



ECONOMIC PLANNING UNIT
PRIME MINISTER'S DEPARTMENT
MALAYSIA

Malaysia

Millennium
Development
Goals Report

2015



UNITED NATIONS
MALAYSIA



2015
TIME FOR
GLOBAL ACTION
FOR PEOPLE AND PLANET



UNITED NATIONS
MALAYSIA



ECONOMIC PLANNING UNIT
PRIME MINISTER'S DEPARTMENT
MALAYSIA

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MILLENNIUM DEVELOPMENT GOALS REPORT 2015



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FOREWORD

Malaysia's *Millennium Development Goals Report 2015* is an evidence-based report card of Malaysia's development experience over the period 2000 till 2015. A joint effort of the United Nations Country Team and the Government of Malaysia, it reviews Malaysia's performance with respect to the MDG goals, targets and indicators. Malaysia is proud to have participated in this global initiative.



The *MDGR 2015* presents that Malaysia has achieved most of the goals and targets, and that the benefits of development have been felt at the national, regional, state, and in many cases, community and individual levels. With respect to the supergoal, absolute poverty has been largely eliminated. All school-age children are receiving primary education and most of them would receive 11 years of education. Gender parity has been reached in education. Healthcare outcomes in child and maternal mortality rates are at levels comparable to those in developed countries. In the area of environment, we are making good progress on our pledge to reduce the intensity of growth in our carbon emissions. We have shared our development experience with other developing countries through our Malaysian Technical Cooperation Programme and other South–South cooperation programmes.

Despite our achievements, we acknowledge that many challenges lie ahead if we are to fulfil our goal of inclusive and sustainable development and realize our vision of an inclusive, resilient and sustainable nation, a target we have set ourselves to reach by 2020. These development priorities have been outlined in the 11th Malaysia Plan (2016–2020) adopted by Parliament in mid-2015, and pave an ambitious agenda to ensure that a people-centred development agenda continues to deliver transformational results to all Malaysians.

Some small pockets of poverty remain, and we will intensify our efforts to reach the less fortunate amongst our people. For example, our remote and hard-to-reach communities still have problems in accessing services such as education and healthcare, but we are finding innovative ways to deliver them. There is still room for improvement for women in decision-making positions, both in public and private sectors. We remain committed to conserving our natural

resources and to forging a green development pathway. Policies and laws are being reviewed to ensure that a strong social safety net continues to be in place to ensure that no one is left behind.

These are core components of the next phase of our development journey.

The *MDGR 2015* provides a historical view of our development and gives an insight into our experience over the past 15–25 years. It also informs our future work to continually uplift and enrich the lives of our people. I hope that this Report will be shared with other countries so that they can benefit from our development journey, in terms of both our successes and challenges, and as well, the remaining development agenda that we will need to address both as a nation and collectively as a global community.

The future to 2020 and beyond is full of uncertainties and risks for the world, especially for developing countries. The 11th Malaysia Plan has mapped out our own strategies for facing the headwinds as well as opportunities for Malaysia over the next five years. We will continue to engage with the United Nations and the international community to build a world of nations that will provide safety and security for all countries, and bring about development that is inclusive, sustainable and resilient.

Dato' Sri Mohd Najib bin Tun Haji Abdul Razak
Prime Minister of Malaysia

PREFACE

The Millennium Development Goals, established in 2000 following the adoption of the United Nations Millennium Declaration at the United Nations Millennium Summit, were the first set of developmental goals to be agreed on by leaders of 189 Member States. Now, 15 years later, the MDGs have yielded substantial results. The *United Nations Millennium Development Goals Report 2015*¹ reveals that the concerted push of the MDGs resulted in significant advances in human well-being, as a result of goalsetting by the global community and their demonstrated commitment to meet measurable and timebound targets.



The MDGs helped lift one billion people out of extreme poverty; increased gender parity in education at primary, secondary and tertiary levels; reduced by more than half the rate of children dying before their fifth birthday; enabled a 45 per cent decline in the maternal mortality ratio worldwide; and saved millions of lives through medical and health interventions. Over six million malaria deaths have been averted since 2000 and there has been a notable increase in antiretroviral therapy for people living with HIV from just 0.8 million in 2003 to 13.6 million in 2014. The MDGs have led to the virtual elimination of ozone-depleting substances, and increased access to improved drinking water and sanitation for more than two billion people. In South-East Asia, the rate of extreme poverty has been reduced by 84 per cent and the hunger target met.

These gains were made possible through national and subnational efforts across the globe that focused on achieving the eight goals and the 21 timebound targets of the MDGs². This joint publication of the Government of Malaysia and the United Nations Country Team – *Millennium Development Goals Report 2015: Malaysia* – provides an overview of Malaysia's attainment of the Goals at the national level. It is Malaysia's third and final five-yearly MDG report, and details Malaysia's achievements of its own MDG Plus targets, following Malaysia's proactive decision and action to go beyond the minimum levels of achievement and pursue higher targets that would be appropriate to its level of development.

This Report provides the latest available national statistical data analysed on the basis of sustainability, inclusiveness and resilience and features the interlinkages between the various goals and targets. It also identifies emerging issues and remaining challenges, many of which have been prioritised for action in the country's 11th Malaysia Plan (2016-2020), announced in May 2015; and puts forth recommendations and a forward looking perspective in line with the post-2015 Sustainable Development Goals (SDGs) adopted by the global community of nations in September 2015.

In 1990, Malaysia set itself an ambitious vision to achieve high income and advanced status by 2020, and over the last 24 years, it has moved steadily towards its goal. The country's notable advances in many areas of development, as revealed in this Report, include:

- The reduction of absolute poverty (based on the national poverty line that is two times higher than the MDG convention of US\$ 1.25 per capita) from 16.5 per cent in 1990 to 0.6 per cent in 2014;
- The near universal, at 97.9 per cent, attainment of primary education and 90 per cent secondary education completion rates for Malaysian boys and girls;
- Achievement of the targets of MDG 3, to promote gender equality and empower women, with the exception of political representation of women;

¹ [http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%202015\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%202015).pdf)

² http://www.undp.org/content/dam/undp/library/MDG/UNDG%20MDG%20Country%20Report%20Guidelines_2%20May2013.pdf

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- Reduction of under-five and infant mortality rates to 7.6 and 6.2 per 1,000 live births, respectively. Malaysia's under-five and infant mortality rates are close to the corresponding average rates of 6.0 and 5.0 per 1,000 live births in high-income and developed nations;
- A relatively low maternal mortality rate (23.2 in 2012) and significant increases in the proportion of safe deliveries and antenatal coverage;
- Success in halting and reversing the spread of HIV/AIDS, and lowering the HIV notification rate to 11.6 per 100,000 population in 2014 close to Malaysia's target of 11 per 100,000 population by 2015; and the highest decline in malaria cases in all of Asia and the Pacific;
- Significant efforts in achieving the goal of ensuring environmental sustainability, including elimination of the use of ozone-depleting substances as per the country's targets, improvement in access and benefit sharing of biological resources; maintenance of more than 50 per cent forest cover; provision of clean water and improved sanitation to all communities, which has resulted in good health outcomes; and substantial declines in the number of households living in squatter conditions, especially in urban areas, by 26 per cent between 2009 and 2012; and
- Being an active contributor to the global partnership for development despite being a recipient of Official Development Assistance, albeit to an increasingly lesser degree.

The remaining challenges for Malaysia are primarily at the disaggregated levels. These include, amongst others: persistent poverty amongst the indigenous people of Peninsular Malaysia (Orang Asli) at 30.4 per cent and natives of Sabah and Sarawak at 20.2 and 7.3 per cent, respectively; inequalities between the bottom 40 per cent and the top 20 per cent of the population and vulnerabilities of the retired, unemployed and those who may be increasingly

impacted by natural disasters; last mile issues in efforts to increase female labour force participation from the current 53.6 per cent (2014); and youth unemployment at 10.2 per cent (2014). Notably, the government is addressing these issues by expanding its focus to the relative poor i.e. the bottom 40 per cent and working towards ensuring inclusive development.

In education, the government is rigorously implementing strategies to address issues related to improving quality and reaching the unreached children, including those with special needs. However, emerging issues such as children of refugees, the stateless and the undocumented are an increasing challenge for Malaysia. While gender parity has been achieved in education, challenges include lagging female wages behind those of males; low levels of female representation in Parliament; the prevalence of domestic violence, coupled with serious underreporting by victims for various reasons; and the rise in underaged marriages and pregnancies.

In the area of health, Malaysia continues to strive to address the gaps that exist, particularly in rural and hard-to-reach areas, prevent the reintroduction of certain infectious diseases, and better balance resources between preventive and curative interventions and reduce associated stigmas, particularly in relation to sexual transmission, to further combat HIV/AIDS, and other emerging issues described in this report. The Report highlights Malaysia's ability to contribute to global initiatives to end preventable neonatal deaths, global goals in connection to maternal and child health and ending preventable maternal mortality, and to eliminate tuberculosis by 2050, amongst others.

In ensuring environmental sustainability, there are opportunities for Malaysia to reduce its ecological and carbon footprint and to find newer means and partnerships to conserve and protect its natural resources, as it adopts and commits to achieving the goals and targets of the post-2015 SDGs.

Malaysia's policies, best practices and transformational programmes that have driven much of its progress, some of which can be found in this Report, are a rich resource to be shared with other countries on similar journeys towards sustainable and inclusive national development. Malaysia is an exemplary developing nation in terms of the role it plays in regional and global partnerships for development and has much to offer the world as countries make efforts to operationalise the even more ambitious and wider-scoped SDGs.

The valuable lessons learnt from Malaysia's experience with the MDGs will serve as a springboard for implementation of its 11th Malaysia Plan, which stresses *Anchoring Growth on People*, and helps Malaysia fulfil its commitments under the post-2015 SDGs towards realising a life of dignity for all by 2030. The UN system will continue to support Malaysia's efforts as needed as the country charts its course to 2020, and thereafter to 2030 and beyond.



Michelle Gyles-McDonnough

**United Nations Resident Coordinator for Malaysia
UNDP Resident Representative for Malaysia,
Singapore and Brunei Darussalam
UNFPA Representative for Malaysia**

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EPU

The EPU team was led by YBhg. Datuk Seri Dr. Rahamat Bivi Yusoff (Director-General, EPU) and comprised YBhg. Datuk Allauddin bin Hj. Anuar (Deputy Director-General Sectoral); Mr. Muhamad bin Idris (Director, Social Services Section); Ms. Zakiah binti Jaafar (Director, Macroeconomics); Mr. Azhar bin Noraini (Director, Environment and Natural Resources); the late Mr. Kamarul Ariffin bin Ujang (Director, Distribution); Ms. Noor Lunar Md. Salleh (Director, International Cooperation), as well as the Sabah Economic Planning Unit and Sarawak State Planning Unit.

UNCT

The UNCT MDG Working Group was chaired by Mr. James George of UNDP and comprised members of the UN Country Team, namely Dr. Graham Harrison (WHO); Mr. Rick Towle (UNHCR); Ms. Wivina Belmonte (UNICEF); Mr. Jonathan Gilman (UNEP); Dr. Victor Karunan (UNICEF); Ms. Saira Shameem (UNFPA); Mr. Hairudin Masnin (UNAIDS); Mr. Azfaazam Kasbani (UNDP); Ms. Gan Pek Chuan (UNDP); Mr. Christopher Choong (UNDP); Ms. Maya Faisal (UNICEF); Mr. Nur Anuar Motalib (UNICEF); Ms. Sooksiri Chamsuk (UNIDO); Dr. Paul Soo (WHO); and Ms. Juanita Joseph (Resident Coordinator's Office).

National Steering Committee

The National Steering Committee that provided oversight to the project was jointly chaired by YBhg. Datuk Allauddin bin Hj. Anuar, Deputy Director-General (Sectoral) of EPU and Ms. Michelle Gyles-McDonnough, UN Resident Coordinator for Malaysia, supported by the Social Services Section of EPU and the UN Resident Coordinator's Office, and comprised various sections of EPU; Ministry of Education; Ministry of Health; Ministry of Foreign Affairs; Ministry of Rural and Regional Development; Ministry of Women, Family and

Community Development; Ministry of Natural Resources and Environment; Ministry of Human Resources; Ministry of Agriculture and Agro-Based Industry; Ministry of Urban Wellbeing, Housing and Local Government; Department of Statistics Malaysia; Public Service Department of Malaysia; and the Implementation Coordination Unit of the Prime Minister's Department.

Technical Working Groups

Six Technical Working Groups (TWGs) were established for the various MDG chapters, including a combined TWG for the health related MDGs 4, 5 and 6. Each TWG was co-chaired by a Government official and a member of the UNCT and comprised all the relevant government ministries, divisions and agencies; academia; civil society and other organisations that were directly involved in the preparation of the Report, and provided the relevant data and information to ensure successful development and completion of the Report:

Consultants

The lead consultant in the preparation of the Report was Mr. Chang Yii Tan, who was supported by Ms. Chin Lijin and Ms. Lim Ai Lee of PE Research Sdn. Bhd.

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Copy-editor and proof-reader

The Report was copy-edited by Ms. Patricia Moccia and proofread by Ms. Rhonda Vandeworp.

ABBREVIATIONS

10MP	10th Malaysia Plan
11MP	11th Malaysia Plan
ABR	Adolescent Birth Rate
ADB	Asian Development Bank
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
ASEAN	Association Of Southeast Asian Nations
B40	Bottom 40 per cent
BCG	Bacille Calmette-Guérin
BEMOC	Basic Emergency Obstetrics Care
CDR	Case Detection Rate
CEDAW	Convention on The Elimination of All Forms of Discrimination Against Women
CEMD	Confidential Enquiry Into Maternal Deaths
CEMOC	Comprehensive Emergency Obstetrics Care
CFC	Chlorofluorocarbon
CIDA	Canadian International Development Agency
CO ₂	Carbon Dioxide
CPR	Contraceptive Prevalence Rate
CPUE	Catch Per Unit Effort
CSR	Corporate Social Responsibility
DANIDA	Danish International Development Agency
DOSM	Department Of Statistics Malaysia
DOTS	Directly Observed Treatment, Short — Course
DPT	Diphtheria-Pertussis-Tetanus
DST	Drug-Susceptibility Testing
DWNP	Department of Wildlife and National Parks
EPF	Employees Provident Fund
EPI	Expanded Programme on Immunisation
EPP	Estimation and Projection Package
EPRD	Education Planning and Research Division
EPU	Economic Planning Unit
ETP	Economic Transformation Programme
EPMM	Ending Preventable Maternal Mortality
EXCO	Executive Council
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FELDA	Federal Land Development Authority

FSW	Female Sex Workers
FTZ	Free Trade Zone
G2Z	Getting to Zero Project
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GLCs	Government-Linked Companies
GNI	Gross National Income
GPI	Gender Parity Index
GTP	Government Transformation Programme
HAART	Highly Active Antiretroviral Therapy
HCFC	Hydrochlorofluorocarbon
HIB	Haemophilus Influenzae Type B
HIV	Human Immunodeficiency Virus
HRP	Harm Reduction Programme
IBBS	Integrated Bio-Behavioural Surveillance
IDA	International Development Association
IMCI	Integrated Management of Childhood Illness
IMPACT	International Multilateral Partnership Against Cyber Threats
IMR	Infant Mortality Rate
IRS	Indoor Residual Spraying
ISTIC	International Science, Technology and Innovation Centre
ITN	Insecticide Treated Net
IUCN	International Union for Conservation of Nature
IVM	Integrated Vector Management
JAKOA	Jabatan Kemajuan Orang Asli (Department Of Orang Asli Development)
JAKIM	Jabatan Kemajuan Islam Malaysia (Department Of Islamic Development)
JICA	Japan International Cooperation Agency
KAP	Kurikulum Bersepadu Sekolah Murid Orang Asli dan Penan
KANITA	Pusat Penyelidikan Wanita dan Gender (Centre For Research On Women And Gender)
KB1M	Klinik Bergerak 1 Malaysia
KEDAP	Kelas Dewasa Ibu-Bapa Orang Asli dan Pribumi
KLSE	Kuala Lumpur Stock Exchange
LBS	Live Births
LFPR	Labour Force Participation Rate
LINUS	Literacy and Numeracy Screening
LULUCF	Land Use, Land-Use Change And Forestry
MAC	Malaysian Aids Council
MACA	Malaysia Anti-Corruption Academy
MARA	Majlis Amanah Rakyat (Council Of Trust For The People)
MASSA	Malaysian South-South Association
MASSCORP	Malaysian South-South Corporation Berhad
MCH	Maternal and Child Health

MCHIP	Maternal And Child Health Integrated Programme
MDGs	Millennium Development Goals
MDR-TB	Multidrug-Resistant TB
MITI	Ministry of International Trade and Industry
MMR	Measles, Mumps and Rubella
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOHE	Ministry of Higher Education
MOU	Memorandum of Understanding
MPFS	Malaysian Population and Family Survey
MSM	Men Who Have Sex with Men
MSRI	Malaysian Social Research Institute
MTCP	Malaysian Technical Cooperation Programme
NADA	National Anti-Drugs Agency
NAR	National Aids Registry
NBC	National Biodiversity Centre
NBOS	National Blue Ocean Strategy
NC2	National Communication 2
NDP	New Development Policy
NDRA	National Drug Regulatory Authority
NEM	New Economic Model
NEP	New Economic Policy
NGO	Nongovernmental Organization
NICU	Neonatal Intensive Care Unit
NMCP	National Malaria Control Programme
NPCB	National Pharmaceutical Control Bureau
NPP	National Physical Plan
NPW	National Policy on Women
NSP	National Strategic Plan
NTP	National TB Control Programme
NWRP	National Water Resources Policy
NVP	National Vision Policy
ODA	Official Development Assistance
ODP	Ozone-Depletion Potential
OECD	Organisation for Economic Co-Operation and Development
OIC	Organisation of Islamic Cooperation
OIC-CERT	Organisation of the Islamic Cooperation - Computer Emergency Response Team
OPP	Outline Perspective Plans
OPV	Oral Poliovirus Vaccine
OSCC	One-Stop Crisis Centre
PADU	Education Performance and Delivery Unit

PASS	Parents Assuring Students Success
PEKERTI	National Policy on Reproductive Health and Social Education
PHP	People Housing Programme
PISA	Programme for International Student Assessment
PHCV	Primary Healthcare Volunteers
PLC	Public Listed Company
PLI	Poverty Line Income
PMR	Lower Secondary Evaluation
PMTCT	Prevention of Maternal to Child Transmission
PPP	Purchasing Power Parity
PROSTAR	Program Sihat Tanpa Aids untuk Remaja
PROTIM	Program Pemulihan 3M (Membaca, Menulis Dan Mengira)/ 3M Rehabilitation Programme (Reading, Writing And Counting)
PSKOA	Strategic Plan for Orang Asli Development
PT3	Pentaksiran Tingkatan 3 (Form Three Assessment)
PWID	People Who Inject Drugs
QPS	Quarantine and Preshipment
SARS	Severe Acute Respiratory Syndrome
SBA	School-Based Assessment
SDGS	Sustainable Development Goals
SME	Small and Medium Enterprises
SKM	Sijil Kemahiran Malaysia
SSC	South-South Cooperation
SSME	Sulu Sulawesi Marine Eco-Region
STIS	Sexually Transmitted Infections
TB	Tuberculosis
TBA	Traditional Birth Attendant
TBIS	Tuberculosis Information System
TFM	Teach For Malaysia
TG	Transgender
TPPA	Trans Pacific Partnership Agreement
TIMSS	Trends in International Mathematics and Science Study
TT	Tetanus Toxoid
TWG	Technical Working Group
U5MR	Under-Five Mortality Rate
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund

UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UPEN	Unit Perancang Ekonomi Negeri (State Economic Planning Unit)
UPSR	Primary School Achievement Test
USAID	United States Agency for International Development
WCIT	World Congress on Information Technology
WHC	World Heritage Committee
WHO	World Health Organization
WTO	World Trade Organization

INTRODUCTION

Malaysia has long been committed to human development. In the early years of independence, agendas such as poverty eradication, expansion of education and health facilities, especially in rural areas, were already priorities in our national development. In 1991, Malaysia set forth the national ambition of becoming a fully developed country by 2020, economically, politically, socially, spiritually, psychologically and culturally. The roadmap to achieve this ambition lies in various policies over the years, and also in the recently launched 11th Malaysia Plan (11MP, 2016-2020), whose theme is “anchoring growth on people” for a socially inclusive society.

