting emissions of greenhouse gases into the atmosphere.

3.4

million tonnes of CO_2 equivalent ($MtCO_2e$) emissions reduction for PETRONAS operations in Malaysia in 2009

31%

Reduction in GHG emissions through venting by PETRONAS Carigali in 2009

LCI

Development of product Life Cycle Inventory (LCI) on carbon footprint for key products manufactured by PETRONAS operating units

Zero

PETRONAS is moving towards Zero Flaring and Venting

We are aware of the responsibility we have in addressing climate change concerns. We have embarked on various measures to minimise the impact of our operations on the environment.

Greenhouse Gas Emissions (GHG)

We have established greenhouse gas (GHG) accounting and inventorisation to measure, monitor and report emissions from our upstream and downstream plants and facilities. In 2005, a standardised process and methodology for a common GHG inventory was introduced to each business sector — exploration and production, oil, gas and petrochemicals. The GHG inventory represents the base GHG footprint, against which results from GHG reduction initiatives can be measured. Our inventory will be extended to all production sharing contractors as well as other PETRONAS international operations.

The accounting and reporting of emissions follow the industry standards provided by the internationally-endorsed Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry by the following: *American Petroleum Institute (API)*, *Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions* by the *International Petroleum Industry Environmental Conservation Association (IPIECA)*, the *International Association of Oil & Gas Producers (OGP)* and *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* by the *World Business Council on Sustainable Development* and *World Resources Institute*.

GHG emissions from 2008 have been established and quarterly reporting requirements are already in place for our Malaysian operations. The GHG inventorisation is an ongoing process; we aim for complete reporting coverage of GHG emissions from PETRONAS' global operations.

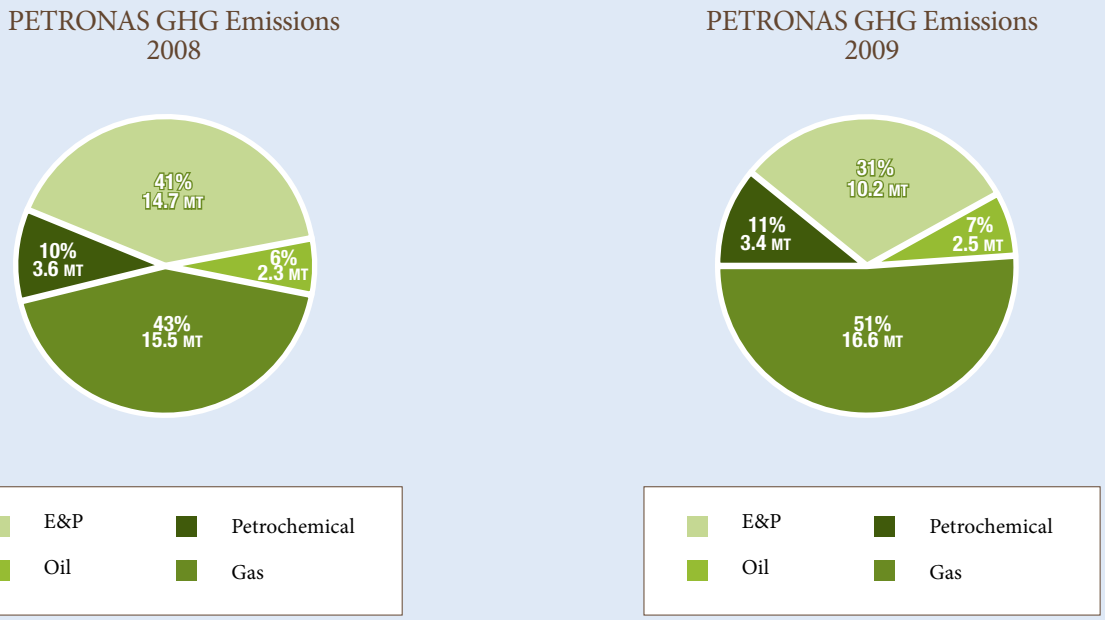
The main direct sources of GHG emissions for PETRONAS' operations are fuel combustion as well as the flaring and venting of associated gas. Consumption of purchased electricity is the main indirect source of emissions across both upstream and downstream operations. GHG emissions for PETRONAS are reported on the basis of operational control.

GHG Emissions for Malaysia Operations

PETRONAS domestic GHG emissions for 2009 was 32.7 million tonnes of CO_2 equivalent ($MtCO_2e$), a reduction of 3.4 $MtCO_2e$ from the previous financial year (refer to Figure 1.3).

The bulk of this reduction was achieved through PETRONAS Carigali's efforts to reduce the quantity of associated gas that is vented during its operations. The quantity of GHGs emitted through venting was reduced by 31 per cent (2 $MtCO_2e$) in 2008 compared to the previous year. This was achieved through better management of high gas-to-oil ratio (GOR) wells and by increasing the uptime of gas export compressors at Baronia Field (Sarawak) from 92 per cent to 97 per cent. The increased uptime also benefited the Bokor Field by reducing the quantity of gas vented there. These improvements are driven by PETRONAS' "Towards Zero Flaring and Venting" policy, and ongoing initiatives implemented by PETRONAS Carigali. Additional GHG reductions were achieved through efforts to reduce flaring emissions, and due to lower oil and gas production in 2009.

Baronia oil and gas installations offshore Sarawak



Total GHG emissions for 2008 = 36.1 million tonnes of CO_2 equivalent.

Total GHG emissions for 2009 = 32.7 million tonnes of CO_2 equivalent.

Figure 1.3

Gas processing and liquefaction accounts for half of the company's domestic emissions (16.6 $MtCO_2e$), while the combustion of fuel for these processes are the primary source of GHG emissions from these operations. Among the main sources of fuel gas consumption by PETRONAS Gas Berhad (PGB) are its acid gas incinerators (AGI) and regeneration gas heaters. Both equipment had an increase in uptime for 2009 compared to the previous year. However, the improved uptime increased the equipment's annual fuel consumption, and this resulted in the generation of an additional 1.0 $MtCO_2e$ for 2009. Higher AGI uptime for that year also benefited PGB by reducing its hydrogen sulfide (H_2S) emissions to less than 1 ppm, which is well below the legal requirement.

Emissions from other downstream sectors are relatively small, and comprise less than 6 per cent of PETRONAS GHG emissions. The Oil Business' emissions increased marginally due to a 11 per cent increase in its throughput. Similarly, lower GHG emissions from petrochemical operations were a result of lower production for this sector, in addition to ongoing ELM initiatives at the plants.

Efforts to reduce GHG emissions for all PETRONAS operations will continue through the ELM efforts, as well as the E&P sector's initiatives to reduce venting and flaring of associated gases. Carbon credits will also be developed to assist in the implementation of additional GHG reduction projects. These carbon credits can be developed under the Clean Development Mechanism (CDM) initiative of the Kyoto Protocol or through other carbon standards.

Flared and Vented Gas

PETRONAS is working to reduce flaring and venting of associated gas from oil fields, across our upstream operations. Flaring and venting constitute 70 per cent of the total GHG emitted across our Malaysian upstream operations in 2009. This represents 7.1 million tonnes out of the 10.2 million tonnes total GHG emissions from PETRONAS Carigali operations.

Efforts to capture flared gas and reduce venting started as early as 1978, when PETRONAS first struck oil offshore Terengganu, Malaysia. As part of PETRONAS' social responsibility, we are taking voluntary measures to reduce GHG emissions. Early initiatives to contain flaring and venting included GOR controls and gas injection schemes, as part of continuous reservoir management measures. Aside from collecting associated gas for production operation and fuel, efforts are also being taken to convert venting to flaring to help minimise methane gas emissions.

Vulnerability and Adaptation Study

PETRONAS is assisting the Malaysian Government to prepare a vulnerability assessment and adaptation (V&A) study on climate change in Malaysia for the oil and gas sector. This study aims to identify activities which are at risk from climate change and propose measures for sector stakeholders to adapt to climate change. These changes may necessitate the implementation of adaptation measures at PETRONAS' installations, which may include reinforcement or redesign of offshore platforms, upgrading of lightning protection systems or protection of vulnerable coastlines. Results from the study will be incorporated into Malaysia's Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), for submission at the end of 2009.

Life Cycle Inventory (LCI)

In collaboration with SIRIM Berhad, the Malaysian national agency for the Life Cycle Inventory (LCI) data bank, PETRONAS has started the development of product LCI on carbon emissions or commonly known as carbon footprint for key products manufactured by its operating units.

The availability of carbon footprint for crude oil production, natural gas and refined petroleum products will facilitate many industries in Malaysia and abroad to conduct a life cycle assessment (LCA) for their products as hydrocarbon fuels are the primary energy supply for most industries. By benchmarking our product carbon footprint with other key producers in the market, we can gauge how green our products are and strategise to reduce carbon emissions accordingly. In doing so, it will contribute to our efforts toward sustainable development.

Low density polyethylene (LDPE) is one of the products in PETRONAS' LCI data bank

Biodiversity

Ensuring projects and operations do not have significant impact on the diversity of humans, animals and plants.

1,700
sq km

The size of the Taninthayi Nature Reserve Project (TNRP)

3,500

Saplings have been planted through the Kertih River Mangrove Rehabilitation Project

2010

Expected completion date of the ecoCare™ Environmental Education Centre (EEC)

PETRONAS acknowledges the importance of biodiversity conservation and has made biodiversity one of the seven key Result Areas areas under our Corporate Sustainability Framework. Potential impacts on biodiversity are considered in the project planning and operation stages, to ensure the protection of people, flora and fauna. The biodiversity impact of all new projects and developments is assessed under an Environmental Impact Assessment. Mitigation measures to reduce biodiversity impact are incorporated into project design and monitoring based on this assessment.

The Biodiversity Conservation Implementation Guide has been developed to provide reference to operating units on a structured approach to integrate biodiversity management and conservation into business operations. The guide also describes best practices in mitigation of biodiversity impacts, and standard tools and methodologies for biodiversity assessment.

KLCC Park

This tranquil 50-acre green lung in the heart of Kuala Lumpur's golden triangle represent PETRONAS' tangible commitment to the conservation of Malaysia's environmental heritage. It is also in line with PETRONAS' vision for balanced, holistic development whereby the arts, sciences, technology and environmental heritage form the foundation for sustainable growth and wholesome living. The 10th anniversary of the opening of the KLCC Park was celebrated in 2008. A uniquely conceived idea, the meticulously landscaped park, occupying the site of the former Selangor Turf Club, was designed by world-renowned Brazilian landscape artist, the late Roberto Burle Marx. Showcasing some 1,900 trees and palms representing 66 indigenous species, the park is a microcosm of Malaysia's rich biodiversity. Of these, 63 mature trees, some nearly a century old, were painstakingly saved and replanted. The park attracts 20 species of local and migratory birds, some of which have made the park their permanent nesting ground.


KLCC Park

The TNRP seedling and tree planting programme

Focus

The Taninthayi Nature Reserve Project (TNRP) is a long term project that contributes to Myanmar's Forest Policy of establishing a 5 per cent protection area of the total country area.

The TNRP encompasses an area of 1,700sq km and is located in the Taninthayi Division in Dawei district, southeastern Myanmar, where the Pipeline Operation Centre is located.

The TNRP was initiated by PETRONAS Carigali Myanmar (PC Myanmar) and approved by the Government of Myanmar in 2003. An agreement on partnership was signed in 2004 between the Nature and Wildlife Conservation Department (representing the Government of Myanmar), Moattama Gas Transportation Co and Taninthayi Pipeline Co (TPC) representing PC Myammar.
The project has recorded several milestones:

(i) Nature reserve baseline data collection, conducted by Myanmar's Forest Department:
- Flora survey - species richness range from 62 to 81 per hectare. Globally threatened species of the *Dipterocarpaceae* family is present in the area.
- Mammal survey - tracks and sign of wild elephant, sambar deer, wild boar, gibbon, White-Handed Gibbon, mongoose, Long-Tailed Macaque, Pig-Tailed Macaque, serow, Asiatic Dhole, civets.
- Bird survey - 244 species of birds from 50 families were observed. Among those, three species were classified as 'vulnerable' and 10 species 'near threatened' according to Birdlife International Red Data Book.

(ii) The Community Forestry Development Programme : It assessed and quantified subsistence use of timber resources and non-timber forest product by residents of Taninthayi Nature Reserve (TNR) and adjacent areas. It also developed a detailed zoning and land use plan for the reserve and immediately adjacent areas.

(iii) Environmental Education Programme:
- An environmental conservation awareness programme was conducted at schools (21 sessions with a total of 2,755 participants), the community (24 sessions with a total of 2,693 participants) and the local authority (three sessions).
- A seedling and tree planting programme which featured a distribution of seedlings and annual tree planting activities during the monsoon season around TNR was established. In the first year (2005-06) 20,000 seedlings were raised at the nursery and in the second year (2006-07), 50,000 seedlings of forest and cash-crop species were raised. Seedlings are distributed to villagers for free and these seedlings are planted at abandoned areas of shifting cultivation.

(iv) Nature Reserve Management Programme:
- This programme supports the development of zoning management, forest fire management and boundary demarcation programmes.

TNRP aims to protect the flora and fauna found in the Taninthayi region and support the livelihoods and environmentally sustainable development needs of surrounding villages. The TNRP supports the community through agro-forestry by providing villagers with pineapple, avocado and coffee seedlings, and organising training workshops on harvesting and conservation. Studies are currently being carried out by local universities to establish the degree of success achieved by TNRP in helping to preserve the biodiversity and the ecological landscape of the region, whilst contributing to local livelihoods.

Focus

PETRONAS has been working in partnership with the Malaysian Nature Society (MNS) on a four-year river mangrove rehabilitation project, through our joint venture company, OPTIMAL Group. ecoCare™, the Kertih River Mangrove Rehabilitation Project and Environmental Education Centre is part of our biodiversity conservation efforts involving the reforestation and rehabilitation of the mangrove ecosystem. This is crucial to protect the wildlife of the mangrove habitat and coastal vegetation along the Kertih River. The project is situated about 10 kilometres away from the PETRONAS Petroleum Industry Complex (PPIC) in Terengganu, Malaysia.

The river mangroves support the livelihood of local villagers, acting as a natural breeding ground for fish, prawns, crabs and other crustaceans. The mangroves are also natural windbreakers, protection for coastlines and help with water retention for agriculture.

Since October 2005, a dedicated team of volunteers comprising 130 local villagers and 90 OPTIMAL staff members have been working to restore mangrove areas and surrounding coastal vegetation to its natural state. This is done initially by selecting and replanting mangrove seedlings according to zone segmentation, based on the specific niches within the ecosystem.

The project team actively maintains consultation and collaboration processes with local stakeholder groups. In addition, workshops and educational trips to a Ramsar-designated site in Tanjung Piai, Johor, Malaysia and the Sungai Buloh Wetland Reserve in Singapore, were conducted in 2008 to enhance the volunteers' knowledge and understanding of mangrove ecology and management.

More than 3,500 saplings of *Avicennia* sp., *Rhizophora mucronata*, *Rhizophora apiculata*, *Ceriops* sp., *Bruguiera* sp., *Xylocarpus* sp. and *Nypa* sp., have been replanted since the start of the project with survival rates of 70 per cent. It is hoped that the conservation efforts along the Kertih River will help restore the health of the mangrove ecosystem.

OPTIMAL staff have been assisting to restore mangrove areas

"Our target is to cover all the identified areas and so far, we have completed replanting 11 sites. The 12th site was established last year and we are constantly reviewing all the sites to establish the best replanting practices and mangrove species to be replanted," says Ahmad Azri Alias, Assistant Project Leader of ecoCare™. The MNS officer is based in Kertih to oversee the programme.

The development of the ecoCare™ Environmental Education Centre (EEC) under this project is expected to be completed by 2010. The EEC is the first of its kind on the east coast of Peninsular Malaysia and will feature displays, exhibits and information on the Kertih River ecosystem and Kertih's unique coastal terrain and biodiversity. It will serve as a resource and education centre with facilities to raise awareness and increase understanding of environmental conservation issues amongst students, teachers and local communities.

"We work with three villages and they support the rehabilitation efforts. Many local fishermen fish here during the monsoon season and there are those who depend on it solely. Through the programme, they have realised that mangrove degradation affects their livelihood as catches decrease. We are glad to have their support in preserving this natural heritage," says Azri.

Health, Safety and Environment

Preventing and eliminating injuries, health hazards and damage to property and conserving the environment.

1

PETRONAS Carigali tops the lowest Total Recordable Case Frequency (TRCF) among International Association of Oil and Gas Producers (OGP) members

Awards

PETRONAS subsidiaries have won numerous HSE accolades

The safety and health of our employees, contractors, customers and the public as well as the environment is a priority in the conduct of our business. In our daily operations, we emphasise safety, strict compliance to our health and safety standards and have zero tolerance for risky conduct in the workplace.

PETRONAS Policy Statement on HSE

Underpinning our determination to continuously improve health and safety performance and our commitment to environmental stewardship is our Group Policy Statement on Health, Safety and Environment (HSE). The statement includes our commitment to HSE excellence in all our activities wherever we operate and the taking of proactive steps in the conservation of the environment.

The Group HSE Committee sets and oversees all HSE policies and performance principles and provides guidance on HSE-related issues. It reviews Group HSE performance and is responsible for establishing annual goals and targets in line with its policies.

HSE Management System and Standards

Our HSE Management System (HSEMS) is a Group-wide management system that facilitates our implementation of policies for managing health, safety and environmental risks across our operations. It meets the requirements of the international occupational health and safety management system specifications of OHSAS 18001 and the ISO 14001 standard for environmental management systems. All domestic operating units have implemented HSEMS and we are in the process of standardising its implementation for international operations.

To date, 11 major operating units in Malaysia comprising upstream activities, refineries, gas processing plants, petrochemical plants and fuel depot have attained ISO 14001 certification. Internationally, our Egyptian LNG operation (ELNG) has attained ISO 14001 certification. Engen Petroleum Limited, our subsidiary in South Africa, has had the following three sites certified during the reporting period: Lube Oil Blend Plant (LOBP), Engen Refinery and SAFOR in Durban.

The PETRONAS Technical Standards (PTS) for HSE management provide the reference for good technical practices to be applied by PETRONAS operating units. For instance, there

The PETRONAS Group HSE Forum is an annual event

is a set of PTS governing HSE Management of Contractors which ensures high contractor HSE standards by requiring adherence to hazards and effects management processes as well as systematic identification, assessment and monitoring of risks through specified planning processes and procedures.

The HSE Tier 3 Assurance, an independent verification and assessment of the adequacy and effectiveness of our HSE Management System and HSE risk-related controls within each operating location, has been conducted across the Group since 2002. It identifies actual and potential gaps in the HSE risk management process and assesses the level of risk. The implementation of measures to close the identified gaps is monitored by the Group HSE Assurance Unit and reported to the PETRONAS Internal Audit Management Committee and PETRONAS Board Audit Committee on a quarterly basis. The HSE Assurance was extended to all major PETRONAS contractors in early 2008.

HSE Knowledge Management and Communication

The PETRONAS Group HSE Forum is an annual event that gathers renowned experts to share the latest developments and best practices in HSE with PETRONAS staff and contractors. The Forum encourages networking amongst staff members working on HSE issues and rewards good HSE management and performance by giving awards to PETRONAS' operating units, subsidiary companies, contractors and employees who have contributed to exemplary HSE practices.

HSE Insight, an in-house HSE publication, is another platform used to communicate and increase awareness on our HSE-related efforts Group-wide.

On 16 March 2009, the Group HSE Division introduced the iHSE, PETRONAS' first enterprise-wide HSE information management system, at four operating units as the pilot phase. It will enhance the tracking, analysis, implementation and sharing of HSE knowledge and initiatives within the respective operating units and across the Group. We expect to roll out the iHSE to all operating units by the end of 2009.

PETRONAS' HSE Culture Survey

We believe that a strong safety culture requires the ownership and participation of employees and management alike, in health and safety processes. In 2008, we included HSE in our company-wide employee performance culture tracking survey, with the aim of assessing the extent of integration of HSE values in PETRONAS' working culture.

The HSE Culture Survey featured 20 questions, covering safety priority, safety awareness, learning culture and competence or training. Results from the survey showed that PETRONAS' HSE culture is stronger on safety awareness (88 per cent) and safety priority (87 per cent) compared to learning culture (83 per cent) and competence or training (81 per cent). Technical and engineering roles showed a higher appreciation of HSE culture compared to others.

As the first survey of its kind in PETRONAS, the HSE Culture Survey will form our baseline for future HSE culture programmes. Gaps identified through this survey will be addressed through the development of specific interventions. For example, training modules covering all aspects of HSE have been developed for various levels of employees, to address the comparatively lower levels of employee satisfaction relating to HSE training.

As we expand our operations globally, we recognise that employee participation is vital for ensuring the success of our HSE programmes.

Environment

Minimum Environmental Management Standard

The PETRONAS Minimum Environmental Management Standard (MEMS) is a set of environmental management standards adopted for Group-wide implementation in 2008, to ensure consistent practices on the environmental protection, conservation and impact minimisation. MEMS has been implemented over and above regulatory requirements.