On many fronts, Malaysia’s ambition coincides with the aspirations of the eight Millennium Development Goals (MDGs) whose core is the advancement of human well-being. Over the course of the 15 years since the MDGs were adopted at the Millennium Summit in 2000, Malaysia has documented its progress and experience with the MDGs through two Country Reports in 2005 and 2010. They analysed the achievements at subnational levels with the intention to identify the development issues that remained unresolved at those junctures. The 2005 and 2010 Country Reports provide the historical background for this year’s Report.

Key findings from these reports showed that Malaysia had achieved relatively good development outcomes, such as in eradicating extreme poverty, achieving close to universal primary education, and reducing infant mortality. Building on these achievements, Malaysia then moved beyond the basic targets of the MDGs and pursued more ambitious targets and addressed other development concerns in the spirit of the MDGs. In this sense, Malaysia has been pursuing a MDG Plus (MDG+) development agenda.

The Millennium Development Goals Report 2015: MALAYSIA is the final report of Malaysia’s experience with the MDGs. It analyses the performance and experience as well as the outcome of development efforts at the national level over the past 15 years in relation to the MDGs. As the final report, it is also an opportunity to explore the unfinished business from the MDGs to inform future development agendas, especially with the Sustainable Development Goals (SDGs) set to replace the MDGs after 2015.

This review of Malaysia’s MDG experience focuses on three underlying themes: sustainability, inclusiveness and resilience. Because Malaysia has already reached a high level of human development advancement, it is pertinent that our achievements be sustained in the future (sustainability); that we can withstand and recover from future challenges (resilience); and that we leave no one out (inclusiveness). This is also in line with the fundamental themes of the 11MP.

The report first provides the background of the country in order to better appreciate the achievements made in the context of the challenges faced by our society and the resources that we have on hand. The description of the country background is available at the end of this introductory chapter together with a summary of the progress made for each MDG. Following chapters are dedicated to each MDG with more detailed analysis and discussion on the progress, experience and remaining issues from the goal. Lastly, the report also has a chapter on the post-2015 agenda to highlight issues of concern for Malaysia in moving forward.

THE MILLENNIUM DEVELOPMENT GOALS

In September 2000, the Millennium Development Goals (MDGs) were adopted by all countries in the United Nations system, which took a bold step towards ending poverty while also promoting the empowerment of women, environmental sustainability as well as access to healthcare and education within a context of global partnership. The core of this development agenda is human well-being. In total, eight goals were adopted with 18 time-bound targets monitored through 48 indicators.

MDG 1 is concerned with ending poverty, especially absolute poverty and hunger.

MDG 2 looks at universal primary education, for boys and girls, as it is the foundation upon which further learning and awareness is established.

MDG 3 explores gender inequalities and women's empowerment, especially since women play key but different roles in the development of their families, communities and societies.

MDG 4 looks specifically at child deaths.

MDG 5 looks at maternal health, including sexual reproductive health.

MDG 6 focuses on infectious diseases, in particular HIV/AIDS, malaria and tuberculosis.

MDG 7 considers the ability of the environment to continuously support human well-being and development.

MDG 8 focuses on global partnerships that contribute towards development outcomes and which can be shared globally.

These are not “silo” goals. Rather, strong interlinkages exist between them. For example, women's empowerment is closely linked to success in poverty reduction, reducing child deaths and better maternal health, which results in a safe, sustainable and healthy environment for themselves, their families and their communities. Their empowerment in turn is largely linked to access to education.

The targets of the goals, where they are specified, are not static. Rather, they are focal points that anchor our efforts towards development. Indeed, the MDGs were built upon the broadest possible consensus. Nevertheless, they provided simple, clear, engaging and understandable objectives that countries could pursue for the development of their people and society.

On that note, the global targets were to inspire accelerated human development, instead of dictating which development issues to pursue. Countries could adapt, and not merely adopt, the goals and targets into their local context. In fact, the MDGs themselves posed different levels of challenge to countries, given the difference in development status, background and circumstance. In consideration of this, the means, strategies and development models for achieving the MDGs were, to a large extent, deliberately unspecified.

Since the adoption of the MDGs, Country Reports have been used as a means to monitor the progress of the MDGs. These reports documented the achievements, challenges, lessons learnt and way forward for the country. Important on an international front, these reports also serve as important exercises for the country to reflect on its own development – to recognise what has been achieved and what remains to be done. As 2015 marks the target year for the MDGs, the country reports are no longer only a tool for tracking performance or documenting experience but an invaluable contribution to inform the discussions for future human development.

THE MALAYSIA MDG REPORT 2015 PROJECT

The preparation of this national MDG Report 2015 (MDGR 2015) was jointly led by the Economic Planning Unit (EPU) under the Prime Minister's Department and the United Nations Country Team (UNCT) in Malaysia through a National Steering Committee, and involved relevant government ministries and agencies, state economic planning units (UPENs), nongovernmental organizations (NGOs), university research groups, and experts. The UNCT formed a MDGR 2015 Working Group (MDGR 2015 WG) in 2014 chaired by the United Nations Development Programme (UNDP) and supported by the UN Resident Coordinator's Office, to coordinate the technical and financial contributions of UN agencies to Malaysia's final MDG report. Members of the MDGR 2015 WG, UNDP, World Health Organization (WHO), United Nations Children's Fund (UNICEF) and United Nations Population Fund (UNFPA) – also co-chaired the Technical Working Groups (TWGs) for the various MDG chapters together with government counterparts, namely EPU, Ministry of Health, Ministry of Education and Ministry of Women, Family and Community Development.

The co-chairs of the TWGs were also members of the National Steering Committee, which was jointly chaired by the Deputy Director General (Sectoral) of EPU and the UN Resident Coordinator. In total, more than 30 agencies and departments of government, as well as other relevant stakeholders and experts were involved through the various TWGs in developing the MDGR 2015.

A key member of several of the Technical Working Groups (TWGs) was the Department of Statistics Malaysia (DOSM), which was the main source of data. DOSM assisted in the computation and compilation of the statistical indicators and checked the data presented in this Report. Other data came directly from the sources that collected them, e.g., the Ministry of Natural Resources and Environment and its line agencies, NGOs, and also from analyses done in the two previous MDG reports on Malaysia in 2005 and 2010. Both the 2005 and 2010 reports had provided good descriptive and analytical perspectives on the Malaysian experience with the MDGs.

MALAYSIA'S DEVELOPMENT JOURNEY

This section provides an understanding of the development process in Malaysia, particularly a historical analysis from post-independence till 2000, the start of the MDG framework. This background will enable the reader to appreciate the achievements that have been made.

National setting

Malaysia is an upper middle income country with per capita income of RM36,937 (US\$10,796). It comprises 11 states in Peninsular Malaysia, three federal territories and the Borneo states of Sabah and Sarawak, and is a

country of diversity with its multi-ethnic, multicultural and multilingual population. The land area is 330,183 square kilometres. Sabah and Sarawak have 60 per cent of the land but only 20 per cent of the population. In 2010, the population in Malaysia of 28.6 million comprised:

- 50.1 per cent Malays;
- 11.7 per cent Other Bumiputera;
- 22.5 per cent Chinese;
- 6.7 per cent Indians;
- 0.8 per cent Others (Malaysians); and
- 8.1 per cent non-citizens.

³ Malaysia, Economic Planning Unit (2015). *Eleventh Malaysia Plan (2016-2020)*.

⁴ Data from Ministry of Natural Resources and Environment, Department of Survey and Mapping Malaysia, 2015.

⁵ DOSM. *Population and Housing Census 2010*. Note that this is an official revised mid-year estimate.

The Other Bumiputera comprise the indigenous people of Peninsular Malaysia (Orang Asli), Sabah and Sarawak. The Malays and the Other Bumiputera are jointly referred to as the Bumiputera. The category of Others refers to Malaysian citizens who do not fall under the main ethnic categories such as those with Siamese or Portuguese roots.

At the time of independence in 1957, the ethnic groups had distinct identities. The Malays were largely concentrated in the rural areas in smallholder agriculture, but they were also represented in government, the police and the armed forces. The Indians were largely in the plantations and also in professional services in the government, while the Chinese dominated trade and commerce. Due to the colonial legacy, a small group of foreigners controlled the corporate sector, largely plantations and tin mines. At the time Malaysia was formed in 1963, the people in Sabah and Sarawak, comprising linguistically distinct groups, were mostly concentrated in rural and remote settlements, where they were self-sufficient in living off the land and natural resources.

National policies

Malaysia has practised centralised economic planning since independence, working at two levels: five-year plans (the Malaysia Plans) and 10-year plans (the Development Policies). Each policy covers two five-year plans. **Table I.1** shows the series of 10-year plans since 1971, when they were first introduced. Since then, there have been four policies, with the first being the New Economic Policy (NEP) and the latest being the National Transformation Policy or more popularly, the New Economic Model (NEM).

In 1971, Malaysia formulated the New Economic Policy (1971-1990) with National Unity as the main objective with a two-prong strategy: (1) to reduce and eventually eradicate poverty by raising income levels and increasing employment opportunities amongst all Malaysians, irrespective of race; and (2) to restructure Malaysian society to correct economic imbalances so as to reduce and eventually eliminate the identification of race with economic function. It was based on the philosophy

of growth with equity. The success of the NEP was predicated upon rapid economic growth so that poverty reduction and restructuring of society did not require reallocation of existing wealth, but rather would result from an expanded economic pie.

The subsequent National Development Policy (1991-2000) followed essentially the same philosophy of growth but with slightly different emphasis, i.e. to eradicate hard-core poverty. The private sector was seen as the engine of growth. Emphasis was placed on human resource development as a primary instrument for achieving the objectives of growth and distribution.

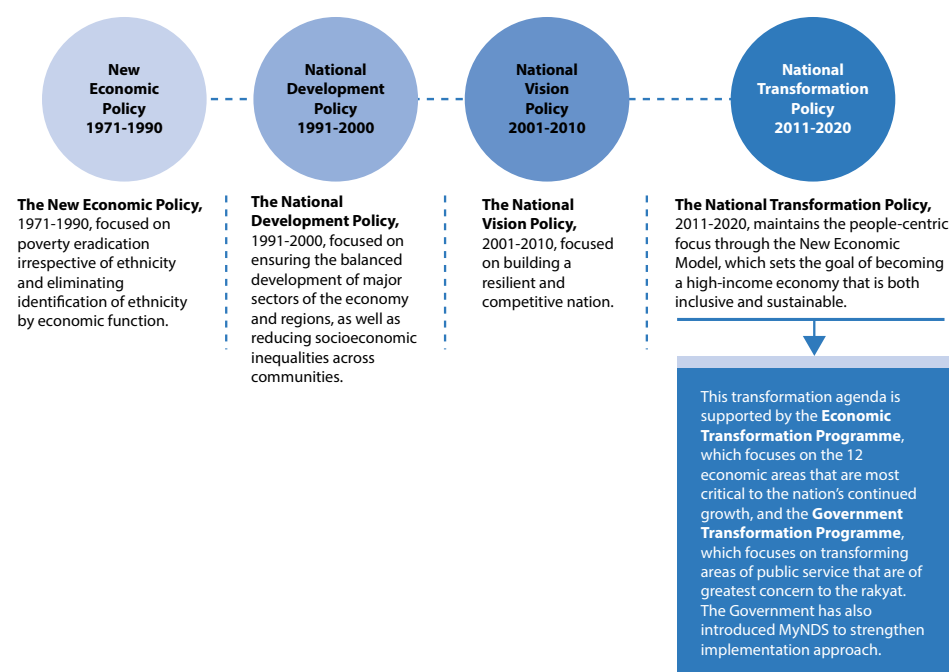
In 1990, Vision 2020 was announced. Its ambition was for Malaysia to become a developed country by 2020. The initial paper by the Prime Minister envisaged a fully developed status embracing all dimensions of economy, social justice, political stability, national unity and social cohesion, quality of life, social and spiritual values, national pride and confidence. In moving towards these goals, the emphasis was on human resource development, export-led growth and industrial diversification, low inflation and private-public partnerships.

The National Vision Policy (NVP, 2001-2010) built upon and maintained the efforts of the NEP, NDP and incorporated the Vision 2020 objectives of transforming Malaysia into a fully developed nation. It emphasized the need to build a resilient and competitive nation as well as an equitable society to ensure unity and political stability.

A major change in development strategy is seen in the NEM. Introduced in 2009, the three main goals of the NEM⁶ are high income (US\$15,000 to US\$20,000 per capita), inclusiveness (enables all communities to fully benefit from the wealth of the country), and sustainability (meets present needs without compromising future generations). The quality of life of the Malaysian people is the ultimate objective of the NEM. This policy laid out a roadmap with radical strategies to achieve the goals of Vision 2020 through four pillars that included the 1Malaysia concept, a Government Transformation Programme (GTP), Economic Transformation Programme (ETP), and the 10th Malaysia Plan (10MP).

⁶ National Economic Advisory Council (2009). *New Economic Model for Malaysia*, Putrajaya.

Table I.1:
Overview of Malaysia's development planning framework



Note: MyNDS – a planning technique used in the 11MP for the preparation of programmes and projects that stresses on optimal usage of limited resources, and focuses on high-impact projects at low cost including efficient and rapid implementation.
Source: Malaysia, Economic Planning Unit (EPU), Eleventh Malaysia Plan (2016-2020)

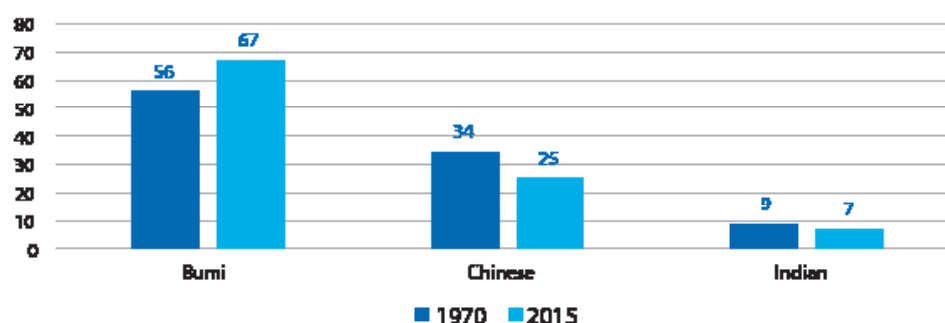
Socioeconomic and demographic trends

5

The population of Malaysian citizens has grown from 10.4 million in 1970 to 26.0 million in 2010. Among Malaysians, the Bumiputera share of the population rose from 56 per cent in 1970 to 67 per cent in 2010, while there were declines in the share of the Chinese from 34 per cent in 1970 to 25 per cent in 2010 and Indians from 9 per cent in 1970 to 7 per cent in 2010 (**Figure I.1**). In 2015, there were 2.07 million migrant workers. Although

migrant workers are found across the country, they comprise one quarter of Sabah's population compared to only 5 per cent to 6 per cent in Sarawak and Peninsular Malaysia. They help to fill labour shortages due to the expansion of plantations in rural areas and a high level of economic activity in urban areas.

Figure I.1:
Population distribution by ethnic group, 1970 and 2010

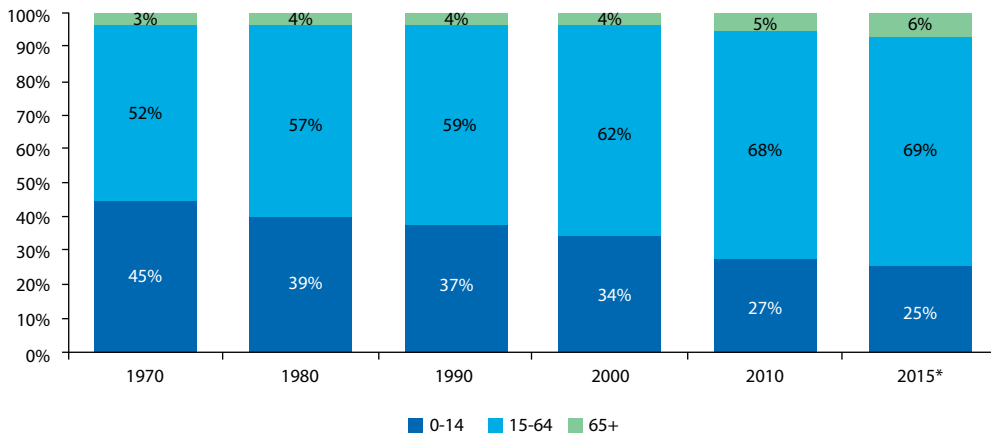


Source: Malaysia, DOSM, Population and Housing Census, various years

Urbanisation has been tremendous, due to rural-urban migration over the past five decades. In 1970, only 27 per cent of the population lived in urban areas but by 2015, urbanisation had reached 74 per cent at the national level, with variations by state from 47 per cent in Kelantan to 94 per cent in Penang. States on the west coast of Peninsular Malaysia were more urbanised than those on the east coast. Since 1991, the net population increase for the country has been in the urban areas.

In terms of age structure, Malaysia had a “demographic dividend” with proportionately more people in the working age category compared to the young and old dependents (**Figure I.2**). In a growing economy this is considered a blessing. The working age group increased from 52 per cent of the population in 1970 to 68 per cent in 2013 (**Figure I.3**). Concomitantly, the dependency ratio dropped from 91 per cent to 46 per cent in the same period, thus increasing the size of the labour force.

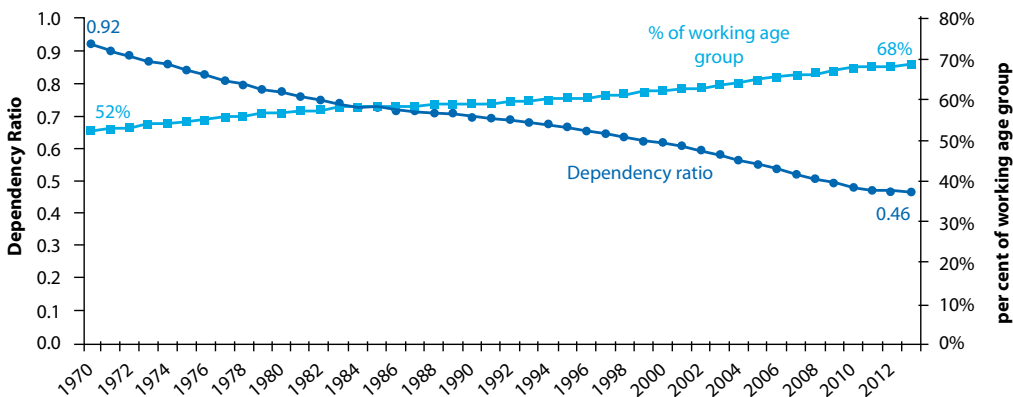
Figure I.2:
Population distribution by broad age groups, Malaysia, 1970–2015



Note: * Population projection based on the Population and Housing Census of 2010, adjusted for under enumeration
Source: Malaysia, DOSM, Malaysia Economics Statistics, Time Series 2013 and EPU, 11th Malaysia Plan 2016-2020

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Figure I.3:
Dependency ratio and percentage of working age group, Malaysia, 1970–2013

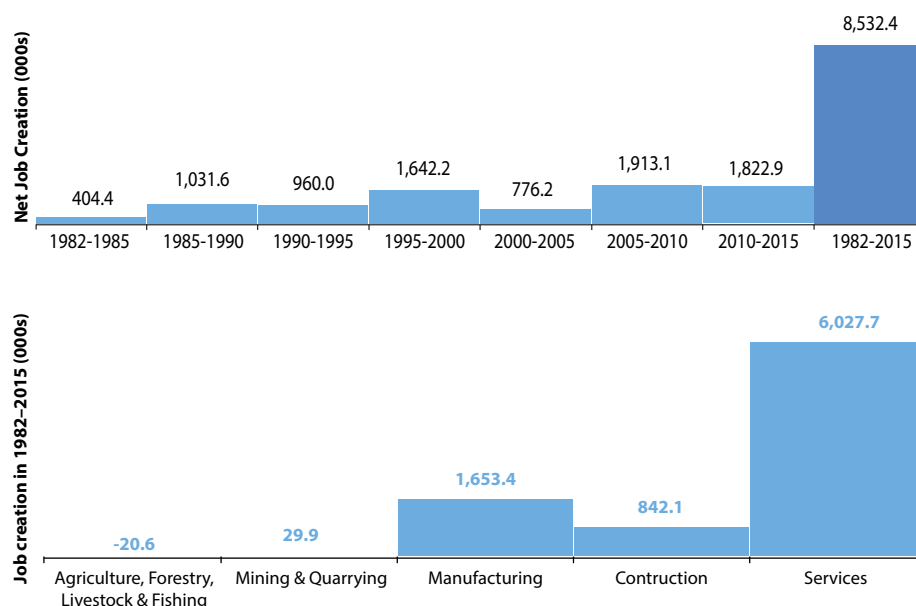


Source: Malaysia, DOSM, Malaysia Economics Statistics, Time Series 2013

The development strategy since 1970 has been to eradicate poverty through job creation. In the rural areas, forests made way for plantations, with the government leading in land as well as social and economic development. Started in 1956, the Federal Land Development Authority (FELDA), the largest of the government land corporations, developed 853,313 hectares in 275 land schemes for 113,000 settlers⁷. Using a corporate approach, FELDA raised the productivity of the farms. Other federal and state land development agencies also contributed to the rural transformation. Landless farmers were given priority. In the urban areas, the strategy was industrialisation, especially through foreign direct investment (FDI) and free trade zones (FTZs), as well as service sector development. The challenges for urban job creation were greater due to

rural–urban migration. Between 1982 and 2014, 20 per cent of the new jobs were in the manufacturing and 30 per cent in the trading sectors. The outcome: 6.5 per cent real economic growth (1970-2010)⁸; about 8.53 million new jobs were created (1982-2015), as shown in **Figure I.4**. Malaysia had a structural transformation of its economy, especially in the export sector where manufactured exports rose 22.4 per cent in 1980 to 85.2 per cent in 2000 but moderated to 76.7 per cent in 2014, as shown in **Figure I.5**. Resource rents from natural capital, particularly the oil and gas sector, helped to provide the foundation for generating economic wealth. Unlike other resource-rich countries, prudent macro-economic management helped channel the resources towards capital spending rather than consumption⁹.

Figure I.4:
Job Creation between 1982–2015 and by Sector



Sources: calculated by UNCT based on the following sources

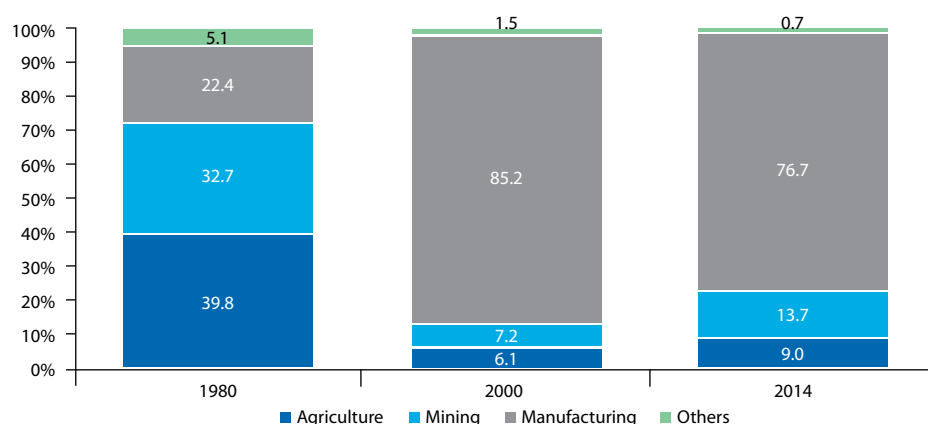
1. Malaysia, DOSM, Labour Force Survey Time Series 2013
2. Malaysia, EPU, Eleventh Malaysia Plan 2016-2020 (data for years 2010 and 2015)

⁷ YM Raja Muhammad Alias Raja Muhammad Ali. "Nation Building: The FELDA Model", found in http://www.unirazak.edu.my/tpl/upload/files/tarls/tarls3_felda_model.pdf. (accessed 28 May 2015).

⁸ Calculated by UNCT based on DOSM, Malaysia Economic Statistics Time Series 2013.

⁹ <https://www.imf.org/external/np/seminars/eng/2013/timor/pdf/RRahuman-PPT.pdf>

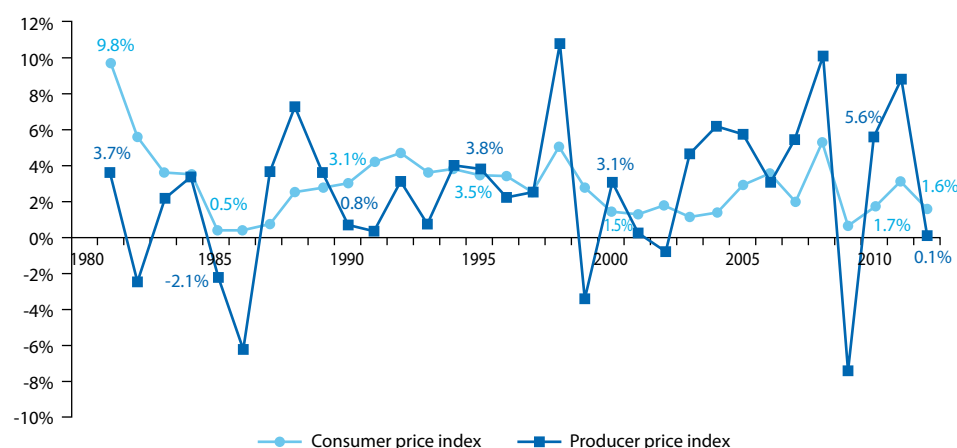
Figure I.5:
Structural transformation of the export sector, Malaysia, 1980, 2000 and 2014
(per cent share)



Source: UNCT/EPU, Malaysia Millennium Development Goals Report 2005 (MDGR 2005); Malaysia, EPU, Eleventh Malaysia Plan 2016-2020

Another important component of the development strategy was low inflation through price control especially on basic goods and services, and subsidies in public goods such as education, healthcare, public transport, water and electricity. In the consumer price index, more than half the items that comprise basic food items, such as rice, cooking oil, flour and sugar, were under price control.

Figure I.6:
Annual change in consumer and producer prices, Malaysia, 1980–2012 (per cent)



Source: Malaysia, DOSM, Malaysia Economics Statistics, Time Series 2013

The priorities of the Federal Government were reflected in the sectoral development expenditures, first emphasizing social priorities and then shifting to economic priorities as the social targets were met.

Table I.2: Federal Government development expenditure by sector, Malaysia, 2000–2014
(per cent of total development expenditure)

Sector	Percentage of total development expenditure (%)				
	2000	2005	2010	2013	2014*
Social services	39.6	24.4	39.4	25.8	24.6
Education	25.4	12.2	22.8	15.3	11.5
Health	4.6	4.0	7.2	4.1	4.0
Housing	4.3	3.5	2.5	2.0	2.2
Others	5.4	4.6	6.9	4.4	-
Economic services	41.7	49.0	49.5	58.4	63.4
Agriculture and rural development	4.2	8.1	5.5	6.4	7.3
Public utilities	5.4	-	-	-	-
Trade and industry	13.1	10.5	13.2	14.8	13.5
Transport	17.4	25.1	16.4	19.3	19.3
Communication	0.8	-	-	-	-
Others	0.6	-	-	-	--
General administration	10.4	10.9	3.6	4.8	2.6
Security	8.3	15.7	7.5	11.0	9.4
Total (RM million)	27,941	30,534	52,797	42,210	42,222

Note:

* Revised estimates

Source:

1) 2000: MDGR 2005

2) 2005-2014: MOF, Economic Report, various issues

SUMMARY OF MDG ACHIEVEMENTS

Achievements made by Malaysia thus far have been founded on the national policies and visions described above. The common philosophy is growth with equity. The strategy was employment generation through industrialisation in the 1970-1990 period, and thereafter an orientation towards post-industrial development. All the while, developments were complemented by appropriate government expenditures in stimulating

growth, creating employment and also a price control strategy and public subsidies, which resulted in low inflation, thus enabling people to enjoy development.

Table I.3 shows Malaysia's MDG achievements from 1990 to 2015 or where data are available. Further details and performance in MDG+ agendas are provided in individual chapters.

Goals and targets	Indicators for monitoring progress	Malaysia's progress (Aggregated)			Notes
		1990	2009	2014	
Goal 1: Eradicate extreme poverty and hunger					
Target 1.a: Halve, between 1990 and 2015, the proportion of people whose income is less than US\$ 1 a day	Proportion of population below US\$ 1 (PPP) per day (Poverty rate)	16.5 % (1989)	3.8 %	0.6 %	Poverty incidence has been halved for all states. As of 2014, all states have poverty rate of less than 1 per cent except Sabah and WP Labuan. Sabah's poverty rate was 4.0 per cent (2014).
	Poverty gap ratio	3.75 %	0.80 %	0.1 %	
	Share of poorest quintile in national consumption	5.00 %	5.10 %	NA	
Target 1.b: Achieve full and productive employment and decent work for all, including women and young people	Growth rate of GDP per person employed	10 %	14 %	2.4 %	Female labour force participation rate increased to 53.6 per cent (2014). Youth unemployment decreased to 11.9 per cent (2009) and further to 10.2 per cent (2014). Informal sector workers constitute 9.7 per cent of total employment.
	Employment-to-population ratio	63.5 %	60.6 %	65.6 %	
	Proportion of employed people living below US\$ 1 (PPP) per day	<1 %	<0.5 % (2007)	0 %	
	Proportion of own-account and contributing family workers in total employment	31.1 %	21.5 %	22.2 %	
Target 1.c: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	Prevalence of underweight children under five years of age (undernutrition)	Moderate: 24.5 %	Moderate: 5.2 %	Moderate: 2.5 %	Surveillance data presented.
		Severe: 0.5 %	Severe: 0.5 %	Severe: 0.2 %	
	Proportion of households below minimum level of dietary energy consumption	3.9 %	0.7 %	0.2 % (2012)	Uses incidence of hard core poverty, which is the food poverty line, as a proxy.
Goal 2: Achieve universal primary education					
Target 2.a: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	Net enrolment ratio in primary education	92.7 %	95.7 %	97.9 %	Uses gross enrolment rate, which does not exclude children outside the official age group on the enrolment side. Literacy rate is based on school attendance.
	Proportion of pupils starting grade 1 who reach last grade of primary	98.1 %	99.0 %	99.2 %	
	Literacy rate of 15–24-year-olds, women and men	98.7 % (men) 97.2 % (women)	98.5 % (men) 98.4 % (women)	97.9 % (men) 98.0 % (women) (2013)	
Goal 3: Promote gender equality and empower women					
Target 3.a: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Ratios of girls to boys in primary, secondary and tertiary education	Primary 1	Primary 1	Primary 1	Gender parity achieved in primary education. Better than parity achieved in secondary and tertiary education.
		Secondary 1.05	Secondary 1.06	Secondary 1.07	
		Tertiary 1.08	Tertiary 1.6	Tertiary 1.31	
	Share of women in wage employment in the non-agricultural sector	35.3 %	39.1 %	39.5 %	Females comprise 38% of total labour force.
	Proportion of seats held by women in national Parliament	5.3 %	10.4 % (2008)	10.4 %	Female candidates who are contesting in general elections have increased.
Goal 4: Reduce child mortality					
Target 4.a: Reduce by two thirds, between 1990 and 2015, the under five mortality rate	Under-five mortality rate (per 1,000 live births)	16.8	8.5	7.6 (2012)	The achievement in 2012 is close to high income and developed countries average rate of 6 per 1,000 LBs (2013).

Goals and targets	Indicators for monitoring progress	Malaysia's progress (Aggregated)			Notes
		1990	2009	2014	
Goal 4: Reduce child mortality, continued					
	Infant mortality rate (per 1,000 live births)	13.1	6.9	6.2 (2012)	The 2012 achievement is close to the average rate of 5 per 1,000 live births in high income and developed countries (2013).
	Proportion of one-year-old children immunised against measles	70 %	94.3 % (2008)	95.3 % (2013)	States have also achieved high immunisation rates. Malaysia uses a combined vaccine of measles, mumps and rubella (since 2002).
Goal 5: Improve maternal health					
Target 5.a: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	Maternal mortality ratio (per 100,000 live births)	44.0 (1991)	27.0	23.2 (2012)	Year 1991 is used as a comparison because it is more accurate after implementing the Confidential Enquiries into Maternal Deaths.
	Proportion of births attended by skilled health personnel (Safe deliveries)	92.9 %	98.6 % (2008)	98.7 % (2012p)	Safe deliveries have been sustained at high levels for more than decade.
Target 5.b: Achieve, by 2015, universal access to reproductive health	Contraceptive prevalence rate	51.4 % (1984)	51.9 % (2004) – Peninsular Malaysia	54.0 % (2014p) – Malaysia	Data for 2014 is the preliminary result of the 5th Malaysian Population and Family Survey 2014.
	Adolescent birth rate (births per 1,000 women aged 15-19 years)	28 (1991)	15	14 (2012)	On average, adolescent mothers delivered close to 17,000 live births a year in the period of 2000-2012.
	Antenatal care coverage (at least one visit)	78.0 %	90.7 %	98.0% (2013)	The average number of antenatal visits per mother is 10 as of 2012.
	Unmet need for family planning	NA	24.7 % (2004) – Peninsular Malaysia	15.9 % (2014p) – Malaysia	Data for 2014 are the preliminary results of the 5th Malaysian Population and Family Survey 2014.
Goal 6: Combat HIV/AIDS, malaria and other diseases					
Target 6.a: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Notification rate: the number of cases detected (cases per 100,000 population)	28.5 (2002)	10.8	11.7	Malaysia's surveillance data on HIV/AIDS are compatible with modelling done either via estimation and projection or Asian Epidemic Model.
					On track to reach the target provided steps in handling sexual transmission is properly implemented.
	Case detection: the percentage of cases detected out of total screened	0.82 % (2002)	0.25 %	0.09 %	Number of screenings have increased from 1.2 million (2009) to almost 1.5 million (2014).
	Reported AIDS-related deaths	1,377 (2007)	805	756	Refers to both HIV and AIDS-related deaths. Deaths peaked in Malaysia in 2007. Mortality rate is 2.5 per 100,000 population (2014).
Target 6.b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	Number of people living with HIV who have received antiretroviral treatment	NA	9,962	21,654	Measurement of treatment coverage is dependent on estimates of people living with HIV. Estimated coverage rate was 37.3 per cent in 2009 (Eligibility: CD4 counts of <200 cells/mm3). Coverage in 2014 estimated to be 47.6 per cent. Estimated 45,476 eligible people using CD4 counts of <350 cells/mm3.

Goals and targets	Indicators for monitoring progress	Malaysia's progress (Aggregated)			Notes
		1990	2009	2014	
Goal 6: Combat HIV/AIDS, malaria and other diseases, continued					
Target 6.c: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Incidence of malaria	50,000 cases	7,010 cases	3,923 cases	Have achieved target of halting and reversing the incidence of malaria. Currently making efforts and progressing towards complete elimination of malaria by 2020.
	Malaria mortality rate (per 100,000 population) and Case fatality rate (%)	Mortality rate: 0.05 (1995)	Mortality rate: 0.09 Case fatality: 0.37 %	Mortality rate: 0.03 Case fatality: 0.30 %	Case fatality used to complement mortality rates since the fraction of all malaria deaths is small.
	Number of deaths related to tuberculosis	571 (1995)	1,582	1,597 (2013)	Mortality rate is 5.37 per 100,000 population (2013). Notification rate of TB increasing as number of screenings for vulnerable groups also increase. Have not achieved target of halting and reversing the incidence of tuberculosis. Unlikely to achieve by 2015.
	Tuberculosis case detection rate	70.1 % (2000)	76.2 %	95.0 % (2013)	
	Tuberculosis cure rate under directly-observed therapy, short-course.	NA	78.0 %	78.0 % (2013)	
Goal 7: Ensure environmental sustainability					
Target 7.a: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Proportion of land area covered by forest	56.9 % (1990)	54.3 % (2010)	54.5 % (2012)	Malaysia is committed in ensuring at least 50 per cent of the country's land area remains as forest, as pledged in the Rio Summit in 1992.
	CO ₂ emissions, total, per capita and per \$1 GDP (PPP)	3.2 tonnes of CO ₂ eq/ capita (1994)	7.2 tonnes of CO ₂ eq/ capita (2006)	7.6 tonnes of CO ₂ eq/ capita (2010)	Refers to carbon dioxide equivalent of all greenhouse gases. Malaysia adopted a voluntary reduction of up to 40 per cent in terms of carbon emission intensity of GDP by 2020 compared to 2005 levels, conditional on the provision of finance and technology transfer from developed countries.
	Consumption of ozone-depleting substances	CFCs: 3,383.4 ODP tonnes, Halons: 809.5 ODP tonnes; Methyl bromide Non QPS: 19.9 ODPT, Methyl bromide QPS: 14.5 ODPT, Methyl Chloroform: 17.2 ODPT, HCFC: 65.5 ODPT	CFCs: 105.2 ODP tonnes, Halons: 0 ODP tonnes, Methyl bromide Non QPS: 3.4 ODPT, Methyl bromide QPS: 37.9 ODPT, Methyl Chloroform: 1.9 ODPT, HCFC: 494.0 ODPT	CFCs: 0 ODP tonnes, Halons: 0 ODP tonnes Methyl bromide Non QPS: 4.1 ODPT, Methyl bromide QPS: 94.7 ODPT, Methyl Chloroform: 0 ODPT, HCFC: 445.8 ODPT (2013)	Specific pre-2010 targets for ozone depleting substances under the Montreal Protocol have been achieved. Malaysia is on track to comply with the post-2010 targets of the Montreal Protocol ¹⁰ .

CFC, chlorofluorocarbons; HCFC, hydrochlorofluorocarbon; ODP, ozone depletion potential; QPS, quarantine and preshipment.

¹⁰ The Montreal Protocol had the goals of phasing out chlorofluorocarbons and halons by 2010. The post-2010 goals were to phase out methyl bromide and methyl chloroform by 2015 and hydrochlorofluorocarbons by 2030.

Goals and targets	Indicators for monitoring progress	Malaysia's progress (Aggregated)			Notes
		1990	2009	2014	
Goal 7: Ensure environmental sustainability, continued					
Target 7.b: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Proportion of terrestrial and marine areas protected	NA	Terrestrial: 10.4 % (2010)	Terrestrial: 10.76 % (2013) Marine: 1.05 % (2013)	The Aichi targets of 17% terrestrial and 10% marine protected areas are recommended for all countries.
	Proportion of species threatened with extinction	NA	1,167 (2010) Threatened species	1,236 (2014) Threatened species	Total threatened species is based on the International Union for Conservation of Nature (IUCN), Red List that includes mammals, birds, reptiles, amphibians, fishes, molluscs, other invertebrates and plant species. The Wildlife Conservation Bill was passed in Parliament in 2010 to provide a stronger legal basis for deterring wildlife offences particularly in relation to illegal wildlife trade in Peninsular Malaysia and FT Labuan.
	Quantity of fish stocks within safe biological limits	0.8 million tonnes	1.4 million tonnes (2008)	1.5 million tonnes (2013 estimates)	Fish landing data are used as proxy to fish stock.
	Proportion of total water resources used (million litres per day per 1,000 capita)	Domestic consumption: 0.191 (2005) Non-domestic consumption: 0.091 (2005)	Domestic consumption: 0.197 Non-domestic consumption: 0.108	Domestic consumption: 0.203 (2013) Non-domestic consumption: 0.127 (2013)	This indicator is used to assess water scarcity. As an adjustment, this indicator is analysed based on the quantity of raw water sources, production, demand and supply. Domestic and non-domestic water consumption has increased. Non-revenue water is about 40% each year (2010-2014).
Target 7.c: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Proportion of population using an improved drinking-water source	92.4 % (2007)	92.9 % (total treated)	95.1 % (total treated)	Efforts are being made to increase water supply coverage to 97 per cent of the population by 2015.
	Proportion of population using an improved sanitation facility	97.9 % (2007)	98.4 %	99.5 %	Efforts are being made towards providing full sanitation coverage.
Target 7.d: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Proportion of urban population living in slums (squatters)	108,704 households (2004)	99,022 households	73,084 households (2012)	The People Housing Programme, introduced in 1999, will continue to be implemented to reduce the number of households living in squatter settlements.