Given that PETRONAS operates in more than 30 countries and under varying national laws and regulations on the environment, these standards serve to ensure consistency and common standards for sustainability. In 2010, MEMS will be extended to cover all PETRONAS-controlled operations globally.

The implementation of this common standard is instrumental in enabling PETRONAS to develop an inventory, reference and report at a Group-level. It will also identify baselines on environmental goals for our subsidiaries.

Hydrocarbon Spills

PETRONAS' reporting on hydrocarbon spills includes spills to secondary containments or impermeable surfaces that do not reach the environment. In 2009, there were 167 spills, accounting for a total volume of 10,216 barrels of oil equivalent (boe). This is an increase from 912 boe spilled in the previous year. Of this, 86 per cent was attributed to one incident of an overfilled tank at a refinery depot. Nevertheless, 98 per cent of the spillage was recovered. A review of the Engineering Standard at the refinery's depot was subsequently conducted to ensure that such incidents would not recur.

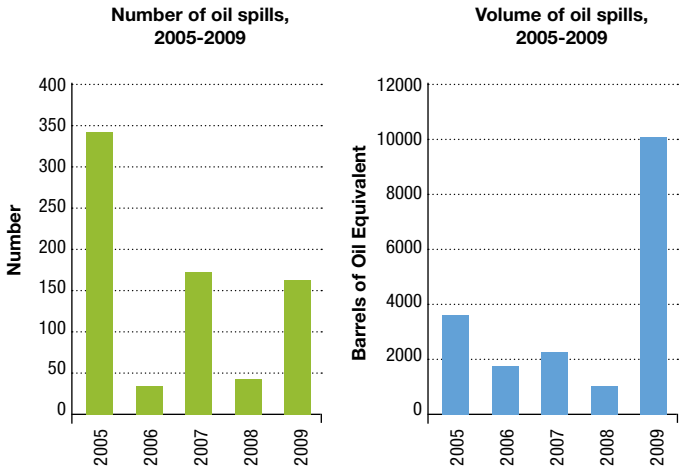


Figure 1.4

Other Spills and Accidental Releases

In 2009, there were six chemical spills reported across our global operations (refer to Figure 1.5). This accounted for a total volume of 414 litres. This is a significant decrease from 56 chemical spills in 2008.

We have taken comprehensive measures to prevent and manage such incidents. A PTS on Environmental Incidents Prevention and Control (EIPC) was issued to all operating units in 2009, to be used as a guide in identifying potential environmental hazards, ranking them according to severity and putting in place appropriate preventive and control measures. EIPC will be rolled out to all operating units in 2010.

Chemical Spills

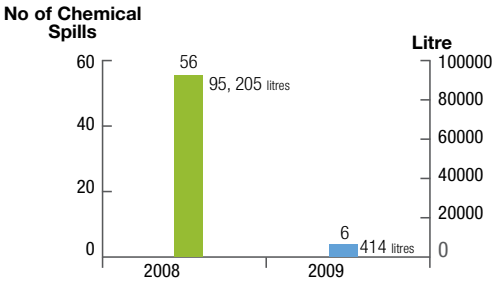


Figure 1.5

Other Effluent Discharges

We monitor effluents on a monthly basis in compliance to environmental regulations.

In 2009, there were no incidents of environmental non-compliance related to effluent discharge. There were only five cases of non-compliance related to effluent discharge in 2008, a 25 per cent improvement from 2007.

Hazardous Waste

PETRONAS adheres to all legal regulations concerning waste, wherever we operate. In addition, the PTS on Waste Management provides standardised guidelines for waste management across the company. Each operating unit has procedures in place for dealing with scheduled wastes.

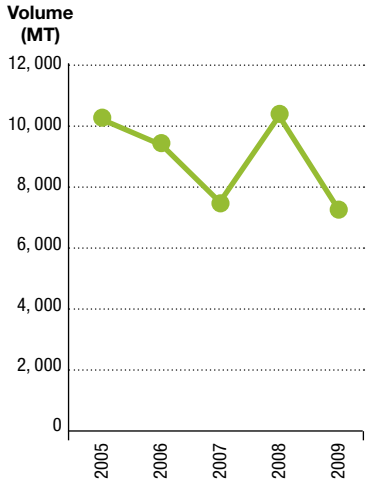
Effective and responsible handling and disposal of hazardous wastes are key components of PETRONAS' environmental management. We will continue to strengthen the management of hazardous wastes in order to minimise their potential harm to workforce health and the environment. Over the last five years, PETRONAS has put in place a waste management programme which includes the systematic review of the operating processes using the principles to 'prevent, reduce, reuse' waste material. Hazardous waste disposed in 2009 to a licenced waste treatment facility was 7,232 MT, showing a 30 per cent reduction from 2008 (refer to Figure 1.6).

In 2009, a PETRONAS Waste Survey was conducted to collect information on waste management from operating units. The survey covered questions relating to operating units' waste generation, waste management procedures, waste minimisation programmes, handling, labelling, storage and treatment requirements, waste reduction efforts and reuse and recycling programmes. Data collected through this survey will be used to:

- Formulate PETRONAS' strategy on waste minimisation;
- Review PETRONAS' Technical Standard on Waste Management;
- Standardise, share and sustain best practices in waste management throughout PETRONAS; and
- Identify training needs of personnel involved in waste management.

A Waste Management Working Group was formed in March 2009, to address issues identified through this survey.

Hazardous waste disposed*



*Malaysia: Domestic operations - waste disposed at the licensed waste treatment facility (Source: Kualiti Alam)

Figure 1.6

Air Emissions

There were zero incidents of non-compliance relating to emissions to air of SOx, NOx, total suspended particulates and black smoke in 2009. The improvement was due to the various engineering controls that were put in place during this reporting period.

Environmental non-compliance related to air emissions

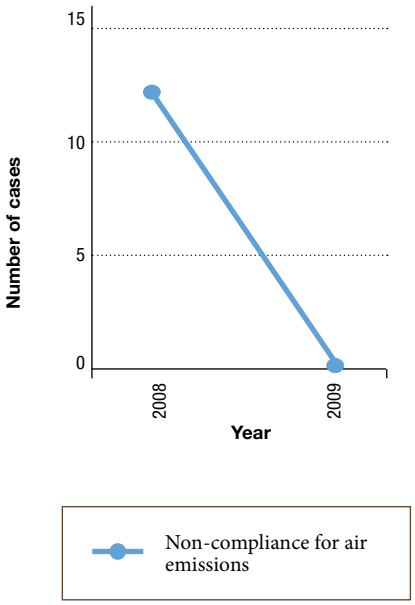


Figure 1.7

Safety

Process Safety Management

PETRONAS has implemented Process Safety Management programmes to manage safety risks associated with its facilities and processes, under its HSEMS.

Implementation strategies and detailed work plans have been established, including a comprehensive PTS on process safety. We have developed training modules and conducted training for relevant personnel. Gap closure plans will be implemented for all operating companies within the Group.

Our contractors are fully involved in our Process Safety Management programmes as key partners in the design, construction, commissioning, operations and maintenance of our facilities.

A Process Safety Community of Practice (CoP) has also been formed, to provide a networking platform for process safety practitioners within the company, enabling the sharing of process safety best practices and lessons learnt.

Line managers are required to stay vigilant in recognising and managing potential hazards. They also have the responsibility for being proactive in controlling and preventing incidences and investigating root causes of any incidents that may occur.

Behavioural Safety Programme

To reinforce our commitment to safety in the working culture at PETRONAS, behavioural safety programmes have been implemented to promote safe working behaviour.

A behavioural safety programme based on our PTS was piloted in 2006, at PETRONAS Carigali's upstream Peninsular Malaysia operations and the gas processing plant in Kertih, Terengganu. This programme aims to reduce at risk behaviour and reinforce safe working habits through active involvement by staff and management. Since then, the programme has been introduced at 12 refining, gas processing and petrochemical plants and maritime services.

Land Transportation Safety

PETRONAS has incorporated a set of minimum standards on land transportation safety into its overall HSEMS. The Land Transportation Safety Guiding Principles, Minimum Standards and Key Performance Indicators, introduced at the end of 2006, detail provisions and specifications for vehicles to adhere to legal requirements, PETRONAS' standards and industry best practices. They also incorporate provisions for appropriate training and qualification programmes. Specific issues covered include effective journey management, contingency plans to respond to emergencies and regular communication with stakeholders on matters related to land transportation safety.

These standards apply to all Group activities involving the transportation of products using heavy vehicles such as bulk tankers, prime movers, trailers and flat beds. They also cover business-related travel in company-owned vehicles and company-owned light vehicles travelling on public road networks.

Domestic and international operations have complied to minimum requirements for light and heavy vehicle specifications, minimum standards for journey management, driver management, vehicle management and HSE systems, by March 2008.

Focus

PETRONAS Dagangan Bhd (PDB), the retail arm of PETRONAS, manages contracts of transportation services which are provided by fleet managers throughout Malaysia.

The drivers are selected after strict selection procedures, followed by extensive training and regular monitoring of their driving behaviour. To motivate and encourage good behaviour, a merit-demerit and penalty system has been put in place. The drivers are given incentives for good HSE and delivery performance.

For vehicles, the types and age limits of prime movers and tankers used are strictly specified. Vehicles are only allowed to be used for a maximum of 12 years and up to 20 years for liquefied petroleum gas (LPG) tankers.

To ensure drivers work in a safe environment, a major initiative known as Road Hazard Mapping and Authorised Routes was introduced in stages beginning in 2007 with full implementation by October 2008, covering all states in Malaysia. All drivers are to comply with the routes identified and are made aware of the hazards. To track their movements and speed, all vehicles have been equipped with Global Positioning Systems (GPS) — starting in 2008, these are monitored constantly.