MDG 1



**ERADICATE
EXTREME POVERTY
AND HUNGER**

INTRODUCTION

The first Millennium Development Goal (MDG 1) has three targets¹¹:

- Halve, between 1990 and 2015, the proportion of people whose income is less than US\$1 a day
- Achieve full and productive employment and decent work for all, including women and young people
- Halve, between 1990 and 2015, the proportion of people who suffer from hunger.



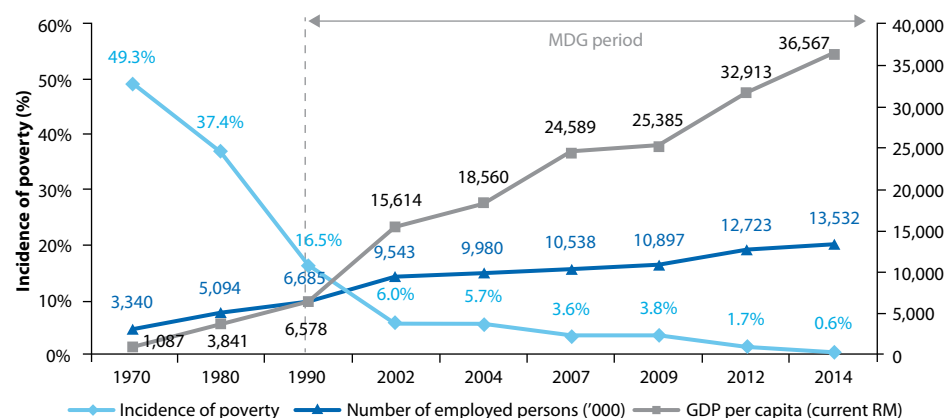
Malaysia first launched its poverty eradication strategy in 1971, 30 years before the MDGs were introduced. In the first 15 years, it halved the incidence of absolute poverty. In the next 15 years, at the start of the new millennium, the poverty rate was brought down to 8.5 per cent. By 2014, the poverty rate had declined to 0.6 per cent. **Figure 1.1** shows the achievements in poverty eradication since 1970.

Poverty in Malaysia¹² is measured by the proportion of households below the poverty line income. It can be said that extreme poverty, the first target of MDG 1, has been largely eliminated at the national and subnational levels except that temporary and local set-backs might occur when disaster strikes. The second target, full and productive employment for all, does not have an explicit quantifiable target but it is concerned with a decent livelihood. The third target is mainly concerned with escape from hunger, but in Malaysia's context, the quality of life is more appropriate. The animating vision is that of equity and inclusiveness – for all to share in the benefits of growth and development. Nine indicators measure

the progress of MDG 1 in Malaysia. Their definitions and any adjustments made to them are in the chapter annex (**Annex 1.1**). This chapter also uses other indicators, principally related to equity, to identify key challenges.

In the 1970s, Malaysia's poverty had sharp spatial and ethnic disparities in income and social well-being. Although not stated as such, the multidimensional aspect of socioeconomic development was also a key element. Basic social services such as education and healthcare, along with infrastructure services such as water and sanitation, were for all intent and purposes free, subsidised or delivered at cost. The government maintained a standard of living that was affordable to most Malaysians over the 1970s. Malaysia's New Economic Policy (1971–1990) was aimed at eradicating absolute poverty irrespective of race and restructuring society to remove the identification of race with economic function. Subsequent economic policies continued this basic philosophy. The rest of this chapter focuses on the progress and the key challenges to MDG 1 over the period 2000 to 2015.

Figure 1.1:
Incidence of poverty, number of employed persons and GDP per capita, 1970-2014



Source:
Malaysia, DOSM, Malaysia Economics Statistics, Time Series 2013.
Malaysia, DOSM, Labour Force Survey, 2014.

¹¹ These UN-specified targets are not suitable for Malaysia. For instance, a poverty line income (PLI) indicator is used in Malaysia. Other suitable proxy indicators will be used for MDG 1 targets.

¹² Although the first indicator is stated with reference to the World Bank's "dollar-a-day" at purchasing power parity (PPP) measure, it is more suited for international comparison purposes. Malaysia's clear definitions for its poverty line are used in this report, as they were in the two other earlier MDG reports.

Box 1.1: Malaysia's poverty line

Malaysia developed its own poverty line in the 1970s when poverty eradication was a main tenet of its New Economic Policy (1971–1990). The poverty line measure was based on a minimum consumption requirement of an average-sized household for food, shelter, clothing and other non-food needs, such as transport, healthcare, and education.

Although the poverty line was defined by consumption, poverty status was determined with reference to gross household income rather than expenditure. Thus, households with incomes below the poverty line income (PLI) were defined as living in poverty, and those with incomes below half the PLI as living in “hard-core” or extreme poverty.

In 2004, the poverty line definition was revised and defined for each household and averaged to each state and strata (urban/rural), taking into account the relative cost of living, household composition and size. This new poverty line defines extreme deprivation or hard-core

poverty as households with incomes below the food poverty line or households unable to meet their minimum food needs.

Considerations were given to addressing the issue of relative poverty in line with Malaysia's development model, which emphasizes an inclusive development approach. In the 10th Malaysia Plan (10MP), this approach was widened to the bottom 40 per cent of households (B40) or bottom two quintiles in the income distribution. The 11th Malaysia Plan further analysed and formulated programmes for the B40 community.

In 2011, the Government Transformation Programme (GTP) designated “raising living standards of low income households” as one of the six national key result areas. It aims to completely eradicate poverty and increase the income and raise the living standard of low income households by laying the foundation for poverty eradication (GTP1.0), and also through economic empowerment of individuals and communities (GTP2.0). It is important to note that the 10th and 11th Malaysia Plans have already expanded coverage to B40 households.

TRENDS IN POVERTY ERADICATION

National summary

With the national PLI as the benchmark, absolute poverty has been eradicated at the national level. Between 1999 and 2014, the national poverty incidence was brought down from 8.5 per cent to 0.6 per cent (**Figure 1.2**). The number of households living below the poverty line also fell from 409,300 to 40,000 between 1999 and 2014. In terms of the intensity of poverty, or the distance of poor households from the poverty line, improvements have

also been observed. This is indicated by the narrowing national poverty gap index from 2.3 in 1999 to 0.1 in 2014 (**Figure 1.3**).

Despite these achievements, the key challenge lies in pockets of poverty despite all efforts made thus far. Based on the analysis in the subsections below, pockets of poverty still exist in rural areas and amongst households in certain states, amongst certain ethnic groups, genders and age group, as summarised in **Table 1.1**, which is based on the latest available data.

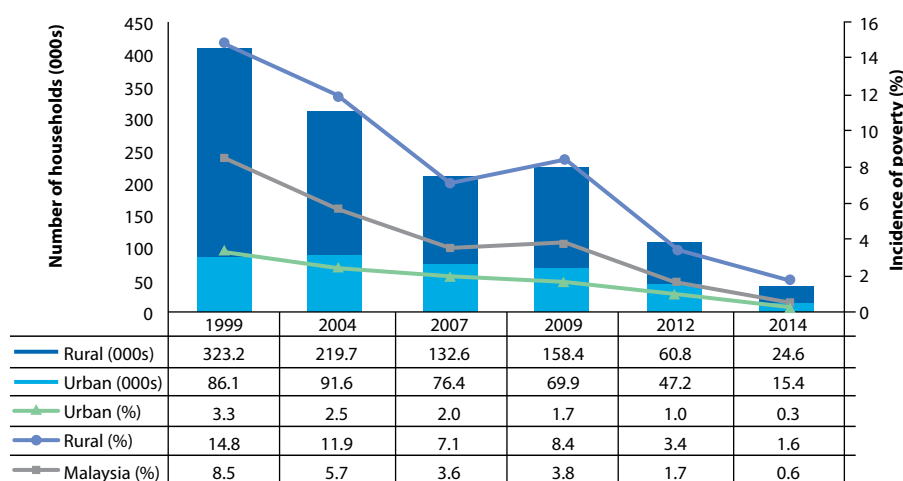
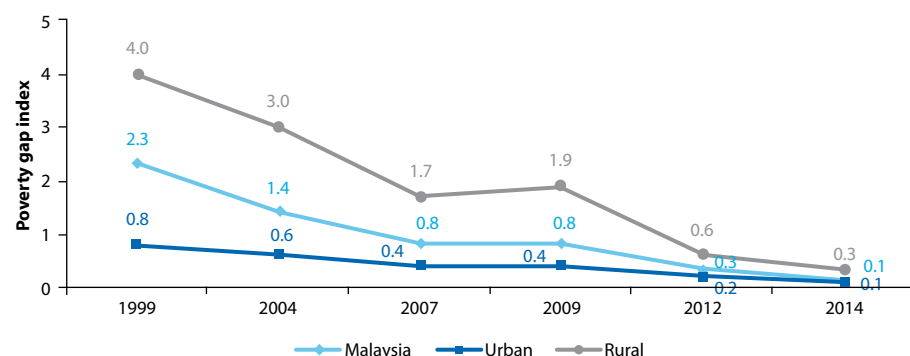


Figure 1.2:
Poverty Incidence and number of poor households by strata, selected years 1999-2014

Source: Malaysia, Department of Statistics, Household Income and Basic Amenities Survey, various years.

Figure 1.3:
Poverty gap index, national and by rural/urban location, 1999–2014



Source: Malaysia, Economic Planning Unit, Ninth Malaysia Plan; Ministry of Women, Family and Community Development, Statistics on Women, Family and Community 2013; Malaysia, estimated by UNCT using data from EPU's Statistics Unit, 2015.

Table 1.1:
Summary of pockets of poverty in Malaysia, 2014

National level	Poverty incidence of 0.6 per cent
Rural poverty	Rural poverty is 1.6 per cent or 24,600 households. Majority of poor rural households are in the agriculture, forestry and fisheries sector (65.2 per cent) and the poverty incidence for this sector is 2.8 per cent.
Poverty at state level	All states have poverty rates of less than 1 per cent, except Sabah at 4.0 per cent and WP Labuan at 1.1 per cent. Poverty rate in rural Sabah is 7.4 per cent.
Ethnicity	Bumiputera 0.8 per cent; Indians 0.6 per cent; Chinese 0.1 per cent; Others 0.9 per cent; Other Bumiputera: Orang Asli 34 per cent; Bumiputera Sabah 20.2 per cent; Bumiputera Sarawak 7.3 per cent (all in 2014, from the 11MP).
Child poverty	Children under five, 1.3 per cent; children under 15, 1.7 per cent.

Source: Data sources cited in text.

Analysis by strata

Poverty rates in urban and rural locations declined during the MDG period with the most dramatic declines observed in rural areas (**Figure 1.2**). Poverty rates in rural areas fell from 14.8 per cent in 1999 to 1.6 per cent in 2014. This corresponded to 25,400 households that were living below the poverty line in 2014. Essentially, the urban-rural poverty gap has largely closed. In terms of the intensity of poverty, improvements have been observed in urban and rural areas. In 2014, the rural and urban poverty gaps were 0.3 per cent and 0.1 per cent, respectively (**Figure 1.3**). The slight increase in rural poverty index between 2007 and

2009 is likely due to a decline in commodity (oil palm and rubber) prices and a slowing down of the global economy, a consequence of the global financial crisis.

Indeed, rural households who were engaged in agriculture, forestry and fisheries accounted for 65 per cent of total poor rural households in 2014 and the second highest¹³ poverty incidence at 2.8 per cent. Nonetheless, this represented an improvement compared to 1990 when poverty incidence was 25 per cent amongst rural households in agriculture and fisheries, which accounted for over 60 per cent of total poor rural households¹⁴.

¹³ Based on the UNCT's calculations using Household Income and Expenditure Survey 2014 data, the highest poverty incidence (5.2 per cent) was amongst rural households engaged in work where activities of households as employers and undifferentiated goods-and-services producing activities of households for own use. However, this accounted for only 0.6 of total poor rural households in 2014.

¹⁴ Malaysia, MDGR 2010, p.13.

Table 1.2:
Poverty incidence % by state, 1999–2014

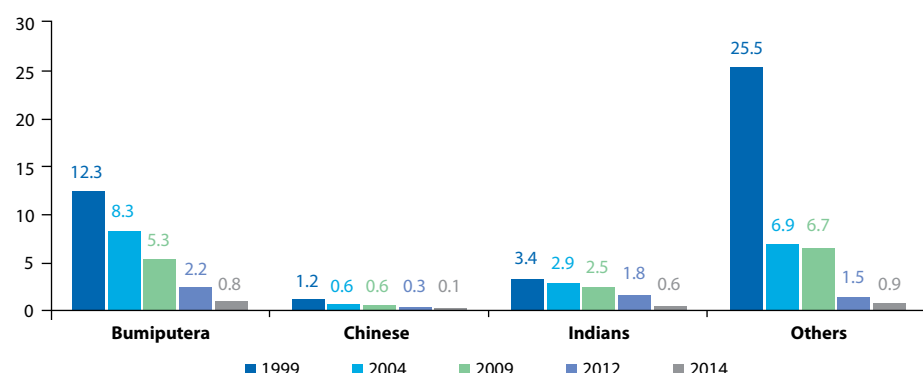
State	1999	2002	2004	2007	2009	2012	2014
Johor	3.1	2.5	2.0	1.5	1.3	0.9	0.0
Kedah	14.2	9.7	7.0	3.1	5.3	1.7	0.3
Kelantan	25.2	17.8	10.6	7.2	4.8	2.7	0.9
Melaka	2.9	1.8	1.8	1.8	0.5	0.1	0.1
N.Sembilan	4.1	2.6	1.4	1.3	0.7	0.5	0.4
Pahang	9.8	9.4	4.0	1.7	2.1	1.3	0.7
Perak	6.8	6.2	4.9	3.4	3.5	1.5	0.7
Perlis	13.6	8.9	6.3	7.0	6.0	1.9	0.2
P.Pinang	0.7	1.2	0.3	1.4	1.2	0.6	0.3
Sabah	23.4	16.0	23.0	16.0	19.7	8.1	4.0
Sarawak	10.9	11.3	7.5	4.2	5.3	2.4	0.9
Selangor	1.9	1.1	1.0	0.7	0.7	0.4	0.2
Terengganu	22.7	14.9	15.4	6.5	4.0	1.7	0.6
WP Kuala Lumpur	0.4	0.5	1.5	1.5	0.7	0.8	0.1
WP Labuan	–	7.1	2.6	4.2	4.3	1.1	1.1

Source: Malaysia, Economic Planning Unit, Tenth Malaysia Plan (10MP); Malaysia, Department of Statistics, Household Income and Basic Amenities Survey, various years

Ethnicity

Amongst all ethnic groups, the incidence of poverty fell by at least half from 1999 to 2014. The rates fell for Bumiputera¹⁵ (12.3 per cent to 0.8 per cent), Chinese (1.2 per cent to 0.1 per cent), Indians (3.4 per cent to 0.6 per cent) and Others¹⁶ (25.5 per cent to 0.9 per cent) between 1999 and 2014 (**Figure 1.4**). Based on further disaggregation of the Bumiputera category, Other Bumiputera have higher poverty rates than other ethnic groups in Malaysia with poverty rates of Orang Asli being at 34 per cent in 2014, while that of Bumiputera Sabah was 20.2 per cent and Bumiputera Sarawak was 7.3 per cent, as reported in the 11MP (2016–2020)¹⁷.

Figure 1.4:
Poverty incidence by ethnicity, 1999–2014



Source: Malaysia, Department of Statistics, Household Income and Basic Amenities Survey, various years.

¹⁵ The Bumiputera category comprises the Malays and Other Bumiputera (which includes the Orang Asli in Peninsular Malaysia and indigenous people of Sabah and Sarawak). In the MDGR 2010 (pp.14–15), Other Bumiputera had poverty incidence of 17 per cent in 2009, made up 51 per cent of total poor households and had a poverty gap index of 4 per cent. Malays had poverty incidence less than 3 per cent and constituted less than 40 per cent of total poor households with a poverty gap index of 0.5 in 2009.

¹⁶ The 'Others' ethnic category used in the Household Income Surveys refers to Malaysian citizens who are not within the main ethnic groups of Malay, Chinese, Indian, Orang Asli or indigenous people of Sabah and Sarawak.

¹⁷ Malaysia, Economic Planning Unit. Eleventh Malaysia Plan (2016–2020). Strategy Paper 2: Elevating B40 Households Towards a Middle-Class Society, Exhibit 2-7, Incidence of poverty amongst ethnic groups, 2009 and 2014, pp. 2–6.

Gender

In many parts of the world, female-headed households are at higher risk of being in poverty than male-headed households. In Malaysia, this gap exists but is narrowing as poverty rates have fallen for both groups. In 2009, the poverty incidence of female-headed households was 4.1 per cent compared to male-headed households at 3.7 per cent. As of 2014, the poverty rate of female-headed households was 0.8 per cent, while that of male-headed households was 0.6 per cent. This suggests that female-headed households have benefited from poverty reduction programmes and such efforts should be continued after proper assessment of their effectiveness.

Table 1.3:
Poverty by education of head of household, 2004–2014

Education of household head	Incidence of poverty %			
	2004	2007	2009	2014
Primary or less	10.0	6.9	7.9	1.8
Secondary	3.9	2.7	2.8	0.6
Post-secondary or tertiary	0.5	0.3	0.2	0.0
	Proportion of poor households %			
	2004	2007	2009	2014
Primary or less	67.0	61.9	61.2	51.9
Secondary	31.6	36.5	37.6	46.2
Post-secondary or tertiary	1.4	1.6	1.3	1.9

Source: calculated by UNCT using Household Income and Basic Amenities Surveys, 2004, 2007, 2009, 2014.

Child poverty

Child poverty is of particular concern because of its long-term effects on cognitive, physical and emotional development as well as on health¹⁸. A 2004 study co-published by the Ministry of Education (MOE) and United Nations Educational, Scientific and Cultural Organization (UNESCO) found that almost 85 per cent of students who dropped out came from poor families, which was correlated with low interest, low academic achievement, and discipline problems. This has far-reaching implication for the future employment of these children as they lack the necessary skills and capacities. This in turn increases their vulnerabilities to staying in poverty.

Education

As important as work is to women, an important corollary is the role of education in getting employment. Educational studies have shown that education gives a person better lifetime chances and therefore socioeconomic success. At the lower rungs of society, education is even more important. **Table 1.3** shows the importance for Malaysia. Amongst the poor, their educational status was mostly at the primary level with a rising trend for those with secondary education.

Child poverty exists because they are members of poor households. Breaking this cycle is therefore important to ensure the sustainability of the poverty reduction achievements.

Table 1.4 shows the proportion of children living in poverty. It is estimated that 1.3 per cent of children under five are living below the poverty line, while 1.7 per cent of children under 15 belonged to this category. This translates to an estimated 135,000 children under 15 years living under the poverty line. Taking into account all children under 18, it is estimated about 157,000 children are living below the poverty line²⁰.

¹⁸ Malaysia, MDGR 2010, p. 16.

¹⁹ MOE/UNESCO 2004. *Dropouts in Malaysian Primary Schools: Causes and Intervention Programmes*, Kuala Lumpur.

²⁰ EPU, unpublished statistics, 2014.

Table 1.4:
Proportion and number (000s) of children in poverty, selected years

Year	Children under 5	Children under 15	National poverty rate
1989	28.3% (676.7)	29.3% (1,966.4)	16.5%
2007	8.1% (178.4)	9.4% (724.9)	3.6%
2014	1.3% (33.3)	1.7% (135.0)	0.6%

Note: Data in parentheses are estimated numbers of all children under 15, in thousand. Derived from Economic Planning Unit, Statistics Unit, Household Income and Basic Amenities Survey, various years.

Source: Malaysia, MDGR 2010 (for 1989 and 2007 figures); EPU, derived from Household Income and Basic Amenities Survey 2014.