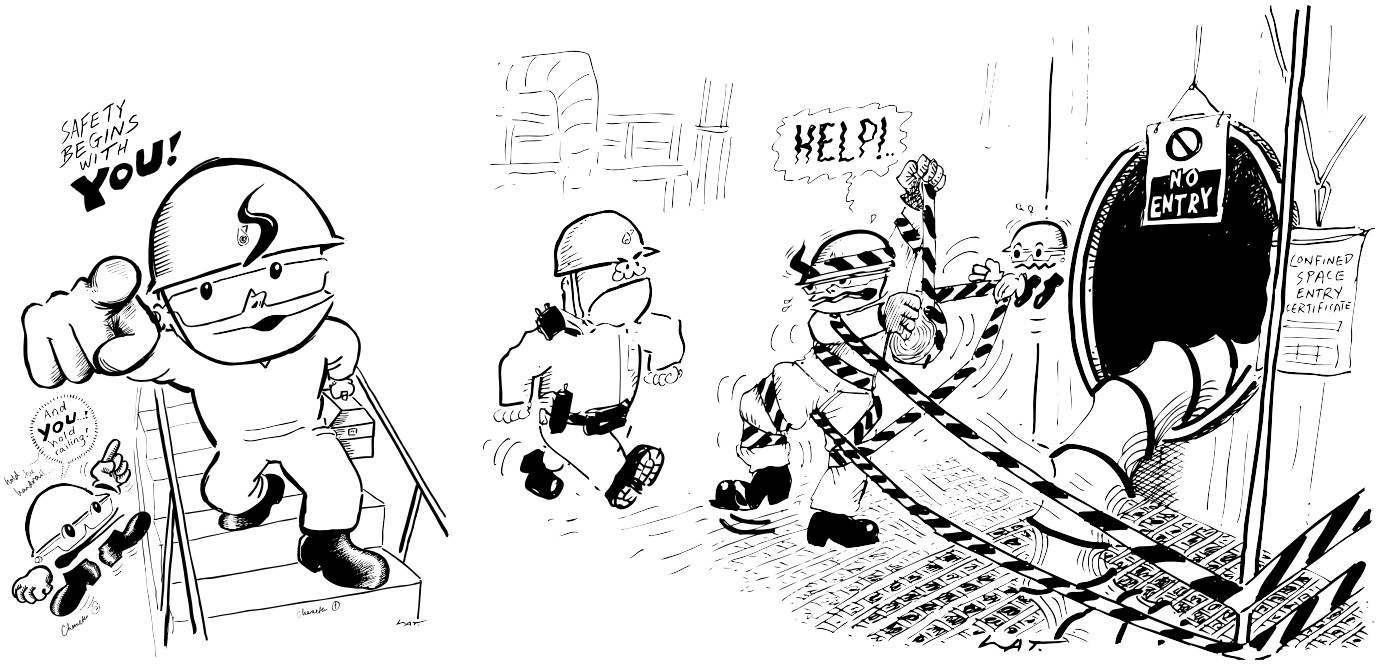
Annual training and reinforcement programmes, such as Highway Emergency Drills, are also held with the relevant authorities to gauge the readiness of drivers and the Emergency Response Teams in cases of product spillage, fire and leakage of petroleum products.

Road tanker

These measures have resulted in a drop in the number of accidents (as a proportion of the number of trips made), most with third-party involvement.

These measures have ensured that not only are all products delivered on time, but that delivery is carried out safely and in accordance with all safety standards.

About 17 fleet managers are bound under these contracts, covering approximately 600 vehicles across the country.



Lat and Group HSE's Safety Campaign

PETRONAS embarked on a unique safety awareness campaign in 2006 with a series of cartoons by Malaysia's renowned cartoonist and social commentator, Datuk Mohd Nor Khalid, better known as Lat. Cartoons can be an effective communication medium, and the cartoonist's widely recognised style and artwork have helped promote safety at the workplace across PETRONAS.

For this on-going campaign, Lat created two characters called Tuah, representing a typical PETRONAS employee, and ZeTo, an acronym for Zero Tolerance which represents Tuah's conscience. The name Tuah is the embodiment of integrity, intelligence and bravery. ZeTo emphasises a safety culture where non-compliance is unacceptable. The cartoons have proven to be a hit among staff every since the launch. We have in our collection over 100 cartoons by Lat on various HSE messages, posters including on safety at petrol stations, calendars distributed to 15,000 staff and a book entitled *The Story of Tuah and ZeTo* that was produced in 2008. The humorous, memorable messages are a constant feature on our corporate intranet as a reminder to staff that safety is everyone's priority.

Occupational Injury and Illness Rates

In 2009, there were 11 fatalities across the Group's operations: seven contractors, one employee and three third-party individuals. These fatalities were the result of workplace accidents including falls from heights and road accidents. We are taking measures to strengthen the implementation and enforcement of the PTS on Contractor Management to address this issue.

Fatal Accident Rate, 2005-2009

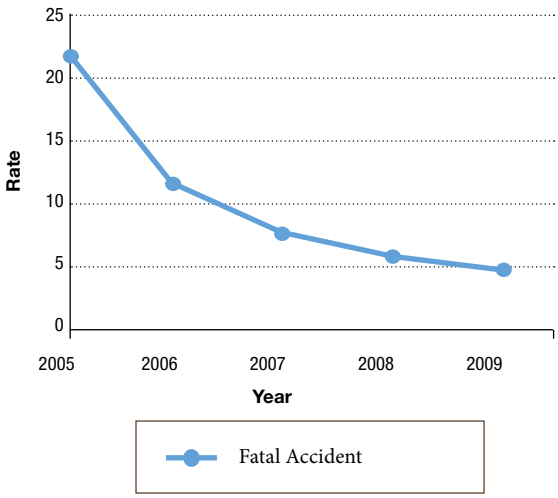
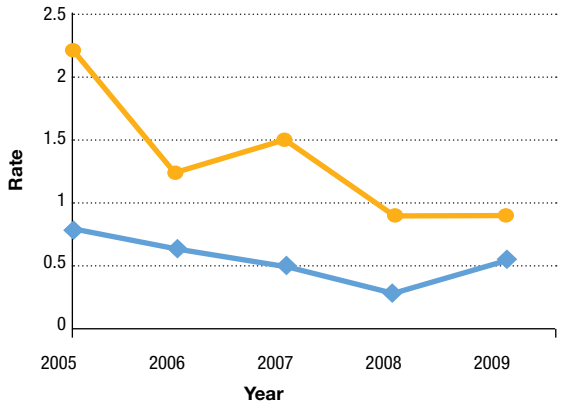


Figure 1.8

Occupational Safety and Health Indicators 2005-2009



TRCF	**2.22**	**1.26**	**1.49**	**0.88**	**0.88**
LTIF	**0.77**	**0.61**	**0.48**	**0.35**	**0.44**

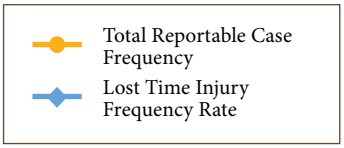


Figure 1.9

Note:

Health and safety indicators are calculated as follows:

Total Reportable Case Frequency (TRCF) = Total Reportable Cases/Total manhours x 10^6

Lost Time Injury Frequency Rate = Number of lost time injuries/Total manhours x 10^6

Fatal Accident Rate (FAR) = Number of fatalities/Total manhours x 10^6

Focus

PETRONAS Carigali Sdn Bhd recorded the lowest Total Recordable Case Frequency (TRCF) rate of 0.81 in 2007, topping the list of 36 members of the International Association of Oil and Gas Producers (OGP) in 2007 in the category of companies engaging the services of contractors (Source: OGP Report 2007). The results were announced in 2008. The average TRCF rate for OGP member companies stood at 2.68, with the results based on the performance of the respective companies and their contractors.

PETRONAS Carigali was 11th in the rankings, for Lost Time Injury Frequency (LTIF) rate in 2007, an improvement from their 15th position in 2006. 10.4 million LTI-free working hours were recorded between 5 September and 17 November 2007. This was achieved on the back of increasing activities in exploration, development and production.

"This was largely attributed to effective supervision with the assignment of permanent HSE officers and enhanced HSE awareness among staff and contractors at the project sites," says PETRONAS Carigali Managing Director and CEO, Datuk Abdullah Karim.

Contractor consulting with PETRONAS Carigali staff at the MMHE fabrication yard in Pasir Gudang, Johor

"Since 2003, we have made it a requirement for contractors to have their own HSE Management System as a mandatory criterion to bid for jobs under PETRONAS Carigali. We have enhanced our HSE risk management and monitored the closure of HSE action items more frequently," says PETRONAS Carigali General Manager of Corporate HSE, Encik Mohd Radzuan Yusof.

The company has continued to develop HSE competency through the implementation of skill group training as well as mandatory development training. It engaged with staff and contractors, and over the last year, PETRONAS Carigali has stepped up unannounced HSE visits by management to the worksites. The HSE Strategy and initiatives were followed through and the HSE plans tracked regularly.

PETRONAS Carigali has been actively involved in OGP since the early 1990s and has submitted its HSE performance data on an annual basis to OGP, since 1996. The Annual OGP reports on HSE performance have allowed PETRONAS Carigali to benchmark its performance against other OGP member companies and helped with the development of its HSE strategic plan.

Note:

TRCF is referred to as Total Recordable Injury Rate or TRIR according to OGP indicators.

$$TRCF = \frac{\text{No. of (Fatality + PPD and /or PTD + LWC + RWC + MTC)}}{\text{Total Manhours (in millions)}}$$

where

PPD = Permanent Partial Disability
PTD = Permanent Total Disability
LWC = Lost Workday Case
RWC = Restricted Workday Case
MTC = Medical Treatment Case

Crisis Management

To ensure the preparedness in response to emergency situations, we have established a Group Contingency Planning Standard (GCPS) in 2007, which provides a set of guiding principles and standards for responding to any emergency or crisis facing the company. The GCPS also delineates roles and responsibilities in situations of crisis.

The information covered under GCPS includes: Emergency and crisis organisation structure; roles and responsibilities; resource management guidelines; a training matrix comprising drills and exercises; notification and communication protocol and an assurance protocol.

Recognising the key role that contractors play in our operations, we have also established a Contractors' Emergency Plan, which is linked to the GCPS. Notification to the public in the case of major emergencies shall be carried out with the police.

At operational level, each operating unit has an Emergency Response Plan (ERP), which has been developed for their specific location based on the GCPS.

Petroleum Industry of Malaysia Mutual Aid Group (PIMMAG)

PETRONAS is mindful of the fact that, despite best efforts, spills can happen, and companies must be prepared to deal with the loss of containment effectively. Hence, in 1993, PETRONAS initiated the Petroleum Industry of Malaysia Mutual Aid Group (PIMMAG), which is open to all companies undertaking upstream and downstream activities in Malaysia. PIMMAG's main objective is to support its members in dealing with oil spills, maintain and operate oil spill response resources, and integrate efforts with government initiatives for the control and cleanup of oil spills. This includes providing oil spill response training and logistic support.

Health

PETRONAS complies with all applicable laws and regulations for a safe and healthy workplace, for employees and contractors. We are committed to support our employees in reducing health risks and maintaining good physical and mental health through the implementation of workplace health programmes, including Health Risk Assessments, Chemical Health Risk Assessments, Medical Surveillance, Fitness to Work Medical Evaluations and Corporate Wellness Programmes.

Our Health Risk Assessment (HRA) process helps us to protect our employees' health by identifying, quantifying and controlling occupational exposures to chemical, physical, biological, psychosocial or ergonomic hazards. HRA is a powerful tool to ensure our workforce remains healthy and protected from workplace health risks.

We also introduced a Corporate Wellness Programme, now at different stages of implementation across our subsidiaries. Participants voluntarily undergo preventive health examinations, participate in fitness activities, weight management programmes, cardiovascular health and other forms of wellness coaching. In 2009, an average of 70-80 per cent of participants across five subsidiaries completed an assessment to gauge their health and identify risk factors.

PGB employees participating in an exercise programme at the workplace

took part. Encouragingly, 42.6 per cent of participants managed to reduce their weight during the competition.

Attendance at regular health talks and participation in exercise programmes are now incorporated into staff key performance indicators (KPIs).

A Baseline Health Surveillance was also carried out in Phase One, giving each employee an update on their health status. Employees underwent periodic medical checkups at dedicated hospitals and clinics.

Phase Two of the Healthy Lifestyle programme focuses on helping employees stop smoking. Employees who smoked, voluntarily participated in a competition to stop smoking, with access to online resources and support groups, as well as receiving assistance from health experts at the International Islamic University, who followed up on participants' efforts to stop smoking, through phone counselling.

In Phase Three, a physical parameters trending exercise will be carried out to assess the health status of PGB's staff. Mental health is the focus in this phase, with stress management programmes being planned. Recognising the need to address health in a holistic manner, aspects of spiritual and financial health will also be given attention. *Al-Falah*, a training programme giving support to staff on their spiritual, physical, mental and financial health will be conducted during this phase.

Focus

PETRONAS Gas Bhd (PGB) started the first phase of its Healthy Lifestyle programmes in 2008, under the theme 'Love My Body, Cherish My Life' and continued with the second phase in 2009. Through these programmes, PGB's employees will have the opportunity to gain knowledge and awareness on healthy lifestyles through exercise, competitions and other activities. A competition was held in 2009, where participants were given four months to show improvements in their health indicators. Participation was high, as 1,843 staff (or 86.4 per cent of PGB's workforce)

AWARDS RECEIVED IN 2009

Chemicals Industries Council of Malaysia (CICM) Responsible Care Awards 2007/08

Category: Petrochemicals

Distribution Code

- PETLIN (Malaysia) Sdn Bhd (GOLD)
- OPTIMAL Group of Companies (SILVER)
- BASF PETRONAS Chemicals Sdn Bhd (MERIT)
- Ethylene Malaysia Sdn Bhd (MERIT)

Community Awareness and Emergency Response Code

- Asean Bintulu Fertilizer Sdn Bhd (GOLD)
- BASF PETRONAS Chemicals Sdn Bhd (SILVER)
- PETLIN (Malaysia) Sdn Bhd (MERIT)
- PETRONAS Penapisan (Melaka) Sdn Bhd (MERIT)

Pollution Prevention Code

- BASF PETRONAS Chemicals Sdn Bhd (SILVER)
- OPTIMAL Group of Companies (MERIT)
- PETRONAS Penapisan (Melaka) Sdn Bhd (MERIT)

Process Safety Code

- PETRONAS Penapisan (Terengganu) Sdn Bhd & Aromatics Malaysia Sdn Bhd (GOLD)
- OPTIMAL Group of Companies (SILVER)
- PETLIN (Malaysia) Sdn Bhd (MERIT)
- PETRONAS Penapisan (Melaka) Sdn Bhd (MERIT)

Employee Health and Safety Code

- BASF PETRONAS Chemicals Sdn Bhd (GOLD)
- PETRONAS Penapisan (Melaka) Sdn Bhd (MERIT)
- Ethylene Malaysia Sdn Bhd (MERIT)

Product Stewardship Code

- BASF PETRONAS Chemicals Sdn Bhd (GOLD)
- PETLIN (Malaysia) Sdn Bhd (SILVER)

PLATINUM AWARDS

BASF PETRONAS Chemicals Sdn Bhd
(*Employee Health and Safety Code*)

Malaysian Society of Occupational Safety and Health (MSOSH) OSH Awards (2007)

Petroleum, Gas, Petrochemical and Allied Sector

- Asean Bintulu Fertilizer Sdn Bhd (Grand)
- PETRONAS Ammonia Sdn Bhd (Grand)
- Petlin (Malaysia) Sdn Bhd (Grand)
- PETRONAS Gas Bhd, Gas Processing Plant, Complex B (Grand)
- Centralised Utility Facilities (CUF) Kertih, PETRONAS Gas Berhad (Grand)
- Centralised Utility Facilities (CUF) Gebeng, PETRONAS Gas Berhad (Gold Merit)
- PETRONAS Gas Berhad, Technical & Facilities Development Division (Gold Merit)
- MTBE Malaysia Sdn Bhd / Polypropylene (Gold Merit)
- PETRONAS Gas Berhad - Transmission Operation Division (Gold Merit)
- PETRONAS Gas Berhad, Export Terminal (Gold Merit)
- PETRONAS Fertilizer (Kedah) Sdn Bhd (Gold Class I)
- PETRONAS Penapisan (Melaka) Sdn Bhd (Gold Class I)
- PETRONAS Penapisan (Terengganu) Sdn Bhd (Gold Class I)
- Aromatics (M) Sdn Bhd (Gold Class I)
- PETRONAS Gas Bhd, Gas Processing Plant, Complex A (Gold Class I)
- MISC Integrated Logistics Sdn Bhd (Gold Class I)
- Malaysia LNG Sdn Bhd (Gold Class II)
- BASF PETRONAS Chemicals Sdn Bhd (Gold Class II)

Services Sectors

Institute of Technology PETRONAS Sdn Bhd (Silver)

RoSPA Occupational Health and Safety Awards (2008)

RoSPA 20 08 GOLD Award

Gold Award

RoSPA Gold Award winners have achieved a very high level of performance, demonstrating well developed occupational health and safety management systems and culture, outstanding control of risk and very low levels of error, harm and loss.

ASEAN Bintulu Fertilizer Sdn Bhd

RoSPA 20 08 MERIT Award

Merit Award

RoSPA Merit Award recognise the winners' commitment and effort in establishing the foundations of health and safety management.

PETRONAS Fertilizer (Kedah) Sdn Bhd

Product Stewardship

Ensuring that products conform to quality and HSE standards and meet the needs of society.

Breakthrough

ECOPLUS™ 105 is a technology breakthrough from PETRONAS

We are committed to making health, safety and environmental protection as an integral part of the product development, handling, usage and disposal.

To ensure a structured and systematic implementation of product stewardship practices across the Group, a Product Stewardship Guideline has been developed in 2008, benchmarked against guidelines from the Chemical Industries Council of Malaysia (CICM), America Chemical Council (ACC) and Plastic and Chemical Industries of Australia (PACIA). The guideline applies to domestic and international operations and is applicable to hydrocarbons and chemicals produced, manufactured and marketed including sales and trading.

A pilot study was conducted at a refinery, PETRONAS Penapisan Melaka Sdn Bhd and a petrochemical plant, Ethylene Polyethylene (Malaysia) Sdn Bhd, to ensure the guidelines are applicable for all PETRONAS businesses. Outcomes from the verification exercise conducted in the pilot study provide input to enhance ongoing efforts in product stewardship implementation across the Group.

ECOPLUS™ 105: A Technology Breakthrough from PETRONAS

PETRONAS introduced the degradable premix resin of high density polyethylene (HDPE) known as ECOPLUS™ 105 in September 2006. Polyethylene in its unaltered form does not easily degrade. ECOPLUS™ 105 was designed to meet the demand for the environmentally friendly plastic products for packaging applications such as carrier, shopping and rubbish bags.

ECOPLUS™ 105 complies with ASTM 883 – 00 on the definition of degradable plastics in terms of the eventual disintegration of the plastic products when exposed to sunlight, ultraviolet, heat and mechanical stress. It degrades when disposed in landfills and does not emit dangerous degradation gases or contribute to groundwater pollution.

The premix resin is also proven to reduce energy consumption as compared to the traditional masterbatch route for similar application.

ECOPLUS™

ECOPLUS™ 105 also complies with the limits for heavy metals in packaging materials as defined in the European Union Directive 04/62/EC and the corresponding US CONEG cases. Similar tests based on FDA regulation (21CFR177.1520) for compliance to food contact requirement is currently undertaken. ECOPLUS™ 105 was awarded Malaysia's First Eco Labelling Certification through its finished product which requires among other things, the degradability performance.

In 2007, PETRONAS' marketing arm, Malaysian International Trading Corporation Sdn Bhd (MITCO), continued with its communication campaign with the objective of expanding market acceptance of the new technology as a solution to environmental conservation.

PETRONAS Polymer Technology Centre (PPTC) is taking ECOPLUS™105 to the next level. Long-term research programmes have been implemented to produce a bio-compostable-type polymer over the next two years. Compostable plastics take a shorter period to completely dissolve in the soil. PPTC is working to include the use of bio-based products in performance requirements. The application of performance plastics extends to among others, the automotive industry.

Product Endorsement

PETLIN (Malaysia) Sdn Bhd, a subsidiary of PETRONAS which produces Low Density Polyethylene (LDPE), has collaborated with one of its customers to ensure it conforms to requirements stipulated by the Japan Hygenic Olefin and Styrene Plastics Association (JHOSPA). PETLIN is a major LDPE producer in Asia. About 80 per cent of its LDPE products are converted to packaging, with most of the final usage for food, or use in contact with food. PETLIN's LD M022X is in JHOSPA's Positive List. This acknowledgement assures consumers that the product is not harmful to health. It also highlights PETLIN's position as a responsible supplier of LDPE.

Societal Needs

Safeguarding human rights within our sphere of influence, contributing to community needs, investing in training and education, promoting arts and sports and conducting our business in a transparent manner.

Merit

Employment opportunities in PETRONAS are based on merit

Award

Platts Global Energy Awards for "The Community Programme of the Year"

In all our social investments, PETRONAS views education and capability building as a top priority. In seeking to enrich the lives we touch, the PETRONAS way is one of active engagement through education, with programmes that cover a full range of human development, including health, the environment, science and technology, arts and culture and sports. The goal is for beneficiaries and participants in these programmes to learn something new that will enrich their lives and empower them with new knowledge and skills.

Engagement through education is a continuous responsibility to progressively, proactively and positively contribute to society. In our efforts, we hope to inspire our partners, employees and stakeholders to participate in our mission to enrich the lives of the people with whom we come in contact daily.

We also recognise the importance of safeguarding human rights within our sphere of influence.