Income inequality

One of the key challenges to socioeconomic development is the persistence of income inequality. Using the Gini coefficient as a measure of inequality, the fluctuations in 1999–2012 seem to be marginally insignificant. For Malaysia, there was improvement from 2009, where a Gini coefficient of 0.441 was reported and which dropped to 0.401 in 2014, as measured on the same per capita income for Malaysians. This welcomed change has been termed as the rise of the middle class (see World Bank Economic Monitor, December 2014). **Table 1.5** shows the Gini coefficient for Malaysia from 1999 to 2014.

Table 1.5:
Gini coefficient for Malaysia by strata, by state and by ethnicity, 1999–2014

	Gini Coefficient						
	1999	2002	2004	2007	2009	2012	2014
Malaysia	0.443	0.461	0.462	0.441	0.441	0.431	0.401
By strata							
Rural	0.421	0.405	0.397	0.388	0.407	0.382	0.391
Urban	0.432	0.439	0.444	0.427	0.423	0.417	0.355
By state							
Johor	0.386	0.408	0.395	0.368	0.393	0.383	0.324
Kedah	0.409	0.426	0.387	0.392	0.408	0.391	0.365
Kelantan	0.424	0.444	0.416	0.368	0.428	0.410	0.393
Melaka	0.399	0.386	0.352	0.380	0.411	0.355	0.316
N. Sembilan	0.392	0.401	0.38	0.385	0.372	0.382	0.361
Pahang	0.332	0.404	0.389	0.380	0.382	0.354	0.360
P. Pinang	0.399	0.435	0.398	0.411	0.419	0.370	0.364
Perak	0.387	0.417	0.393	0.399	0.400	0.417	0.366
Perlis	0.394	0.437	0.423	0.454	0.434	0.455	0.346
Selangor	0.394	0.423	0.443	0.418	0.424	0.396	0.379
Terengganu	0.440	0.424	0.443	0.399	0.418	0.426	0.360

	Gini Coefficient						
	1999	2002	2004	2007	2009	2012	2014
By state							
Sabah & WP Labuan	0.448	0.465	0.477	0.450	0.453	0.428	0.387
Sarawak	0.407	0.445	0.440	0.442	0.448	0.44	0.391
WP Kuala Lumpur	0.414	0.448	0.467	0.446	0.374	0.442	0.407
WP Putrajaya	n.a	n.a	n.a	0.362	0.342	0.305	0.374
By ethnicity							
Bumiputera	0.433	0.435	0.452	0.430	0.440	0.421	0.389
Chinese	0.434	0.455	0.446	0.432	0.425	0.422	0.405
Indian	0.413	0.399	0.425	0.414	0.424	0.443	0.396
Others	0.393	0.449	0.462	0.545	0.495	0.435	0.433

Source: Malaysia, DOSM, Household Income and Basic Amenities Surveys, various years

Analysis of the 2014 Household Income Survey (HIS) data by the World Bank show that income gaps between ethnic groups have narrowed but are not yet completely eradicated²¹. Decomposition analysis shows that most of the inequality is “within group” rather than “between” groups. The characteristic that explains a significant amount of inequality is the education of the head of household, which accounts for 30 per cent of the overall inequality. Even urban-rural differences, which was formerly a major factor of inequality, accounted for only 10 per cent of total inequality.

ACHIEVING FULL, PRODUCTIVE EMPLOYMENT AND DECENT WORK

22

Malaysia's New Economic Policy (1971–1990) was aimed at eradicating poverty by raising income levels through creating jobs, improving productivity as well as restructuring its economy. Achieving full and productive employment would enable individuals and households to stay out of poverty. At the macrolevel, Malaysia has managed to generate a significant amount of employment since the 1970s, when poverty eradication was one of two key objectives for its development strategy. Based on the definition of the Organisation for Economic Cooperation and Development (OECD), an unemployment rate below 4 per cent is considered as full employment and Malaysia has attained this target since 1995. This is a remarkable achievement, given that the number of employed persons went from 7.6 million

in 1995 to 13.5 million in 2014. As indicated earlier, this was achieved from an expansion of the manufacturing sector from the 1970s to 2000. Since then, the major employment growth has been in the services sector, which grew from 3.4 million to 5.2 million from 2000 to 2014, while manufacturing has remained at about 2.2 million over the same period.

This section provides a statistical perspective on the nature of employment and the various dimensions by gender, youth and low wage earners. Vulnerable employments such as own-account workers and unpaid family workers as well as workers in the informal sector are also documented.

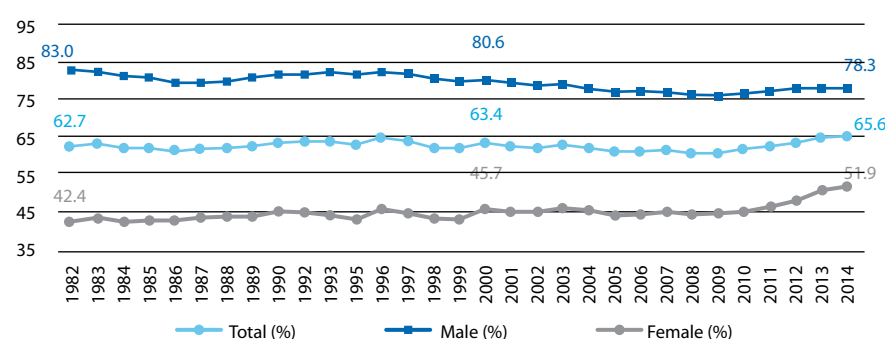
²¹ The World Bank, *Economic Monitor*, (December 2014). “The Middle Class Society”, pp.45–46.

Employment-to-population ratio

The overall employment-to-population ratio has remained relatively stable since 1982 at 62 per cent to 65 per cent at marked gender differences (**Figure 1.5**). While the male employment-to-population ratio has declined slightly from a high of 80.6 per cent (2000) to 78.3 per cent (2014), the female employment-to-population ratio has remained steady for most of 2000 to 2009 at between 46 per cent and 48 per cent but since increased to 51.9 per cent in 2014 probably due to government policies

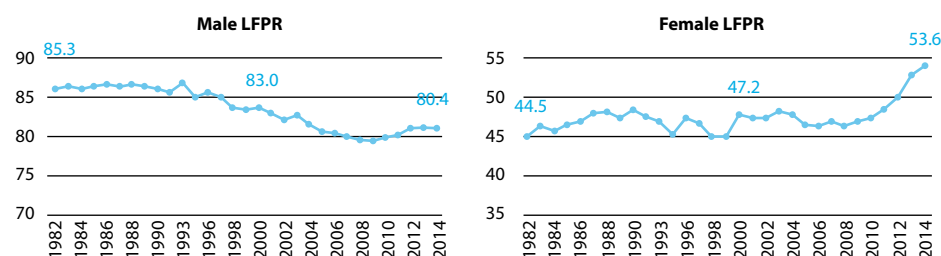
and programmes aimed at raising the female labour force participation rate (LFPR) (**Figure 1.6**). The ambition in the 10MP was to increase the female LFPR to 55 per cent by 2015²². The current levels, albeit increasing in the last three years, are considerably lower than the average of upper middle-income countries (56.4 per cent) and developing countries in the East Asia and Pacific region (62.6 per cent)²³.

Figure 1.5:
Employment-to-population ratio, 1982–2014



Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years

Figure 1.6:
Male and female labour force participation rates, 1982–2014



Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years

²² Malaysia, Economic Planning Unit (2010) Tenth Malaysia Plan. p. 232

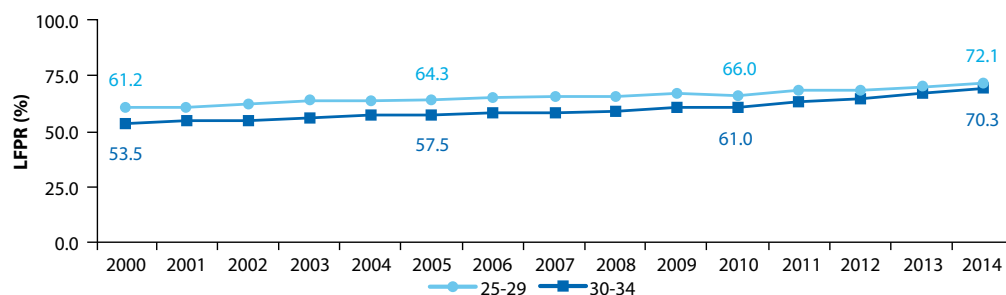
²³ Data for 2013 from The World Bank, (2015). Labour force participation rate, female, available at <http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS/countries/XT-MY-4E?display=graph>.

Despite high demand for workers in elementary (i.e. unskilled) occupations, affordable and accessible childcare and home-related services remain insufficient making it difficult for women to go back to work. If more women were able to take up paid employment (even in elementary occupations), the incidence of poverty would fall even more. In Sabah, which has nearly 60 per cent of such households, the impact would have been even greater, reducing poverty from 17.7 to 9.8 per cent²⁴.

Proportionately more women are staying on at work

during the younger part of their working life (**Figure 1.7**). The point difference in the female LFPR between the 25–29 cohort and 30–34 cohort is likely due to marriage and child-rearing. But it is noteworthy that since 2010, the LFPR for both age groups has risen, especially for the older age cohort, and reaching more than 70 per cent. The percentage point difference between the two age groups has also narrowed from 7.7 in 2000 to 1.8 in 2014. The female LFPR for women aged 25–29 increased from 61.2 in 2000 to 72.1 per cent in 2014, while the female LFPR for women aged 30–34 rose from 53.5 in 2000 to 70.3 per cent in 2014.

Figure 1.7:
Female labour force participation rates (LFPR), ages 25–29 and 30–34, 2000–2014



Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years.

Unemployment

Malaysia has achieved full employment. Unemployment rates throughout the period 2000 to 2014 were less than 4 per cent with the highest at 3.7 per cent (2009) and the lowest at 2.9 per cent (2014). Low unemployment rates were recorded by both genders. As of 2014, the unemployment rate of males was 2.7 per cent, while that of females was 3.2 per cent. At these rates, Malaysia is considered as having only frictional unemployment.

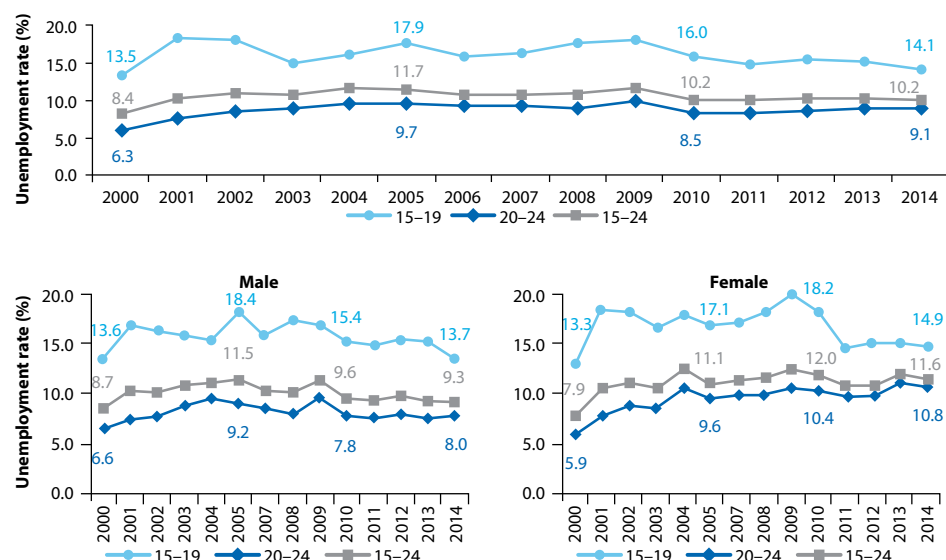
Youth aged 15–19 have a relatively high unemployment rate. Their unemployment rate was 13.5 per cent in 2000 and rose to 18.6 per cent in 2001, an increase of 5.1 percentage points within a year. Unemployment for this age group fluctuated post 2009 and has settled at 14.1

per cent as of 2014 (**Figure 1.8**). Although the next youth cohort (aged 20–24) has a much lower unemployment rate; it rose from around 6.3 per cent in 2000 to 9.1 per cent in 2004.

The unemployment rate for all youth aged 15–24 has increased from 8.4 per cent in 2000 (186,400 persons) to 10.2 per cent in 2014 (239,600 persons). This group accounted for 60 per cent of the unemployed in 2014, down from 65 per cent in 2000. As a proportion of the unemployed in 2014, the 15–19 youth group accounted for 17.5 per cent, while the 20–24 age cohort accounted for 42.5 per cent in Malaysia. Unemployed youth accounted for 4.1 per cent of the total youth population as of 2014. The ratio of women's youth unemployment to women's adult (aged 25–64) unemployment remains higher than that of men, at 8.0 compared with 6.9 for men in 2014.

²⁴ Malaysia, MDGR 2010, p. 16.

Figure 1.8:
Youth unemployment rate by age group and by gender, 2000–2014



Proportion of employed persons living below US\$1.25 a day

This section is concerned with the poorest segments of Malaysian society, as defined by those²⁵ below US\$ 1.25 per capita per day, and all below the national PLI. In particular, the focus is on the poor who are working as employees. In 2014, the ringgit equivalent of US\$ 1.25 (PPP) per day is RM2.85 per day and at US\$ 2 (PPP) per day is RM4.56 per day. **Table 1.6** shows the changes from 1999 to 2014. Based on the 2014 analysis, it is estimated that there are no employees earning below US\$ 1.25 and US\$ 2 per day.

Table 1.6:
Incidence and number of employees earning less than selected levels, 1999–2014

Year	<US\$ 1.25 (PPP)	<US\$ 2.00 (PPP)	< National PLI
1999	<1 %	1.4 %	1.4 %
	30,000	60,000	65,000
2004	0.5 %	1.0 %	1.5 %
	35,000	75,000	102,000
2007	<0.5 %	<1 %	0.01 %
	25,000	55,000	85,000
2014	0 %	0 %	<1%
	0	0	72,800

Note: The figures for years 1999, 2004 and 2007 are quoted from the analysis results reported in the MDGR 2010, while the figures for 2014 were computed by the UNCT based on the Household Income and Basic Amenities Survey 2014. Data Source: Economic Planning Unit; Malaysia, Department of Statistics, Household Income Survey, various years.

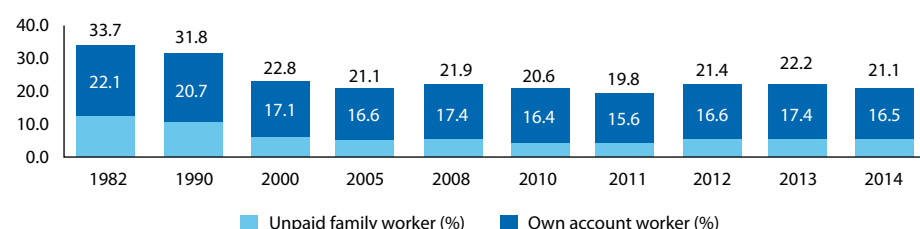
²⁵ The US\$ figures are in PPP terms, obtained from the World Bank website on World Development indicators.

Own-account and unpaid family workers in employment

Own-account workers and unpaid family workers are less likely to have formal work arrangements, access to benefits or social protection programmes, and are more “at risk” to downturns in economic cycles. In addition, workers in vulnerable employment situations are often incapable of generating sufficient savings for themselves and their families to offset declines in remuneration during economic downturns. Hence, vulnerable employment is linked to poverty²⁶.

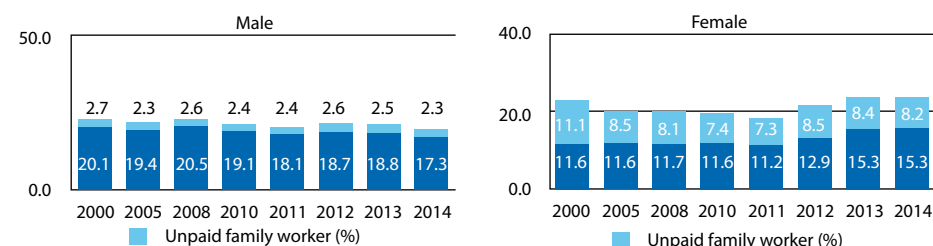
Their share as a proportion of the employed in Malaysia fluctuated within a narrow range of 20 per cent to 23 per cent between 2000 and 2014. Own-account workers hover around 15.6 per cent to 17.4 per cent, while unpaid family workers were around 4.2 per cent to 5.7 per cent (**Figure 1.9**). In terms of the gender characteristics, women were more likely to be unpaid family workers than men (**Figure 1.10**).

Figure 1.9:
Own-account and unpaid family workers as proportion of employed, selected years



Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years

Figure 1.10:
Proportion of own-account and unpaid family workers by gender, selected years



Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years.

The agricultural sector, including fisheries, illustrates several complexities within this dimension. Almost 60 per cent of those employed in the sector were own-account or unpaid family workers.

The own-account and unpaid family workers grouping has lower educational attainment than other workers. Focusing on nonagriculture, 34 per cent of them had primary education or less, compared with 18 per cent of all employed; 10 per cent had post-secondary or tertiary

education. By gender in this grouping, women had lower educational attainment than men, but not much.

On average, nonagricultural own-account workers have a significantly lower median income than those in employment (**Table 1.7**). Female own-account workers earn median incomes roughly half of females in employment, and about two-thirds less than men in the own-account category.

²⁶ United Nations, Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources, version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.aspx>, accessed on 18 July 2015.

Table 1.7:
Gross monthly income US\$ by employment status and gender, non-agriculture, 2007 & 2014

	Male				Female			
	Own Account		Employee		Own Account		Employee	
	2007	2014	2007	2014	2007	2014	2007	2014
10th percentile	644	2,110	1,326	2,450	470	1,230	1,047	2,047
Median	1,598	4,667	3,074	5,224	1,261	3,078	2,746	4,821
90th percentile	4,253	11,077	8,129	12,641	3,755	6,900	7,263	10,853

Source: UNCT's calculations based on Household Income and Basic Amenities Survey 2007 and 2014.

Against this differential in income, own-account and unpaid family workers work fewer hours than employees (**Table 1.8**). It gives only the mean, as the mean and median hours are almost the same; the median, other than for own-account and unpaid family workers, is over 48 hours a week. Across the worker categories, there is a slight decline in the number of working hours from 2007 to 2014. The highest reduction of working hours was for the unpaid family worker. In general, female workers work slightly fewer hours than male workers.

From these trends, it is apparent that the situations of own-account workers and unpaid family workers are complicated. The vulnerability of women in terms of taking the larger share of unpaid family work is also apparent. Strengthening social protection systems is an area that needs further effort, as recognised and addressed by the strategies listed within the 11MP.

Table 1.8:
Mean hours worked per week by gender and employment status, 2007, 2010 and 2014

	Male			Female			Total		
	2007	2010	2014	2007	2010	2014	2007	2010	2014
Total	47.8	47.3	47.1	46.5	45.7	44.5	46.9	46.7	46.1
Employer	52.0	51.1	50.1	51.8	51.1	48.2	51.4	51.1	49.8
Employee	49.3	48.6	48.4	47.9	47.0	46.4	48.1	48.0	47.6
Own-account worker	42.4	42.2	41.3	40.6	39.5	37.7	42.2	41.5	40.0
Unpaid family worker	42.0	40.0	38.9	42.2	41.3	38.3	42.5	40.8	38.5

Source: Economic Planning Unit; Department of Statistics, Labour Force Survey Report, various years.

Apart from the employment status, Malaysia has begun collecting data on workers in the informal sectors²⁷. Overall, the proportion of informal sector workers to the total labour force was about 8 per cent in 2012 and 10 per cent in 2013. In 2013, there was overall gender parity in the informal sector workforce.

As a percentage of labour force by gender, there are more females engaged in the informal sector (12.9 per cent)

compared to males (7.8 per cent) as of 2013. The gender difference is more apparent in the rural areas.

By age group, there were proportionately more retirees in the informal sector than the youth (under 20 years of age) for both 2012 and 2013. Only 10 per cent of those under 20 years old were engaged in the informal sector. In comparison, 18 per cent of the labour force aged above 60 comprised people who were in the informal sector.

²⁷ The informal sector in Malaysia is defined by the Department of Statistics (Informal Sector Report) as those establishments that: are not registered with the Companies Commission of Malaysia with all or at least one product or service for sale or barter transaction; employs 10 workers or less with workers not covered by social security; and involves non-agricultural activities.

HALVING THE PROPORTION OF PEOPLE WHO SUFFER FROM HUNGER

This target takes into consideration child hunger amongst the general population. The weight-for-age metric was used to measure underweight (moderate standard deviation: $SD < 2$ and severe: $SD < 3$) amongst children under five. Monitoring of underweight for this target group is obtained from the administrative data of government health clinics. It would appear that the target of halving the number of people suffering from hunger, as measured by the percentage of underweight children under five has been achieved by 2010. After 2010, the detection rates at the clinics have continued to drop and appear to have reached a plateau. The proportion of population below the minimum level of dietary energy consumption is proxied by the percentage of people living below the national food poverty line, i.e. the hard-core poverty line²⁸. As of 2012, the incidence of hard-core poverty in Malaysia is 0.1 per cent²⁹.

Child hunger

Based on administrative data, Malaysia has essentially reduced the percentage of children under five who are moderately underweight by close to 90 per cent between 1990 and 2014 (**Table 1.9**). These large declines have also been reflected at state level, although progress in Sabah and Sarawak seems to be slower than in Peninsular Malaysia. As of 2014, the percentage of children under five with moderate underweight is 2.5 per cent nationally with the states of Kelantan, Pahang, Sabah and Sarawak having noticeably higher percentages of moderately underweight children (3.0 to 6.9 per cent). Notably, these states have sizeable populations of indigenous people who are in remote areas. As for severe underweight children, Malaysia has kept it below 1 per cent for the whole period of 1990 to 2014.

Within each state, some districts have higher percentages of underweight children under five compared to the state average. This district-level variation differs from one state to another. States such as Pahang, Sarawak, Kelantan and Sabah have high variations between respective districts (variance 10.2–15.6). In contrast, states like Melaka, Pulau Pinang, Johor and Perak have very low district variations (variance 0.1–3.7) with similar percentages of underweight across all districts³⁰.

The National Health and Morbidity Survey 2011 provides a better guide to the actual level of undernutrition as it is a representative sample survey focusing on prevalence. The overall prevalence of underweight children under five was 19.6 per cent in 2011³¹. Looking closely at specific vulnerable groups, the National Orang Asli Development Plan study³² (2014) reported that about 8 per cent³³ of Orang Asli children under five were undernourished in 2012.

Recognising that certain communities had higher percentages of undernourished children, the Ministry of Health (MOH) implemented a Rehabilitation Programme for Malnourished Children to supplement the dietary needs of undernourished children of hard-core poor families since 1989. Prior to 2010, this rehabilitation programme was mainly targeted at the hard-core poor but has since been extended to the poor and those vulnerable to poverty. The GTP 2.0 (Community Feeding Programme) for children of low income households was launched in 2013 with outreach also to the Orang Asli and Penan communities. In particular, a community feeding programme for all children within villages with undernutrition cases was implemented to prevent food sharing and to improve the rehabilitation outcome.

²⁸ An adult nutrition survey was undertaken in 2014 but data were not available at the time of writing.

²⁹ Malaysia, Department of Statistics, Household Income Survey 2014.

³⁰ Malaysia, Ministry of Health, Nutrition Division, 2015.

³¹ Malaysia, Ministry of Health, Institute of Public Health, National Health and Morbidity Survey 2011.

³² UNDP-EPU-UNICEF, Orang Asli National Development Plan Project Report, unpublished, 2014.

³³ This percentage is an estimation that was calculated by using the absolute number of cases of undernourished Orang Asli children under five receiving food baskets (administrative data) divided by the number of Orang Asli children aged 0–4. The administrative data on the children receiving food baskets for 2012 (1,752 children) were obtained from Ministry of Health, Orang Asli Health Services Unit. The number of Orang Asli children aged 0–4 had been estimated based on the 2010 population census where there were 21,423 Orang Asli children aged 0–4 in 2010. By using the method above, this amounts to about 8% of the Orang Asli children being undernourished and receiving food baskets. These figures were reported under the UNDP-EPU-UNICEF Project titled “Status Sosioekonomi Orang Asli bagi merangka Pelan Pembangunan Nasional untuk Orang Asli” that was completed in 2014.

Table 1.9:

Percentage (%) of moderately underweight children under five attending health clinics by state, selected years

	1990	1995	2000	2005	2010	2011	2012	2013	2014p
Malaysia	24.5	19.5	13.0	7.5	4.3	3.8	3.2	2.6	2.5
Johor	15.4	13.5	5.3	2.2	0.9	0.6	0.4	0.3	0.2
Kedah	24.8	21.6	15.5	7.3	2.3	2.5	2.2	1.8	1.4
Kelantan	31.1	24.9	13.9	8.7	7.0	4.5	5.3	4.3	3.0
Melaka	26.1	24.9	20.4	5.1	4.4	2.4	2.4	1.5	1.4
N. Sembilan	29.5	17.6	12.6	8.5	3.8	3.0	1.5	1.6	1.7
Pahang	29.3	22.3	14.1	10.0	5.9	4.1	3.5	3.4	3.8
Perak	27.6	19.0	10.0	7.1	3.6	3.6	3.0	3.3	3.8
Perlis	30.4	19.8	12.6	9.8	2.8	1.8	0.8	0.7	0.9
P. Pinang	25.4	15.7	13.5	6.0	2.5	1.7	1.5	0.9	1.1
Sabah	NA	22.9	12.6	8.5	6.3	6.5	5.6	3.9	4.1
Sarawak	22.4	17.9	14.9	11.3	10.1	8.4	8.5	7.5	6.9
Selangor	21.7	15.4	14.7	5.8	2.7	2.9	1.9	1.7	1.4
Terengganu	26.9	27.9	13.6	11.5	3.3	3.1	2.4	2.2	1.3
WP Kuala Lumpur	NA	NA	NA	NA	4.2	1.0	0.8	0.6	1.8
WP Labuan a, b	NA	NA	NA	4.5	3.4	2.4	1.9	1.3	1.1
WP Putrajaya a, b	NA	NA	NA	4.7	2.4	6.9	2.3	1.9	1.7

a. Data for WP Labuan and WP Putrajaya for 2002 are 3.9.

b. Data for WP Labuan and WP Putrajaya for 2003 are 2.4.

* NA means not available

Note: Moderate underweight is weight for < -2SD to < -3SD.

Source: Malaysia, Ministry of Health, Health Facts, various years.

MOVING FORWARD

Despite the success in attaining the MDG 1 targets, new issues and challenges have emerged for Malaysia. Recent data and analysis have revealed small groups of population that are vulnerable to natural disasters, unable to overcome barriers and gaps in development because their jobs or incomes are affected by new developments. The rest of the section will describe these challenges and issues.

Persistent low income shares of the B40 households

In 2014, the top 20 per cent had a mean income of RM14,305 compared to RM2,537 for the bottom 40 per cent or a ratio of 5.6 times. In 1989, the ratio was 7.0, a reduction in the inequality that is consistent with the Gini results reported in **Table 1.5**. This slight narrowing of income inequality was reflected in urban and rural locations. Inequality, as measured by the share of income of the bottom 40 per cent (B40) of households, has remained stable, albeit narrowing slightly between 1989 and 2014 (**Table 1.10**).

Table 1.10:
Share of total household income (%) for B40 households, 1989–2014

Year	1989	1995	1999	2002	2004	2007	2009	2012	2014
Malaysia	14.5	13.7	14.0	13.5	13.2	14.6	14.3	14.8	16.8
Urban	14.7	14.8	14.8	14.7	14.6	15.2	15.3	15.6	17.2
Rural	15.6	15.5	15.6	16.1	16.6	17.4	16.2	17.1	18.4

Note: Citizens only.

Source: Malaysia, Economic Planning Unit based on Department of Statistics, Household Income Surveys, various years.

The B40 community

With absolute poverty largely eliminated, the key challenge is the vulnerable part of the population. The government has turned its attention to the bottom 40 per cent household income group. The B40 is a large and heterogeneous group of 2.7 million households in 2014. Enlarging the scope of policy concern is a sign of inclusiveness, and the key challenge is not to lose sight of the poor and the vulnerable, who are at the bottom of the Malaysian society. The following are some of the issues and challenges for the B40 households³⁴.

- A socioeconomic disparity between the top 20 percent (T20) and the B40. The gap between these two groups is 5.6 in terms of mean household income (2014) and that gap has been closing since 1989.
- Pockets of poverty are high amongst the Orang Asli (34 per cent), Bumiputera Sabah (20.2 per cent) and Bumiputera Sarawak (7.3 per cent) when compared to the national average of 0.6 per cent.
- Although mean income for the B40 households (RM2,537 in 2014) has grown at 12.8 per cent per annum (2009–2014), average household monthly spending (RM2,015 in 2014) has grown at 10.1 per cent, suggesting an income increase of 2.7 per cent³⁵. With the GST at 6 per cent in early 2015, the mean B40 household income balance would be reduced to RM400 per month from RM522 previously. As the GST affects all households equally, those at the lower end of the B40 spectrum will feel the effect more than those in the upper parts of the spectrum.
- The B40 households generally have lower educational attainment and skills acquisition. An estimated 89.9 per cent of household heads have low or semi-skilled jobs that fetch low incomes even though 84.6 per cent have secondary school education.
- The B40 group also lacks entrepreneurship capacities and engaged in micro, small enterprises. It would not be surprising that they would be impacted by the minimum wage ruling, since labour costs almost certainly rise, although the GST ruling may not directly affect them.
- For households earning RM3,000 per month or less, their indebtedness level was seven times their annual household income. At these high levels of indebtedness, they will require several decades of repayment based on normal loan repayment conditions. Households with incomes of RM5,000 had indebtedness of about three to four times their annual household income.
- About 16 per cent of rural and 34 per cent of urban B40 households do not live in their own houses; they are likely renting or sharing their accommodation. About 30 per cent live in overcrowded conditions, with more than two persons to a room. The Orang Asli, Bumiputera of Sabah and Sarawak are still in need of housing despite efforts by the government to provide housing for these communities.
- The B40 households also have limited access to quality healthcare services, as a high proportion of urban households are crowding the public healthcare facilities. In the rural areas, accessibility to healthcare services could still be a problem.

³⁴ 11MP Strategy Paper 2, pp. 2-9, <http://rmk11.epu.gov.my/pdf/strategy-paper/Strategy%20Paper%202002.pdf>

³⁵ 11MP data, Strategy Paper 2 stated that an increase in cost of living is one of the major issues faced by B40 households, pp. 2-9.

In 2009, the B40 households had a mean monthly income of RM1,440; in 2012, their income had risen to RM1,847 and further to RM2,537 in 2014 (11MP). Given the vulnerabilities discussed above, the multidimensional poverty index³⁶ (MPI) that is proposed by the 11MP is extremely pertinent as a complement to the PLI.

The World Bank³⁷ has proposed a definition for the vulnerable group as those who have 2.5 times the PLI; in Malaysia, this group was estimated to be about one million in 2014. They could fall into poverty if faced with income loss or unexpected expenses. This vulnerable population had declined from 24 per cent in 2009 to 19 per cent in 2012, and further to 15 per cent by 2014, and the sharp decline is due to fairly strong economic as well as household income growth.

At-risk retirees

Analysis of the Employees Provident Fund (EPF) contributors, the 14.29 million members of whom 6.29 million are active contributors, seems to suggest an emerging area of concern as the retirement age approaches. The important characteristics of their situation³⁸ are that 53 per cent of contributors who are aged 54 have less than RM20,000 in their account and 68 per cent of EPF contributors have less than RM50,000³⁹. With this level of savings, they will face additional challenges such as inflation, rising healthcare costs as they age, and declining opportunities for wage work. The extension of the retirement age to 60 has given temporary relief for those at retirement age.

Those impacted by natural disasters

An issue that emerged in 2014 was the impact of floods and natural disasters on low income households and the poor. Kelantan, one of the poorer states in Malaysia, was severely impacted by the floods, with more than 200,000 persons affected. More research needs to be done to understand the social nature of the impact, and improve the resilience to disasters. A comprehensive social protection programme is needed to provide support for people affected by natural disasters. The 11MP has indicated that a strategy is being developed.

The impact of minimum wage

Minimum wage was legislated in 2012 with the intention, amongst others, to function as a 'safety net' by placing a 'legal floor wage' in order to secure a reasonable basic standard of living for workers in the country. The overall economic benefits of minimum wage for both workers and society at large are well documented. Careful consideration was given in setting a reasonable level of minimum wages that would not disrupt the labour market. A 'balanced approach' to the minimum wages initiative is also seen as one of the policy instruments of the New Economic Model (NEM), to ensure inclusiveness by transforming the Malaysian economy from middle income to high income by 2020. One of the intended impacts is for businesses to become more productive through investment in skills and automation. In the long term, minimum wages represent a step in the right direction if Malaysia aspires to become a high income nation.

Despite the benefits of minimum wage, there may be challenges and unintended outcomes, especially for a minority of the population, such as those working in small businesses, youth and women, and poorly educated individuals. For example, poorly qualified workers or those with little or no experience will find it harder to get jobs. Formal "low end" work may be at risk as jobs may be outsourced to the informal sector. Social organisations that provide "employment" as part of their charitable work may have to cut back on their programmes if they cannot raise funds to compensate for the impact. The government is aware of these problems. Appropriate social protection programmes should be designed to abate the unintended short-term consequences on groups who are socially and economically disadvantaged in a severe manner. In particular, skills training programmes to raise their productivity and reduce their exposure to risks are needed.

³⁶ 11MP, Box 3-2 Multidimensional Poverty Index, p. 3.23.

³⁷ The World Bank. (2014). *Malaysia Economic Monitor, Towards a Middle-Class Society*.

³⁸ Summarised from the EPF website and 11MP Strategy Paper 2.

³⁹ EPF website, http://www.kwsp.gov.my/portal/documents/10180/154418/BOOK_-_EPF_Saving_and_Your_Retirement__CS5__25032015.pdf

Non-Citizens

Little information is available on the refugees, undocumented and stateless persons who live within Malaysia's borders. These persons are estimated at 152,000 (UNHCR website, April 2015). There were also 2.07 million legal foreign workers as of 31 December 2014⁴⁰; there are various estimates of the number of illegal foreign workers, generally regarded to be more than those who are legal workers.

A comprehensive social protection programme

The 11MP Strategy Paper 2 indicated that the social protection programmes are fragmented. Most are operating in silos, and not well targeted with inclusion and exclusion issues. The paper reported a total of 29 social safety net programmes that were implemented by seven agencies along with 13 other universal social protection programmes, including EPF, Social Security Organisation (SOCSO), and Public Service Pension. Most of the programmes did not have a clear exit policy. The Paper recommends that the social protection programmes be reviewed, so that they can provide integrated and comprehensive coverage. The delivery system for the B40 programmes should also be streamlined, rationalised and coordinated with the relevant agencies.

CONCLUSION

As the MDG era closes for Malaysia in 2015, the government can take pride in having done extremely well on the “super goal”, especially the poverty targets under MDG 1. As was seen, poverty eradication was attained largely through employment generation, income growth as well as sectoral shifts in the economy. It can be said that extreme poverty has been largely eradicated and the employment generation has contributed to this outcome.

Despite this achievement, other disparities have opened up, e.g. the B40 group, or those who live and work in flood-risk areas and are vulnerable to disasters and losses or those who could fall into or back into poverty if they lost their jobs.

The government has taken the approach to shift its focus to relative poverty and more specifically targeting the B40, who are likely a heterogeneous group given

the analysis done in the 11MP. Social and economic pressures are likely to affect the group differently. It would be important to ensure that the most vulnerable⁴¹ amongst the B40 do not fall through the cracks, despite the vast array of institutions that bring development to the people. In this regard, a more focussed approach seems necessary: raising their mean income would truly meet the spirit of the inclusive approach as espoused by the 11MP.

As pointed out in the 11MP, it is important to revisit the social protection programmes for the most vulnerable populations. Studies that help planners understand how to reach effective solutions would facilitate bringing about wider good for all Malaysians. Malaysia should feel proud of its achievements in MDG 1 as it moves beyond the MDGs, overcomes the challenges and closes the remaining gaps beyond the post-2015 period.

⁴⁰ See <http://www.mohr.gov.my/index.php/en/archives/214-archive-news-2014/1175-more-than-two-million-legal-foreign-workers-in-malaysia-dewan-rakyat-told-by-Deputy-Human-Resource-Minister-Datuk-Seri-Ismail-Abdul-Muttalib>.

⁴¹ The 11MP defines this group as the households who are above the PLI with incomes up to 2.5 times the PLI (similar definition as the World Bank).

ANNEX 1.1

TARGETS AND INDICATORS

Table 1.11:
MDG 1 Target and Indicators

Target		Indicators	Notes
Target 1a: Halve, between 1990 and 2015, the proportion of people whose income is less than US\$ 1 a day	1.1	Proportion of population below US\$ 1 (PPP) per day	National poverty line income used to estimate proportion of households below the poverty line. Latest available data: 2012.
	1.2	Poverty gap ratio	How poor are the poor: mean ratio of distance from poverty line, with all households above the poverty line assigned zero distance. This measures the mean percentage the poor fall short of the poverty line.
	1.3	Share of poorest quintile in national consumption	Share of poorest 20 per cent of households sorted by household income. Another measure of how poor are the poor.
Target 1b: Achieve full and productive employment and decent work for all, including women and young people	1.4	Growth rate of GDP per person employed	Measured at constant local currency units as well as purchasing power parity and US\$. For comparison with household income and earnings, current local currency units are used. This is a measure of the productivity of workers and establishes an upper bound to possible earnings per worker on an equal share basis.
	1.5	Employment-to-population ratio	Employment-to-population ratio is the total number of employed persons as a proportion of persons in the 15–64 working age group. Take note that the labour force participation rate is the total number of persons in the labour force (employed and unemployed) as a proportion of the total persons in the 15–64 working age group.
	1.6	Proportion of employed people living below US\$ 1 (PPP) per day	The number of employees for the 2014 analysis is estimated by multiplying the average number of workers in a household (1.7 persons) by the number of households considered poor i.e. number of households earning below the poverty line incomes of US\$ 1.25 (PPP), US\$ 2 (PPP) and the national poverty line.
	1.7	Proportion of own-account and contributing family workers in total employment	Measure of “informal” sector. Estimated from labour force surveys, using the category of self-employed and unpaid family worker. Characteristics, including earnings, of such workers are derived from the Household Income Survey.
Target 1c: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.8	Prevalence of underweight children under five years of age	Ministry of Health supplied data for individual states, based on children visiting Ministry of Health clinics, using a weight-for-age metric, with those more than two standard deviations below the standardized median classified as moderately underweight and those more than three standard deviations below it, severely underweight.
	1.9	Proportion of population below minimum level of dietary energy consumption	The proxy used is those below the national food poverty line income: that is, those classified as “hard-core” poor.

ANNEX 1.2

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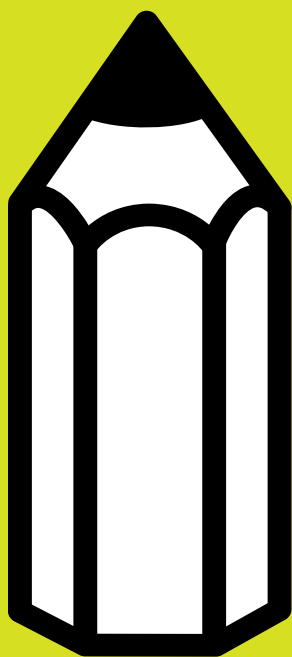
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MDG 2



**ACHIEVE UNIVERSAL
PRIMARY EDUCATION**

INTRODUCTION

The second Millennium Development Goal (MDG 2) has a single target:

- Ensure that, by 2015 children everywhere, boys and girls, will be able to complete a full course of primary education



Education has undergone tremendous development since Malaysia was formed in 1963. It has evolved from a diverse and fragmented system that caters to communal needs into an integrated national system that strives to achieve national unity, and aims to develop the potential of individuals in a holistic and integrated manner so that they are intellectually, spiritually, emotionally and physically balanced and harmonious⁴². Education is recognised as a key factor for Malaysia to attain its ambition of becoming a united, developed and high income nation by 2020.