Human Rights

Through our engagement with stakeholders, we understand the importance of addressing human rights issues and safeguarding human rights within our sphere of influence.
With this in mind we developed the PETRONAS Human Rights Training Pack in the second half of 2008 to provide comprehensive training for PETRONAS staff on human rights and to encourage all parties with whom we do business to observe laws and regulations governing human rights across the areas over which we have control. In 2010, we plan to conduct human rights training in all countries where we have major operations.

Promoting Integrity

A reputation for business integrity is one of the most valuable assets a company can possess. At PETRONAS we uphold a high standard of ethical business conduct. Practices to embed business integrity at PETRONAS cover five dimensions:

- Our Corporate Values;
- Our integrity education programme for all employees;
- Codes of business and personal conduct;
- Role modelling of business integrity by Corporate Leaders; and
- Our Corporate Governance framework.

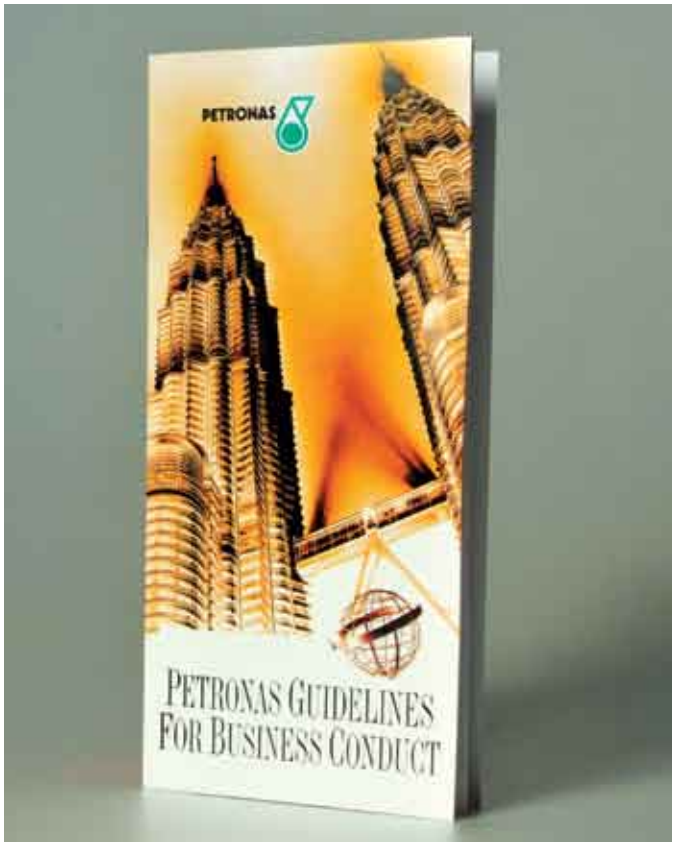
In addition, the PETRONAS Values of Integrity (VOI) programme provides a platform to align PETRONAS staff with our common value system, particularly with regard to the shared value of integrity, to guide their outlook and actions accordingly.

Initiated in 2005, the VOI programme supports the corporate integrity framework which entails four key elements:

- Code of Ethics;
- Reporting Channels;
- Training and Internal Communication; and
- Top Management Examples.

The objectives of the programme are to enhance understanding, conviction and commitment towards the shared value of integrity; to provide a process for enhancing consistency and quality of decision-making related to ethical issues, and to enhance role-model skills through the sharing of experiences among participants.

The learning programme offers a comprehensive insight to the value of integrity. Among the core modules are the PETRONAS shared value of integrity, global and national concerns, organisational challenges on integrity and a decision-making tool.



Focus

In recognition of the work and values of the late PETRONAS chairman, the Institute of Integrity Malaysia (IIM) has established the Tan Sri Azizan Zainul Abidin Integrity Circles for Young Professionals programme (TSAZAIC), launched by Malaysia's Chief Secretary to the Government, Tan Sri Mohd Sidek Hj Hassan in 2007.

The programme targets young professionals from both the public and private sectors in Malaysia to participate in learning courses to foster a common understanding of the meaning and virtues of ethics and integrity. PETRONAS and IIM developed the learning modules jointly and to support the programme, the PETRONAS Management Training Centre (PERMATA) conducts the Train the Trainers workshops for selected TSAZAIC trainers.

TSAZAIC session at PERMATA

Dental services provided by government health staff at our CSI programme in Long Seridan

Indigenous Communities

At PETRONAS we recognise the importance of engagements with local communities. We believe that we have a responsibility to keep local communities informed of our project plans and the implications it may have on their way of life. We also contribute to improving social welfare through sustainable activities, and work with partners including local and government authorities on implementing our community projects.

One such project is the Sabah-Sarawak Gas Pipeline Project (SSGP). The pipeline spans 500 km from Kimanis in Sabah to Bintulu, Sarawak. We initiated a Social Impact Assessment (SIA) with two local universities which enabled us to design more effective engagements with indigenous communities and corporate social investment (CSI) programmes that will benefit the people.

In the SSGP project, we established contact with community leaders from the Berawan, Iban, Kayan, Kelabit, Kenyah, Orang Ulu and Penan communities.

PETRONAS held regular dialogue sessions with the local communities to share details and updates of the project, and the project team and contractors involved were also introduced to the local communities.

From 2007 – 2008, 12 dialogue sessions were held with the various communities. Approximately 50-100 people attended each session.

Below is the list of dialogue sessions held in 2007-2008:-

1	11 July 2007	Long Kevok, Miri	Penan settlement
2	12 Aug 2007	Long Seridan, Miri (also attended by Penan from Long Ludin and Long Belok)	Kelabit/Penan settlement
3	24 Aug 2007	Long Adang, Limbang (also attended by Penan from Long Nyakit, Long Pusit and Sungai Madihit)	Penan settlement
4	27 Sept 2007	Long Latei, Miri	Penan settlement
5	28 Sept 2007	Long Kevok, Miri	Penan settlement
6	29 Sept 2007	Ba'Puak, Miri	Penan settlement
7	29 Sept 2007	Long Si'ang, Miri	Penan settlement
8	29 Sept 2007	Long Kawa, Miri	Penan settlement
9	30 Sept 2007	Long Leng, Miri	Penan settlement
10	27 Nov 2007	Lg Jegan, Miri	Berawan settlement
11	28 Nov 2007	Uma Akeh (also attended by locals from Long Puak and Long Banyok)	Kenyah settlement
12	17 Apr 2008	Long Rayah, Ulu Limbang	Penan settlement

The areas where the pipeline project comes in contact with the Penan are in Baram, Miri and Sg Adang, Lawas. During the dialogue sessions, the communities had the opportunity to inquire about the project and how the community can benefit from it.

Several programmes have already been conducted in both Sabah and Sarawak. As a large section of the pipeline runs through Sarawak, and the communities live largely in scattered, remote areas, many of the CSI programmes will be held in Sarawak. The programmes are planned, and are carried out collaboratively among the regional offices, the SSGP project management team and the contractor.

In Sabah, the CSI plans include training of local youth to obtain possible employment in the oil and gas industry and to support environmental conservation programmes, among others.

A list of CSI activities for 2009 in Sarawak:

Location	Activity
Rumah Pong, Long Lama	Activities in conjunction with Gawai celebration
Rumah Banggau	Activities in conjunction with Gawai celebration
Long Tuma School, Lawas	Petrosains programme
Long Sukang	Engagement session and community programme ▪ Refurbishment of library at Long Sukang School ▪ Refurbishment of community hall ▪ Refurbishment of Long Sukang School hostel ▪ Dental/medical camp
Batu 18 School, Bintulu	Petrosains programme
Long Adang	Engagement session and community programme ▪ Medical camp ▪ National identity card registration ▪ Refurbishment of longhouses
Long Seridan	Community programme ▪ Building gravity feed water system ▪ National identity card registration

Sprucing up the library in Long Seridan as part of PETRONAS' CSI programme

Focus

A CSI activity was carried out in Long Seridan, Miri, Sarawak from 5 to 12 February 2009. This was held as a follow up activity to a dialogue session held there in July 2008 as well as to build a stronger relationship with Penan communities in the Long Seridan area surrounding the Sabah-Sarawak Gas Pipeline Project (SSGP).

A 31-strong team comprising PETRONAS employees involved in the SSGP and staff of government departments visited the area. The objective was to provide national identity card registration services, dental check ups, library refurbishment at the Long Seridan School and engage in social and sports activities with the communities. Some 300 Penan and Kelabit participated in the activities carried out.

Bribery and Corruption

PETRONAS' protocol on Bribery and Corruption is outlined in detail in the PETRONAS Code of Conduct and Discipline. All staff are made aware of this Code as part of their induction training and are required to familiarise themselves with its contents and implications. The Code is available on the company intranet in both Bahasa Malaysia and English and outlines clearly our policies on:

- Avoiding conflicts of interest;
- Avoiding involvement in business where employees or their family have direct or indirect interests;
- Disclosure norms for business activities;
- Prohibition of commission, discounts and secret profits;
- Gifts and entertainment protocols;
- Prohibition of borrowing and other personal transactions with PETRONAS' clients; and
- Relationships with suppliers, contractors and vendors.

Focus

The World Economic Forum Partnering Against Corruption Initiative (PACI) was launched in 2004 as a multi-industry, multi-national initiative to combat global corruption. It is a business-driven global initiative with commitment from top executives. PETRONAS is a signatory to PACI and has committed to PACI's two fundamental actions of zero-tolerance towards bribery and the development of a practical and effective implementation programme. PETRONAS also plays an advocacy role by encouraging its business partners and associates to become signatories of PACI. PETRONAS President and CEO Tan Sri Mohd Hassan Marican is a PACI Board Member and represents the energy industry.

Business Transparency

PETRONAS recognises that transparency and open communication are essential. To this end, we will provide all relevant information as may be required by our stakeholders about our activities, subject only to overriding considerations of business confidentiality.

PETRONAS People

In line with our Guidelines for Business Conduct and our Corporate Sustainability Framework, we strive to provide our employees with a safe working environment, supported by competitive remuneration packages and opportunities for career development. We also adopt clear and effective human resource policies that respect our employees' human rights including labour rights and non-discrimination.

Employees are guided by the Code of Conduct and Discipline which affirms our values of upholding the highest standards of business ethics, through loyalty, integrity, professionalism, and cohesiveness in carrying out the business activities of the company.

We recognise and respect our employees' right of freedom of association and choice of representative organisations to engage in collective bargaining consistent with applicable laws. Contents of the employees' Collective Agreement and the Code of Conduct are accessible to all employees on the PETRONAS corporate intranet.

PETRONAS provides employment opportunities based on merit

Clear Merit-based System

PETRONAS provides employment opportunities based on merit in compliance with all applicable laws and regulations to individuals who are qualified to perform job requirements. Male and female employees have the same salary structure based on job dimension, job performance and year of service.