Indeed, education is a major catalyst for human development. By equipping people with knowledge and skills, education can open up opportunities for better employment, income, social participation, and health, amongst others. In this sense, education will level out the “playing field” and thus improves equity and opportunities for people to pursue their own development. Equally significant, education enables people to understand and overcome shocks and disasters, enhancing their resilience. Indeed, education is a major influence in ensuring the sustainability of human development by assisting individuals to make decisions that meet the needs of the present without compromising the ability of future generations to meet their own needs. MDG 2 gives focus to primary education, which is the foundation upon which future learning takes place. The indicators used to monitor the progress on MDG 2 are summarised in **Annex 2.1**.

In practical terms, Malaysia has achieved the MDG 2 goal of providing universal primary education. Between 1970 and 2000, participation rates rose from 67 per cent to 95.6 per cent, as a result of large investments in education, expansion of facilities, intake of teachers, and more teaching programmes. By 2014, participation rates had reached 97.9 per cent. Completion rates in primary education have also been high at about 98 per cent with similar achievements for boys and girls (GPI⁴³ = around 1.00) since the early 1990s. Consequently, youth literacy rates rose to 98.0 per cent in 1990 and has stayed at these levels since. Given these achievements in primary education, Malaysia has expanded the scope of MDG 2 to include secondary education. This chapter will discuss the factors that enable Malaysia to attain these achievements. The challenges for education in the larger context are also discussed, bearing in mind that accessibility, equity and quality⁴⁴ of education need to be fulfilled together in order for education to play its catalytic roles as mentioned above.

⁴² 10MP, p. 196.

⁴³ Gender Parity Index (GPI) reflects girls access to education compared to that of boys.

⁴⁴ Accessibility refers to whether people have access to education and is indicated by the enrolment rates at different education levels. Equity refers to fairness and inclusion. Personal or social circumstances such as geographical location, socioeconomic background or gender should not be obstacles to realising full educational potential. This component is important for education to level out the playing field between marginalised groups and mainstream society. Disaggregated data would be useful to examine this aspect. Quality influences the level of skills and knowledge; the level of ability to optimise opportunities and resilience to face challenges as well as the capacity to make better decisions for one's self and society.

THE MALAYSIAN EDUCATION SYSTEM

The education sector in Malaysia stretches from preschool to tertiary education, and is the responsibility of the Ministry of Education (MOE) and the Ministry of Higher Education (MOHE). In the context of the MDGs, this chapter will focus mainly on the primary and secondary (lower and upper secondary) education levels.

Although early childhood education is available for children aged four to five, formal education under the national education system⁴⁵ begins with pre-primary at age six, followed by six years of compulsory primary education. Children are enrolled into the school year that corresponds to their age⁴⁶ and thus there are few overaged primary school students. With automatic promotion in primary school there are virtually no repeaters. Upon completion of primary education, students move on to lower secondary education that spans three years before completing two more years of upper secondary education. Automatic promotion from lower to upper secondary levels started with the student cohort that completed Form 3 in 1993.

Malaysia's education sector is largely provided by the public education system. At the primary level, about 98 per cent of enrolled students attend public schools. There are two main types of primary schools: (1) government schools where *Bahasa Malaysia*, the national language, is the medium of instruction; and (2) government-aided schools where Chinese or Tamil is used as the medium of instruction. The remainder, about 2 per cent, are private schools, state religious schools and other religious schools that are registered with MOE. At the secondary level, about 91 per cent of students were enrolled in public schools as of 2013. Besides MOE, other institutions that provide secondary education include *Majlis Amanah Rakyat* (MARA), the private sector, state governments, and the Ministry of Defence.

In total, 5.18 million students are enrolled in all schools up to the upper secondary Form 5 level⁴⁷. In 2014, 2.79 million students were in primary education. There are presently 7,758 public primary schools, of which 5,652 are in the rural areas⁴⁸. The private sector and other government institutions, primarily the religious primary schools, operate another 194 primary schools, with another 99 other private institutions that are registered with MOE providing both primary and secondary education.

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Over the 11 years of primary and secondary education, students are assessed through three national-level examinations. They include the Primary School Achievement Test (UPSR) at the end of Year 6; Lower Secondary Evaluation (PMR) at the end of Form 3 which has been replaced as of 2014 by the Form Three Assessment; as well as the Malaysia Certificate of Examination (SPM), which is equivalent to the General Certificate of Education (O-level) at the end of Form 5 (upper secondary).

⁴⁵ For more detailed description of the national education system, including vocational streams, see Malaysia, Ministry of Education (2015), *Malaysia National Education For All Review Report: End of Decade Review*.

⁴⁶ This scenario occurs among populations in remote areas and mobile populations such as among the Orang Asli in Peninsular Malaysia and the indigenous people of Sabah and Sarawak.

⁴⁷ The total number of students in public schools up to Form 6 level was 4.97 million in 2014.

⁴⁸ Malaysia, Ministry of Education, as of 30 June 2014.

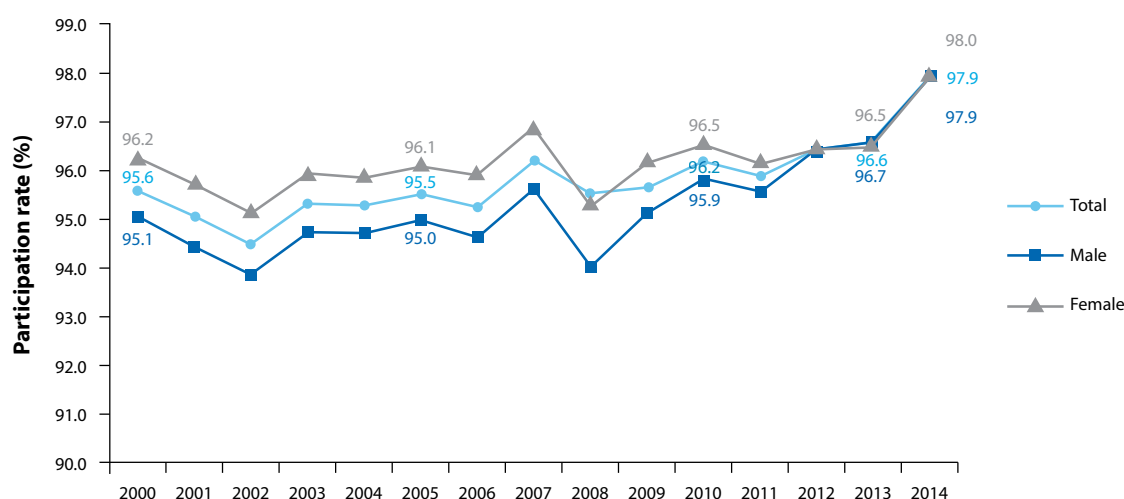
PARTICIPATION RATES

Primary education

The participation rate or the gross enrolment rate refers to the proportion of students enrolled at a certain educational level over the official school-age population at that level. At the national level, Malaysia has achieved participation rates of more than 95 per cent in primary education since 2000 (**Figure 2.1**). The “2015 Malaysia National Education For All Review Report: End of Decade Review” reported that the number of children not entering Year 1 dropped to 10,293 in 2013 from 26,222 in 2012.

Gender parity had been achieved in primary education since the early 1990s. As shown in **Figure 2.1**, females had a marginally higher enrolment rate than males (GPI around 1.00) for most of the 2000 decade. The male participation rates have increased recently, and parity was reached since 2012 (GPI = 1.00). Malaysia has thus achieved universal primary education for boys and girls alike.

Figure 2.1:
Participation rates at primary level by gender, 2000–2014



Source: Malaysia, Ministry of Education, Educational Planning and Research Division.

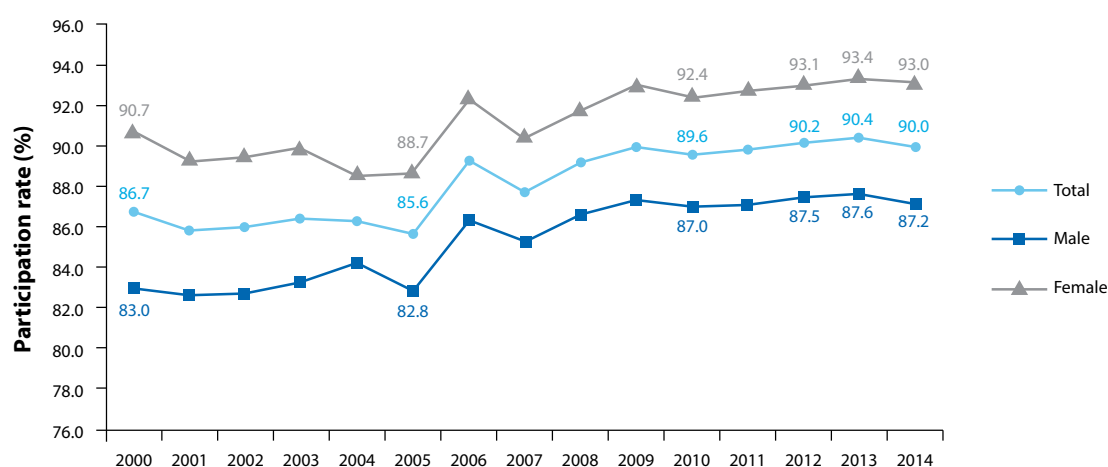
Note: Data include students in public and non-public schools, e.g., Sekolah Rendah Agama Negeri (Primary State Religious Schools) and Sekolah Rendah Agama Rakyat (Primary People's Religious Schools) but not in other institutions, e.g., community rehabilitation centres for the handicapped.

Secondary education

Improvements in secondary school participation rates have also been reported: they increased from 86.7 per cent in 2000 to 90.0 per cent in 2014 (**Figure 2.2**). According to the 2015 Malaysia National Education for All Review Report: End of Decade Review, near universal participation rates were achieved at lower secondary education as of 2014, while at the upper secondary level, it has increased from 45 per cent in the 1980s to approximately 82 per cent in 2014.

As shown in **Figure 2.2**, female participation rates at the secondary level have been higher than males between 2000 and 2014, with an average of 90 per cent in 2014. The gender gap has only narrowed slightly between 2000 and 2014 from a GPI of 1.09 to 1.07. This is likely due to the lower participation of boys at the upper secondary levels. Further study is required to shed light on the reasons for this divergence. This issue of the lower performance of boys is discussed in the MDG 3 chapter.

Figure 2.2:
Participation rates at secondary level by gender, 2000–2014



Source: Malaysia, Ministry of Education, Educational Planning and Research Division, 2014

Note: Data include students in public and non-public schools such as private schools, Sekolah Menengah Agama Negeri (Secondary State Religious Schools), Sekolah Menengah Agama Rakyat (Secondary People's Religious Schools) but not in other institutions such as vocational training institutions and community rehabilitation centres for the handicapped.

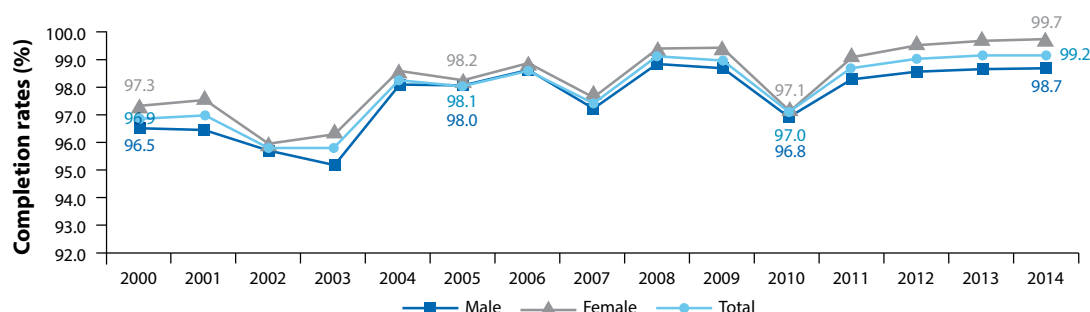
COMPLETION RATES

Completion rates refer to the percentage of students who have completed a full cycle of education at a specific level. This indicator measures an education system's success in retaining students from one grade to the next as well as its internal efficiency. As there is automatic promotion in primary and secondary schools, completion rates are generally high.

Primary education

Nationally, the completion rate of primary education has risen from 96.9 per cent in 2000 to 99.2 per cent in 2014 (Figure 2.3). Girls have outperformed boys over this period, although statistically it is insignificant (according to Z-test using enrolment data in the EPRD Quick Facts). Indeed, the GPI for completion rates have been maintained within the range of 1.00 to 1.01 per cent over this period.

Figure 2.3:
Completion rates at primary level by gender, 2000-2014



Source: Malaysia, Ministry of Education, Educational Planning and Research Division, 2014.

Note: Data includes students in public and non-public schools, Sekolah Rendah Agama Negeri (Primary State Religious Schools) and Sekolah Rendah Agama Rakyat (Primary People's Religious Schools) but not in other institutions such as community rehabilitation centres for the handicapped.

Analysis by states shows considerable improvement for those with the lowest completion rates (Table 2.1). In Sabah's case, the primary school completion rate was 81.5 per cent in 2000 but rose to over 100 per cent by 2012. Sarawak's completion rate improved from 94 per cent to 99 per cent in the same period. However, Kuala Lumpur's completion rates have remained at 93 per cent. In the capital city, there are more variations due to transfers to neighbouring states or even going overseas for study⁴⁹.

⁴⁹ In 2000, the government announced that children are required to have proper documentation in order to enrol in public schools. It was fully implemented nationwide in 2003. This requirement impacted Sabah the most with a substantial number of enrolled children leaving their primary schools due to the circumstances and hence the noticeable drop in completion rates between years 2001 and 2003. In 2009, the Malaysian government issued a circular that allowed children without proper documentation to enter schools with verification by their village head. The National Registration Department also made amendments to consider children with Malaysian mothers as Malaysian. With that, many more children were able to enrol for public schools and contributed, in part, to completion rates being more than 100 per cent.

Table 2.1:
Completion rates % in MOE primary schools by state, selected years

Year	2000	2002	2004	2006	2008	2010	2012	2014
Malaysia	96.9	95.8	98.3	98.6	99.1	97.2	99.1	99.2
Johor	99.2	98.0	98.9	99.6	98.3	95.7	98.0	99.1
Kedah	101.0	100.5	101.5	101.7	101.6	100.7	100.9	100.6
Kelantan	98.5	97.5	99.6	100.3	100.1	92.5	101.1	100.2
Melaka	100.9	100.6	102.3	101.7	103.1	100.2	101.2	99.6
N. Sembilan	101.0	98.6	102.1	102.4	102.1	97.6	99.8	99.4
Pahang	97.2	95.1	97.1	98.6	98.8	92.3	99.8	100.0
Perak	99.0	97.7	99.0	99.9	98.8	91.5	99.3	99.4
Perlis	99.3	100.9	101.2	100.7	103.9	94.3	104.7	102.8
P. Pinang	97.9	99.3	99.2	100.3	99.0	99.9	97.6	97.0
Sarawak	94.3	94.0	97.0	97.1	97.6	93.5	98.6	99.4
Sabah	81.5	79.6	85.9	87.2	93.9	94.9	100.2	101.0
Selangor ^a	103.3	100.2	103.9	103.3	100.7	108.3	98.4	98.3
Terengganu	99.4	96.9	100.0	96.1	185.8	90.9	99.9	100.6
WP Kuala Lumpur	92.6	91.1	91.4	96.3	92.9	93.2	93.3	93.2
WP Labuan	NA	NA	NA	88.3	89.5	94.8	94.0	94.7
WP Putrajaya	NA	NA	NA	NA	NA	NA	128.5	115.8

a. Including Putrajaya

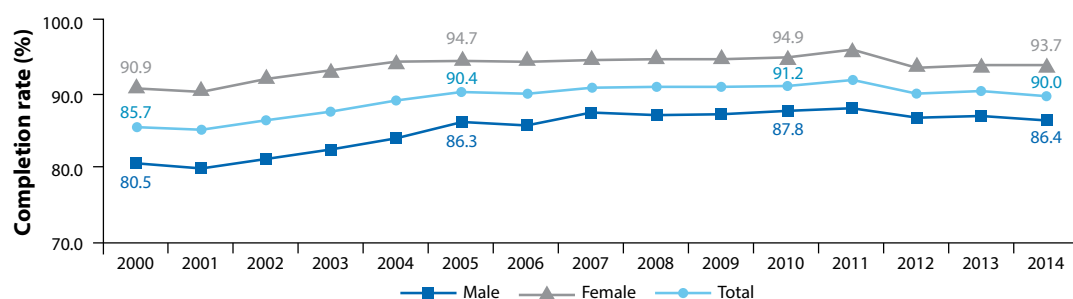
Source: Malaysia, Ministry of Education, Educational Planning and Research Division, 2015.

Secondary education

Completion rates at secondary education are relatively lower than those observed for primary education with only about 90 per cent of students completing the full course. Nonetheless, completion rates have improved between 2000 and 2014, rising from 85.7 per cent in 2000 to 90.0 per cent in 2014 (**Figure 2.4**). This completion rate does not include the non-public schools and those furthering their studies overseas were not included.

The gender gap is more apparent at the secondary level. Females outperformed males for the entire period of 2000–2014 (**Figure 2.4**). Male completion rates were improving as the GPI narrowed from 1.13 in 2000 to 1.08 in 2007, but it has remained at this level since then. A review of this outcome should be made as this gender difference perpetuates itself at the next level of education. On another note, analysis by state shows that completion rates have been improving for all states with most states achieving more than 90 per cent as of 2014 except for Kedah, Kelantan, Selangor, Sabah and Sarawak (**Table 2.2**).

Figure 2.4:
Completion rates at secondary level by gender, 2000–2014



Note: National data include Maktab Rendah Sains MARA and Royal Military College.

Source: Malaysia, Ministry of Education (MOE), Majlis Amanah Rakyat (MARA) and Royal Military College, 2014

Table 2.2:
Completion rates (%) in secondary schools by state, selected years

	2000	2002	2004	2006	2008	2010	2012	2014
Malaysia	85.7	86.6	89.1	90.1	91.0	91.3	90.2	90.0
Johor	84.0	84.2	87.6	87.5	88.2	89.4	89.7	91.3
Kedah	85.4	87.3	90.0	89.8	90.2	90.9	89.7	89.6
Kelantan	87.5	87.2	91.9	91.6	90.1	90.2	91.4	89.2
Melaka	89.7	91.7	93.4	95.2	96.3	96.4	94.1	93.8
N. Sembilan	91.9	90.6	94.7	96.2	99.5	98.7	96.8	94.7
Pahang	85.9	89.5	92.3	93.1	91.2	91.0	91.4	92.4
Perak	86.8	86.4	90.9	90.0	90.7	92.0	90.1	90.4
Perlis	92.8	99.1	96.3	103.6	102.0	99.2	97.1	93.0
P. Pinang	90.7	89.6	90.5	91.5	91.7	93.0	91.9	91.1
Sabah	75.5	73.8	73.8	80.4	80.3	81.9	83.5	83.8
Sarawak	78.5	80.5	81.8	82.8	82.9	83.1	83.1	83.4
Selangor	83.9	84.8	89.4	91.0	92.5	92.0	89.8	89.3
Terengganu	86.5	86.7	91.5	90.9	95.6	96.3	91.2	90.8
WP Kuala Lumpur	86.9	84.5	85.1	85.9	89.1	91.8	91.5	91.2
WP Labuan	NA	NA	NA	89.1	91.2	89.1	88.7	93.6
WP Putrajaya	NA	NA	NA	NA	NA	NA	108.1	99.3

Note: Prior to 2001, Labuan was part of Sabah. For calculation purposes, students moving from one state to another are considered as having dropped out from the one they left, but they have not dropped out of the system. Data do not include non-public schools.

Source: Malaysia, Ministry of Education, Educational Planning and Research Division, 2015.