PETRONAS' in-house Unions subscribe to the Malaysian Industrial Laws and provide avenues for collective bargaining on benefits for our non-executive staff. PETRONAS' total workforce stands at 39,236 people in 2009, of which 27 per cent are women. In terms of management positions, 19.3 per cent are held by women in companies under PETRONAS terms and conditions. We also place importance on developing human capital in our countries of operation, and many host country nationals work at our offices around the world (refer to Figure 1.10).

Proportion of locals versus non-locals for domestic and selected countries

Country	Local	Non-local
Malaysia	97%	3%
Sudan	53%	47%
Vietnam	90%	10%
Myanmar	85%	15%
Turkmenistan	79%	21%
Egypt	45%	55%
Indonesia	86%	14%

Figure 1.10

Monitoring Employee Satisfaction

Employees are encouraged to provide feedback on their workplace experiences through a variety of channels including regular communication sessions between management and the workforce and individual staff appraisals.

We have conducted surveys to gauge indicators such as staff commitment. To maximise the benefit of these surveys and to encourage employees to continue giving their views and perspectives, the managers engage at company wide and business level to communicate the results of the surveys and our responses to all employees. Subsequent intervention programmes are developed by managers and employees to address areas for improvement. PETRONAS will continue to conduct such surveys as part of a continuous process to gauge employee feedback.

Learning and Development

PETRONAS has always focused on developing the professional capabilities and leadership of our people and is committed to train and develop a continuous supply of highly competent workforce with the suitable skill mix to support and sustain businesses. We take a combined learning approach to achieve these goals.

We have development programmes for staff from the beginning of their career in the company to retirement. The Accelerated Capability Development (ACD) programme was implemented across PETRONAS in 2009 to give junior executive staff an opportunity to participate in a streamlined capability development and learning programme.

Non-executive, technical staff have the PETRONAS Competency-based Assessment System (PECAS) for continual assessment for promotion within their career path. Non-executive, non-technical staff have a similar assessment system called NENTCI (non-executive non-technical competency interview).

Our Preparing for Retirement programme aims to help employees approaching retirement age with various aspects of managing a balanced life.

Employee Care and Grievance Systems

The company has formal polices for employee care and for handling grievances. Our confidential employee grievance system is spread over five levels to provide a systematic, structured and efficient system to help employees to resolve concerns and grievances in their workplace. Employees with concerns are given a formal case file for an official complaint.

Labour Practices

At PETRONAS, we believe that businesses have a role to play in the promotion and protection of labour rights. We do not, as a matter of policy and practice, allow any of our operations, parts or infrastructure, to be used in ways that would enable violations of human rights. We encourage all entities with whom we do business to observe laws and internationally-recognised labour rights standards, ensure training and education on labour rights for employees, and to refrain from knowingly employing anyone who has contributed to the violation of labour rights.

Several commitments frame our approach to ethical labour practices. These include employees' collective agreements, our human resources policies and procedures, our HSE policy, the executive handbook detailing entitlements for executives and our Corporate Code of Conduct. In addition, we have strict policies on the prohibition of forced labour, underage employment, discrimination of any form and violations on the right of freedom of association and collective bargaining. Our staff development programmes offer platforms for employee awareness and the provision of information on employees' rights.

Our labour policies and practices adhere strictly to the requirements of labour laws and regulations in each country we operate in.

Community: Education and Human Capital Development

PETRONAS is active in the development of communities in places where it operates globally, assisting people in improving their quality of life through education and capability development programmes. We assist people in acquiring skills so that they can meet the challenges of today and the future.

Focus

PETRONAS is recognised for its commitment to community development, winning the Platts Global Energy Awards in December 2008 in "The Community Programme of the Year" category. The award was conferred due to the proven success of Program Bakti Pendidikan PETRONAS, an education programme held across Malaysia to provide primary school students with academic and psychological skills to overcome low self-confidence and a lack of access to resources. Trained teachers support the programme by conducting additional lessons in English, Maths and Science. Five hundred PETRONAS staff across Malaysia volunteer their time every month as part of the programme to help motivate the children. Launched in 2003, the programme touches the lives of over 3,000 students annually.

Bakti Pendidikan PETRONAS programme at Bukit Pantai primary school in Bangsar, Kuala Lumpur

PETRONAS runs several long-term CSI programmes in Malaysia and in our countries of operation. Among the highlights in 2009 are:

Malaysia

Sentuhan Kasih

This programme aims to help the less privileged during the festive seasons and to promote the spirit of volunteerism among PETRONAS staff. A total of 1,250 less privileged children, families, senior citizens and disabled adults nationwide received personal contributions from PETRONAS staff volunteers. The participants also took part in PETRONAS outreach programmes.

"Dansing Thru Broadway"

This entertainment event, organised by The Ladies' Association of PETRONAS (PETRONITA) raised funds for several organisation including the National Kidney Foundation (Children's Dialysis Programme), Prince Court Medical Centre (Cleft Lip & Palate Deformity Treatment, Musculo Skeletal Treatment for Children and Sayangi Mata Mu programmes), and MERCY Malaysia (humanitarian efforts). The event also supported PETRONAS' programmes for the underprivileged. Showcasing young Malaysian performers, the event raised RM1.2 million for these worthy causes through sponsorships from the various corporations and business institutions.

GALERI PETRONAS

GALERI PETRONAS is open free to the public. The aim is to contribute to the preservation, development and promotion of art and culture in support of nation building and the development of a holistic society. The gallery attracted 88,703 visitors and 2,815 participants took part in outreach programmes in 2008. In the same year, it was voted as the 'Best Culture, Arts & Heritage Experience 2008' in the Expatriate Lifestyle magazine. GALERI PETRONAS also received Anugerah Lokasi Seni & Budaya Terbaik in the Anugerah Pelancongan LIBUR 2008.

PMGP 2009 Children's Engagement Programme

The PETRONAS Malaysian Grand Prix 2009 Children's Engagement Programme (PMGP) was organised to inspire interest in technology and capability development among youth. A total of 935 Science Stream students from 75 secondary schools in Perak and 200 primary school children from five Program Bakti Pendidikan PETRONAS schools participated in activities at Universiti Teknologi PETRONAS and the Sepang International Circuit during the Malaysian F1 Grand Prix season.

PETRONAS-MABA Basketball Programme

Sports can bring people together and this programme promotes the development of basketball by popularising the game among youths to foster closer interaction among races to strengthen national unity. It also aims to identify potential basketball players to represent the country at tournaments.

More than 3,000 youth participated in the competitions and programmes. Twenty per cent of the players from the PETRONAS-MABA (Malaysia Basketball Association) Basketball Academy made it to the national team.

DEWAN FILHARMONIK PETRONAS

The world-class concert hall had issued over 71,000 tickets over the 2007/2008 concert season. Dewan Filharmonik PETRONAS showcased four local and eight international artistes last year and one new work commissioned.

ENCOUNTER

This programme by the Malaysian Philharmonic Orchestra (MPO) aims to increase community awareness, understanding and enjoyment of classical music and to create a framework that generates career opportunities for the younger generation to fulfill their aspirations in becoming orchestra musicians and working in the arts. Some 10,886 students and teachers participated in programmes including:

- MPO Schools' Concert Series;
- MPO Open Rehearsals Series;
- Concert Hall Visits;
- Workshops and Master Classes; and
- Education and Community Outreach Programmes.

SAHABAT PPDa-PETRONAS

This programme seeks to enhance the knowledge, understanding and skills on drug abuse prevention education among students in the country. Sahabat PPDa-PETRONAS (Pendidikan Pencegahan Dadah or Drug Prevention Education) also aims to inculcate positive values among school children, and unite schools and communities in the fight against drug abuse.

A total of 1,600 students graduated from the Sahabat PPDa-PETRONAS Facilitator Course to enhance their leadership and communication skills. PETRONAS volunteer staff and Education Department officers participated in a Training of Trainers session to further enhance leadership and motivational skills to better conduct Sahabat PPDa-PETRONAS activities.

PETRONAS Volunteer Opportunity Programme (PVOP)

Launched in 2006, the PVOP encourages the spirit of volunteerism and provides a platform for PETRONAS staff to use their skills, experience and time to benefit communities through humanitarian relief initiatives.

The programme is done in collaboration with MERCY Malaysia which held disaster training programmes for volunteers. Deployment of volunteers on humanitarian missions in Malaysia and internationally is done also through MERCY Malaysia. The recent mission involved offering assistance to those affected by the Bukit Antarabangsa landslide in Malaysia last year.

Petrosains, The Discovery Centre

Malaysia's first interactive science discovery centre, which opened in 1999 provides a rich and stimulating environment to promote better appreciation of science in a fun and educational way. In 2009, there were 371,976 visitors.

PETRONAS StreetSmart, a regular programme organised by Petrosains, is an interactive exhibition roadshow held to instil safety awareness among students. Among the inititatives carried out are camps for students, Road Safety Club Workshops, National Sketch Competition, Motorcycle Riding Programme and Seat Belt Convincer Programme.

International

Indonesia

- PETRONAS Education Sponsorship- This programme aims to produce Indonesian professionals for the oil and gas industry, and 37 have graduated since 2003. In 2008, 10 students were sponsored with another nine in 2009.

Myanmar

- Since April 2008, PETRONAS Carigali Myanmar has been directly engaged in the Yetagun Socioeconomic development programmes for the underprivileged communities of Kanbauk and Dawei. Activities include Early Child Care Development Centres (EECD), education enhancement centres and scholarship, skills training programmes and family planning programmes.

A computer training course is part of the Yetagun Socioeconomic development programmes

- Myaing-Thar-Yar Village (MYT) Rehabilitation Project: As a responsible corporate citizen, we provide humanitarian assistance and relief to those suffering from natural disasters. Cyclone Nargis, which struck Myanmar in May 2008, was one of the most destructive storms to have hit Asia in decades. In April 2009, as a continuation of the relief effort, and in collaboration with Myanmar's Ministry of Energy, Myaing-Thar-Yar Village was chosen for reconstruction. PETRONAS donated 40 houses together with electricity to the village and more CSI activities are being planned for the future.

Sudan

- The PETRONAS Mobile Library is part of our commitment to education and community building. The programme now has four buses and over 15,000 books. The Mobile Library has so far been visited by over 65,000 students in Khartoum, Southern Juba and Port Sudan in the east. There are trained facilitators for language lessons, story-telling sessions and training workshops to help teachers explore innovative teaching methods.The project is in collaboration with the Khartoum State Ministry of Education.
- School Library Programme – PETRONAS also has a long term programme to aid school libraries in Khartoum with educational material. This programme

complements our mobile library service. So far, the programme has reached 26 school libraries in Khartoum.

- PETRONAS Education Sponsorship – The sponsorship programme aims to produce Sudanese professionals for the country's oil and gas industry and 137 Sudanese Students have chosen to study at Universiti Teknologi PETRONAS since 1998.
- PETRONAS Debate & Quiz Trophy - The PETRONAS Inter-Varsity English Debate Competition (PAVED) annually attracts over 100 students from about 20 universities all across Sudan. More than 1,000 students from over 98 schools have participated in the Quiz.

PETRONAS Mobile Library at Shaheed School for Talent Excellence

Turkmenistan

- The PETRONAS Education Sponsorship programme for students from Turkmenistan has been in place since 1998. In 2009, there were 11 Turkmen scholars studying at UTP.
- A boarding school in Ashgabat and a school in Turkmenbashy have been adopted by PETRONAS Carigali (Turkmenistan) Sdn Bhd in 2009.

Vietnam

- English Language Training Programme – This programme for undergraduates at Vietnamese universities has helped over 90 per cent of participants secure employment. Up to 2008, 760 have participated in the Programme. This year, 300 students have so far participated.
- Natural Science Contest – Between 2006 and 2008, more than 400,000 students have participated in the annual event which helps to inculcate a passion for science.

Institutions of Learning

Universiti Teknologi PETRONAS (UTP)

UTP is a manifestation of PETRONAS commitment to education and contribution to the national vision of Malaysia as a developed knowledge economy. As one of the premier science and technology centres, the university has enrolled 1,222 local and 311 international students in 2009.

PERMATA & INSTEP:

PERMATA (PETRONAS Management Training Centre) and INSTEP (Institut Teknologi Petroleum) are the two learning institutions of PETRONAS Management Training Sdn Bhd, the management and training subsidiary of PETRONAS. PERMATA provides a range of leadership, management and competency development programmes while INSTEP provides specialised training for the oil and gas industry along with specialised courses in HSE specifically within the petroleum industry both international and domestic.

Akademi Laut Malaysia (ALAM), is a maritime academy which is jointly owned and operated by PETRONAS' shipping subsidiary MISC Berhad. The academy is a one-stop maritime training centre for technical, administrative and management education for both sea-based and land-based personnel. In 2009, 670 cadets enrolled at ALAM.

Focus

Sajee Mahamad

Sajee Mahamad's life changed the day she earned her PETRONAS Education Sponsorship to study at UTP. She has the distinction of being in the pioneer batch of students from Thailand to receive PETRONAS scholarships in 2003. Majoring in information communications technology (ICT), Sajee graduated in 2008. She is now working as a Business Information & Research Management Executive, Business Development & Planning Department, Malaysian International Trading Corporation Sdn Bhd (MITCO) in Kuala Lumpur.
"I am the first person in my family to go to university, and I am very grateful for the opportunity. I'm especially happy that the scholarship has helped lighten my parents' financial burden of paying for my education," she says.

Originally from Narathiwat in the south of Thailand, Sajee was among 11 Thais to receive PETRONAS Education Sponsorship to study at UTP. Sajee also received a scholarship offer to continue her studies in Thailand, but opted to study in Malaysia as the country has proven expertise in ICT, her chosen field. Once she got to UTP, she knew she had made the right choice.

"The education I received was impactful, and the facilities were top class. I also received a lot of support from my lecturers who always did their best to help students fulfill their potential. On a social level, UTP has students from other countries and I got a chance to meet and learn about people from other backgrounds and cultures," she says.

Sajee and the other Thai sponsored students went back to their old high school to share their experiences with the students, telling them about UTP, the scholarship and showing them photos, hoping to inspire them to improve their lives through education.

"In Thailand, not many girls take up technical degrees as they think it's traditionally a male domain, but at UTP, I saw a lot of female students taking engineering courses. I hope others will also get the chance to experience life at UTP," she says.

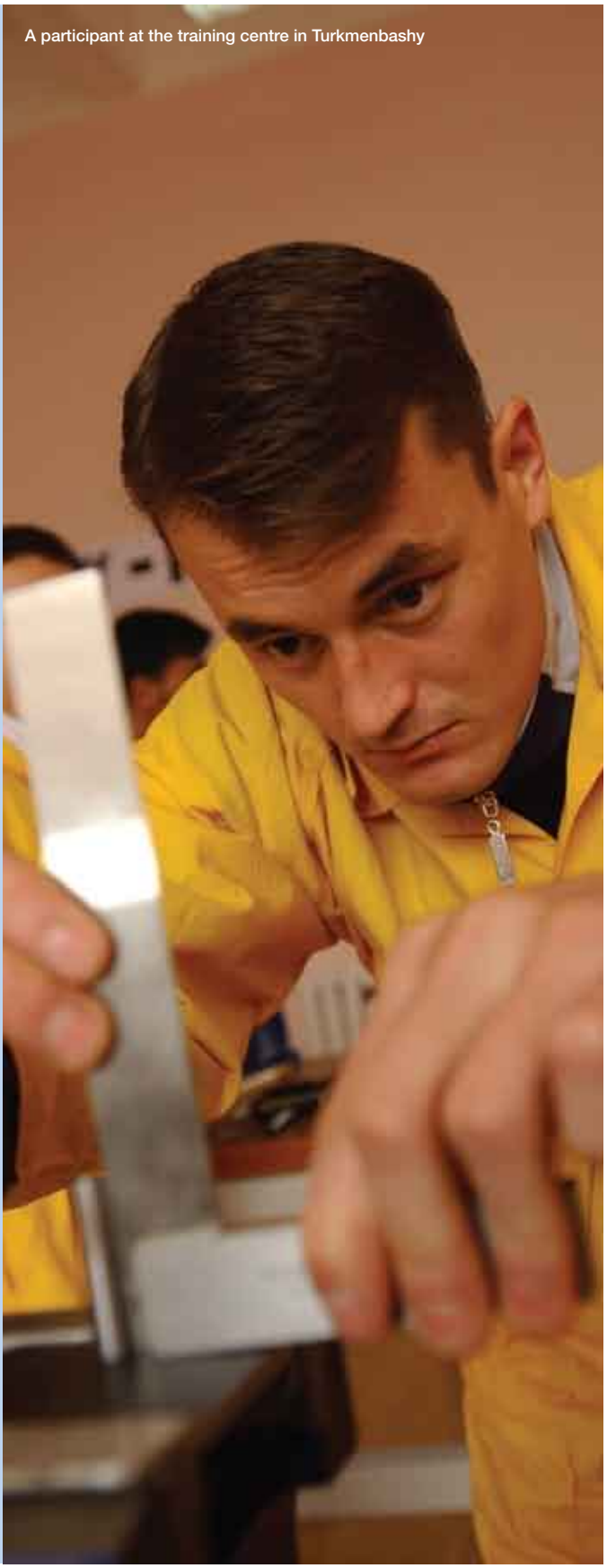
Being a foreign student herself, Sajee's time at UTP was challenging as she had to adjust to living in a different country without her family for the first time. She took up the challenge positively, though, and used the time to improve her English language skills.

"This sponsorship has changed my life. Studying at UTP has given me many opportunities. It has made me and my family really proud."

Focus

The objective of the Turkmenistan Technician Training Programme is to develop highly skilled national staff to operate Turkmenistan's gas production facilities when the gas production is scheduled to come on-stream in 2010. The duration of the programme is 27 months. Training during the first 15 months (Intensive English as well as classroom and workshop practical) is conducted by INSTEP instructors at our temporary training centre in Turkmenbashy, Turkmenistan. Participants will then continue their training in Malaysia which includes six months training at INSTEP, Terengganu and six months on-the-job training at selected oil and gas facilities.

A total of 85 technicians have graduated from INSTEP and another 60 are currently undergoing training in Turkmenbashy. These technicians will be manning our operations for Block 1 facilities in Kiyanly and offshore Caspian Sea. Thirty-four technicians are currently undergoing on-job-training in Malaysia. A total of 41 technicians will also be sent tentatively starting from June 2009. All in, eight technicians have been further trained as line trainers. They are currently working with INSTEP trainers in facilitating and conducting training at our temporary training centre.



A participant at the training centre in Turkmenbashy

Focus

In November 2006, PETRONAS Fertilizer (Kedah) Sdn. Bhd. (PFK) launched the PFK Friends of the Environment Programme (ARAS PFK), aimed at building awareness on the importance of biodiversity protection and conservation amongst communities in the districts of Kuala Muda and Yan in Kedah, targeting students in particular.

ARAS PFK aims to support youth education on sustainable ecosystem stewardship and conservation efforts. A five-year learning module and activity plan has been mapped out involving schools and local stakeholders within a five kilometre vicinity of the PFK fertiliser plant in Gurun, Kedah. Five themes were identified: four on the conservation and protection of rivers, marine parks, forestry and natural resources and one on environmental career prospects.

ARAS PFK has also formed partnerships with the district education department, environment department, irrigation and drainage authorities, marine park authorities, the wildlife department and local universities, collaborating on environmental camps for students.

At these environmental camps, participants were trained in techniques of environmental monitoring, for instance, gathering and evaluating water samples to measure river pollution levels. They also observed the macro-invertebrate species living in clean rivers, comparing these to those in polluted waters. The participants learned to identify the cleanliness of the rivers based on a structured analysis using the Biological Water Quality Index. On another project, they participated in the control of excessive crown-of-thorns population, as part of marine life conservation measures and carried out beach cleaning to protect coral reef growth.

After each field project, students were required to develop and recommend viable conservation and protection projects. An environmental resource corner was introduced at all schools involved, to update students on the progress of their projects. Students were also encouraged to participate in an annual competition promoting the development of innovative and original sustainable solutions to local environmental challenges. The ARAS PFK awards for competition finalists are held every year, during PFK's health, safety and environment day.

In 2008, the programme's focus was on conserving marine ecosystems, particularly coral and mangrove rehabilitation. Students visited and learnt about conservation work at Pulau Payar, Malaysia's largest marine park and its adjacent islands, Pulau Kaca, Pulau Lembu and Pulau Segantang. They learned about preserving ecosystems for shoreline protection, sediment retention, nutrient retention and removal of toxins. The ARAS PFK programme attracted 100 students from 10 schools.

Our Approach to Reporting

Our sustainability reporting is guided by the International Petroleum Industry Environmental Conservation Association / American Petroleum Institute (IPIECA / API) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (April 2005). This index is also cross-referenced with the Global Reporting Initiative (GRI) indicators defined in the Sustainability Reporting Guidelines Version 3.0 (G3).

PETRONAS Sustainability Report: IPIECA/API and GRI Index

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