DROPOUT RATES⁵⁰

Dropout rates are the percentage of students who do not complete a full course of education at a certain level due to various reasons, which may include poverty, disciplinary cases, lack of interest, and underaged marriage and teen pregnancy⁵¹. Dropout from education is a matter of concern because children are leaving schools without fully developing the skills and knowledge needed to optimise their future opportunities. They are at risk of engaging in risky behaviours such as substance abuse or illegal activities, and are vulnerable to various circumstances and shocks. At present, the MOE statistics capture the number of students who leave the national education system.

In Malaysia, dropouts from primary education are minimal as shown by the high completion rates. With a completion rate of 99.2 per cent, only 3,800 students (0.8 per cent) from the 2014 graduating cohort dropped out from primary school. The dropout rate is higher at the secondary level, particularly upper secondary, and mainly amongst males. In absolute numbers, 46,408

students (10 per cent) from the 2014 graduating cohort dropped out of secondary education. This is an improvement compared to 58,773 students (14.3 per cent) who dropped out from the 2000 graduating cohort. Hence, a substantial number of youth do not complete secondary education.

The transition from primary to secondary education is another point where dropouts occur in Malaysia. Consistent with the improving participation rates, the primary to secondary transition dropout rates have also declined, from 9.95 per cent in 2000 to 2.71 per cent in 2014. In numerical terms, the number of dropouts has declined steadily from 45,200 in 2000 to about 12,898 in 2014 (**Table 2.3**). From a gender perspective, females tend to have slightly higher transition rates than males over the period of 2000–2014, although the GPI has narrowed from 1.04 to 1.02. This implies that both genders are successfully transitioning into lower secondary.

Table 2.3:
Dropouts during the transition from primary to secondary level, selected years

	2000	2002	2004	2006	2008	2010	2012	2014
Number of dropouts	45,212	36,485	30,142	34,993	26,072	12,240	16,098	12,898
Dropout rate (%)	9.95	8.34	6.53	7.20	5.34	2.57	3.52	2.71
Transition rate (%)	90.05	91.66	93.47	92.80	94.66	97.43	96.48	97.29
Male	88.35	89.46	91.63	90.63	91.94	96.95	96.26	96.14
Female	91.89	94.06	95.45	95.15	97.62	97.92	96.71	98.50
GPI of transition rate	1.04	1.05	1.04	1.05	1.06	1.01	1.00	1.02

Note: Adjusted to remove transfer of students from public to non-public schools but not for transfer from non-public to public schools or from public school to home schooling

Source: Malaysia, Ministry of Education, Educational Planning and Research Division, Malaysian Educational Statistics, 2000 to 2015

⁵⁰ This is calculated by the cohort method whereby the dropout rate is estimated by deducting the completion rates from 100 per cent. The completion rate is the percentage of students enrolled in Year 6 out of those who had enrolled in Year 1 of that cohort year.

⁵¹ The Malaysian government does not restrict students who have been expelled from one school from applying to other schools or disallow young mothers from attending school. However, the social stigmas attached to these circumstances are likely to disadvantage these students.

LITERACY RATES

The statistical reporting of literacy in Malaysia uses the proxy of school attendance, which is globally accepted and is based on practical considerations, rather than a test of the ability to read and write. The literacy rate is thus defined by the percentage of population who had ever attended school⁵². A more accurate measure of literacy for primary school can be derived from the Literacy and Numeracy Screening (LINUS) Programme, which is discussed later in this section.

Youth literacy rates

In Malaysia, the literacy rates⁵³ of youth (age 15–24) stood at about 98 per cent between 2000 and 2014.

Most of the gains in youth literacy were made before 1990 with improvements in female literacy contributing most to this achievement. Gender parity had been achieved for the whole period of 2000–2014 (**Table 2.4**), in line with the primary education participation rates as discussed previously.

There is very little interstate variation in literacy, and literacy rates have risen slowly across all states. The exception being Sabah, where the literacy rate seems to have declined from 94.5 per cent in 2000 to 90.8 per cent in 2013, rising slightly to 92.2 per cent in 2014 (**Table 2.5**). The decline in literacy rates is likely contributed by non-citizens⁵⁴ who have had less schooling.

Table 2.4:
Literacy rates (%) of 15–24-year-olds, selected years

Year	1982	1990	2000	2010	2011	2012	2013	2014
Population	95.5	98.0	98.2	97.9	98.1	98.1	98.0	98.2
Male	97.1	98.7	98.3	97.8	98.0	97.9	97.9	98.3
Female	93.9	97.2	98.1	98.0	98.2	98.4	98.0	98.1
GPI literacy	0.97	0.98	1.00	1.00	1.00	1.01	1.00	1.00

GPI = Gender Parity Index, where GPI = 1 implies gender parity has been achieved and GPI < 1 implies that males have the advantage and vice versa.

Note: Includes non-citizens.

Source: Malaysia, Department of Statistics, Labour Force Survey, various years.

⁵² As Malaysia is moving to improve its educational quality (Malaysia Education Blueprint, 2013–2025), this proxy measure from the Labour Force Survey is inadequate especially with automatic promotion applied in primary and secondary levels. Unless intervention programmes are effectively implemented to improve quality, students in upper secondary school (after nine or more years of schooling) may be barely literate.

⁵³ United Nations, Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources. Version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.aspx>, accessed on 18 May 2015.

⁵⁴ The statistical source, Labour Force Survey, is designed to estimate the structure of labour force, employment and unemployment across the country, and not a true measure of literacy. In the survey, school attendance is used as a proxy for literacy.

Table 2.5:
Literacy rates by state (%), 15–24-year-olds, 2000–2014

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Malaysia	98.2	98.4	98.2	98.3	98.3	98.4	98.4	98.5	98.4	98.5	97.9	98.1	98.1	98.0	98.2
Johor	98.7	98.7	99.1	99.2	99.2	98.9	99.1	99.2	99.3	99.4	99.2	99.5	99.4	99.3	99.2
Kedah	98.9	99.5	98.6	99.2	98.9	99.4	99.2	99.2	99.3	99.4	99.0	99.2	98.6	98.9	98.5
Kelantan	98.3	99.0	98.4	98.8	98.9	98.9	98.7	98.9	98.9	98.9	98.7	98.8	98.5	99.1	98.9
Melaka	98.8	99.2	99.1	99.2	99.2	99.5	99.0	99.1	99.5	99.3	99.4	99.4	99.5	99.1	99.5
N. Sembilan	98.6	98.4	98.4	98.5	98.9	98.8	98.7	99.1	99.2	99.3	98.3	98.7	98.7	98.9	99.5
Pahang	98.4	97.7	98.0	97.8	97.7	97.0	98.5	97.6	98.5	98.3	98.5	98.4	99.3	98.2	98.7
Perak	98.3	98.5	98.7	98.4	98.6	99.0	98.6	99.2	99.4	99.2	99.1	99.3	98.9	98.3	98.9
Perlis	99.5	98.6	99.1	98.5	99.4	99.5	99.4	99.2	99.4	99.4	99.2	99.2	99.3	99.2	99.2
Pulau Pinang	99.6	99.5	99.1	99.1	99.0	99.1	99.4	99.3	99.4	99.6	99.8	99.7	99.5	99.3	99.5
Sabah	94.5	94.9	95.2	94.3	94.5	95.1	95.1	95.0	93.7	93.4	90.9	90.8	91.7	90.8	92.2
Sarawak	97.6	97.9	97.4	97.8	98.2	98.1	98.0	98.3	98.3	99.0	98.6	99.2	98.9	99.0	99.1
Selangor ^a	99.0	99.2	98.7	99.4	99.2	99.1	99.2	99.3	99.4	99.4	98.6	99.5	99.3	99.7	99.6
Terengganu	98.9	99.2	99.5	98.8	99.2	98.9	99.4	99.1	99.3	99.6	99.1	98.9	99.0	98.8	98.4
WP Kuala Lumpur	99.3	99.4	99.6	99.6	99.1	99.5	99.5	99.5	99.7	99.8	99.5	99.5	99.7	99.4	99.6
WP Labuan	95.1	95.0	94.2	97.2	91.5	94.4	92.9	90.2	88.6	90.4	98.5	97.2	96.6	97.9	95.7

a. Putrajaya, declared a federal territory in February 2001, is included as part of Selangor.

Note: Includes non-citizens.

Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years.

The literacy rate (by school attendance) of Malaysian citizens is generally higher than that of non-citizens⁵⁵, although literacy rates of both have been increasing between 2000 and 2014 (**Table 2.6**). Taking into account the population aged 10 to 64, the literacy rate of Malaysian citizens has improved from 94.5 per cent in 2000 to 97.2 per cent in 2014. This increase is likely to be a result of younger generations having higher participation rates in education.

⁵⁵ Malaysia has allowed other organisations to fund and run alternative education centres in order to meet the educational needs of children who cannot be reached by conventional measures. There are currently 50 community learning centres in Sabah, specifically for children of Indonesian plantation workers. As of February 2015, Malaysia had agreed to allow more centres to cater to the educational needs of Indonesian workers in Malaysia as a result of discussions with Indonesian President Joko Widodo on his first bilateral visit to Malaysia.

Table 2.6:
Literacy rates (%) by citizenship and age group, 2000-2013

Citizen	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Age 10 and above	91.6	91.9	92.1	92.6	92.8	93.0	93.6	93.6	93.8	94.2	94.4	95.2	95.2	95.2	95.7
Age 15 and above	90.3	90.7	91.0	91.6	91.8	92.0	92.7	92.8	92.9	93.4	93.7	94.6	94.6	94.7	95.2
Age 10 – 64	94.5	94.8	94.9	95.3	95.4	95.6	96.1	96.1	96.3	96.7	96.9	97.5	97.5	97.5	97.9
Non-citizen															
Age 10 and above	86.4	85.6	85.1	85.5	84.9	84.8	87.2	85.3	80.8	81.3	87.4	87.7	89.2	89.1	89.5
Age 15 and above	87.2	86.6	86.1	86.7	86.6	86.2	89.1	86.4	81.9	83.4	87.8	88.0	89.6	89.5	89.9
Age 10–64	87.6	86.4	85.8	86.5	85.6	85.5	87.7	85.9	81.3	81.8	87.9	88	89.5	89.4	89.8

Note: Literacy rates were proxy data, which were estimated based on percentage of population who have ever attended school.
Source: Malaysia, Department of Statistics, Labour Force Survey, various years.

Literacy and Numeracy Screening (LINUS)

Malaysia initiated the Literacy⁵⁶ and Numeracy Screening (LINUS) programme⁵⁷ nationwide in 2010 to enhance basic literacy (in the national language) and numeracy skills of primary schoolers, Years 1 to 3. This programme assesses the literacy and numeracy competencies amongst students three times a year with remedial interventions being applied between screenings to help those struggling with basic literacy and numeracy skills. This screening can also identify children with special education needs⁵⁸. In 2013, MOE launched LINUS 2.0, which included English literacy but reduced the number of screenings to two per year (one at the end of the first quarter and the other at the end of the third quarter).

Based on the average results under the LINUS 2.0 programme, 64 per cent of Year 1 children at first screening are literate in the national language, 77 per cent are numerate and 53 per cent are literate in English (**Table 2.7**). Through remedial interventions, the literacy rate for the national language increased to an average of 81 per cent in the second screening, while numeracy rates increased to 89 per cent and literacy in English to 67 per cent. Similarly for Years 2 and 3, improvements are observed after the first screening. It is also apparent that literacy and numeracy skills increase as the children progress through Year 1 to 3 of primary education. By the second screening at the end of Year 3, 99 per cent of students are numerate and literate in the national language. Screening results for English at Year 3 will only be available at the end of 2015.

⁵⁶ LINUS is a test of reading, writing and numeracy and not school attendance as described in the previous subsection.

⁵⁷ In 2006, a KIA2M programme was started that was aimed at improving reading and writing skills in Year 1. It was replaced by LINUS in 2010, which included screening for numeracy skills, in addition to literacy skills.

⁵⁸ Students with special education needs as detected by LINUS will be verified and confirmed by Medical Officers.

Table 2.7:
Average literacy and numeracy rates (%) for screenings 1 and 2 of LINUS 2.0, 2013–2014

Primary Level	Literacy (BM)		Numeracy		Literacy (English)	
	Screening 1	Screening 2	Screening 1	Screening 2	Screening 1	Screening 2
Year 1	64	81	77	89	53	67
Year 2	86	92	90	94	69	78
Year 3	95	99	95	99	83	NA

Note: Average is based on UNCT's calculations. Screening 1 results use three cohorts (2013–2015), while Screening 2 results use two cohorts (2013 and 2014). English results are based on one cohort for year 3 and two cohorts for years 1 and 2. While each cohort's performance is dependent on that year's performance, the patterns for all cohorts are similar to that of the average.
Source: Malaysia, Ministry of Education, 2015.

The results from LINUS 2.0 are consistent with the findings from LINUS that was previously conducted from 2010 to 2012, particularly the improvement in literacy and numeracy skills from Year 1 to Year 3. In terms of gender, the LINUS results (2010–2012) demonstrated that male students were slightly less literate and numerate compared to their female counterparts in Year 1. However, this gap was gradually bridged as students progressed from Year 1 to Year 3. Examining by state, LINUS results showed that literacy and numeracy of above 98 per cent were seen in all states by the second assessment of Year 3 despite certain states recording lower rates at Year 1⁵⁹.

These findings strongly suggest that the interventions have been successful in improving basic literacy and numeracy by Year 3, regardless of gender, ethnic background⁶⁰, location (state) or the varying degrees of literacy and numeracy levels in Year 1.

Rehabilitation Programme (ProTiM)

ProTiM, or Program Pemulihan 3M (Membaca, Menulis dan Mengira), was the first literacy assessment programme and was the precursor of LINUS. **Box 2.1** provides a description of it.

Box 2.1: The Rehabilitation Programme (ProTiM) and increasing literacy and numeracy

In 2008, MOE launched ProTiM nationwide for all Year 4 students who had not mastered basic literacy and numeracy skills. The objective of this programme is to ensure that students master the skills of reading, writing and arithmetic or the 3Rs before they proceed to secondary education. Apart from improving educational outcomes, the programme played a role in reducing dropouts by providing them with basic skills needed to follow the secondary level curriculum. In 2009, the programme was expanded to include students who were already in Years 5 and 6 but needed additional remedial action.

ProTiM ran before LINUS was implemented in 2010. Presently, both programmes are complementary to each other in that

students who missed LINUS or lacked improvement despite undergoing LINUS could be assisted from Year 4 onwards.

ProTiM also involves two assessments: one at the beginning and the other after 10 weeks of remedial intervention classes at each year. The main targets for the programme presently include Year 4 students who did not reach the construct level to be considered as literate in the Year 3 second screening (LINUS 2.0) and other students in Year 4 who have not yet mastered basic literacy and numeracy skills. Evaluating the outcomes of this programme in the future would be useful to ensure that it is effective and efficient in reaching the desired impacts.

⁵⁹ Malaysia, Ministry of Education. (2014). Averages of results are based on UNCT calculations.

⁶⁰ Based on LINUS data for years 2010 to 2012, Indian and Other Bumiputera children had noticeably lower numeracy and literacy rates (national language) at Year 1 (Screening 3, LINUS) compared to other ethnic groups. However, they were able to catch up with children in other ethnic groups by the end of Year 3, scoring only about 1 to 2 per cent lower than the highest scoring ethnic group.

GOVERNMENT COMMITMENT

Malaysia's achievements in MDG 2 for both primary and secondary education have been the results of the long-standing commitment to provide quality education for all. As early as the First Malaysia Plan (1MP, 1966-1970), education has been amongst the key development priorities, and it has been included in subsequent five-year national development plans (Malaysia Plans) and the 10-year Outline Perspective Plans⁶¹ (OPP) or development policies. Changes and reforms to the Malaysian education system reflect efforts by the government to align education to development needs over time.

Recognising education's importance, Malaysia has made continuous and significant investments in education since the 1970s. In 2000, Malaysia spent 18.05 per cent of total public expenditures on education. Over the MDG period, 2000 to 2015, the highest ratio spent on education was 23.86 per cent in 2003 and lowest was 13.88⁶² per cent in 2007.

Under the guidance of the Malaysia Plans, the Education Development Master Plan 2001-2010, and the Malaysia Education Blueprint 2013-2025, the government endeavours to ensure that all children can access and complete primary education regardless of gender, ethnicity, socioeconomic background, location and ability. Through expanding the school infrastructure, teacher capacity and other initiatives, Malaysia made primary education accessible to most parts of the country, which resulted in increased participation rates from the 1980s to 2000s⁶³.

Malaysia amended the Education Act 1996 (Act 550) to make primary education compulsory in 2003. In pursuit of greater participation in education, the Malaysian government uses persuasive methods and incentives to encourage children to attend school. These included initiatives such as the Poor Students Trust Fund, uniform allowances, the Supplementary Food Programme, Tuition Aid Scheme⁶⁴ for children from underprivileged families, hostel facilities for those where daily commute is impractical and free textbooks provided to all primary and secondary students, amongst other initiatives. As of 2012, free education is available from primary to upper secondary levels within the public schooling system⁶⁵.

As progress has been made for the majority of the school-age population, the government has been directing efforts towards children from marginalised populations, who are not in school and who are lagging behind academically. They include children from poor families, in urban, rural or remote areas, children living in plantations and estates, children with special needs as well as amongst the indigenous populations.

⁶¹ Outline Perspective Plans (OPPs) are long-term planning documents spanning two Malaysia Plans and were introduced in 1971. Each of the OPPs had a special policy theme. The first OPP contained the New Economic Policy, and the third OPP, the National Vision Policy. Figure I.1 shows the various OPPs.

⁶² Between 2007 and 2013, Malaysia's Ministry of Higher Education was split from the Ministry of Education and hence the latter's educational budget also decreased. As of 2013, both ministries have merged back into a single ministry, the Ministry of Education.

⁶³ A detailed description of the education policies, plans and programmes from the 1970s to early 2000s is discussed in Malaysia's MDGR 2005.

⁶⁴ This programme is suspended and under review to improve its effectiveness.

⁶⁵ Although education is free, parents also contribute in other ways such as providing funds to Parents -Teacher Associations and for sports and school magazines.

Apart from improving access, the government has continuously increased efforts on improving the performance and quality of the education sector, in line with the Vision 2020 aspiration of becoming a developed nation by 2020. In the 10MP (2010-2015), four strategies were designed to specifically improve the performance of the education sector. This included increasing preschool enrolment rates and enhancing basic literacy and numeracy skills; holding schools accountable for student outcomes; improving the quality of leadership in schools; and developing talent in the teaching profession. Some of the initiatives included: introduction of the LINUS programme, a school banding system, up-skilling and increasing the wages of teachers, introduction of Higher Order Thinking Skills in the curriculum, school-based assessments and public examinations. In the 11MP (2016-2020), the objective has shifted towards improving student outcomes via improving the quality of education.

The Malaysia Education Blueprint 2013-2025 provides the framework for improving the performance of the education sector in line with objectives of the 10MP and 11MP. The MOE has established the Education Performance and Delivery Unit (PADU) to ensure that the Blueprint's initiatives are implemented efficiently. In terms of improving the quality of education, the new initiatives include:

- Appointing school coaches to bridge the gap across states and schools. This has already resulted in major improvements in the 2013 exam results for Sabah and Kedah;
- Trust Schools, which are private-public partnerships involving 62 schools in the country, are setting new benchmarks in community involvement and innovation in education;
- Raising the bar for selection into the teaching profession, with 70 per cent of new intakes having a minimum of five A's in the SPM examination;
- Utilizing merit rather than seniority-based selection criteria in appointing school heads;
- Assessing the English language proficiency of 60,000 English teachers and providing up-skilling for those who did not meet the standards;
- Ensuring basic literacy and numeracy in Bahasa Malaysia and English via remedial teaching for poor-performing students;

- Revamping school curricula, teacher training, and teaching to incorporate best practices in teaching English, Science, Mathematics, and Higher Order Thinking Skills (HOTS);
- Encouraging greater participation in vocational education by providing more options, and improved career paths;
- Encouraging more children to attend preschool (participation increased to almost 90.7 per cent in 2014);
- Introducing LINUS (Literacy and Numeracy Screening) to assess and improve literacy and numeracy in the early school years and English literacy screening in 2013;
- Increasing community-school engagement through the Teach for Malaysia Programme whereby talented young university graduates and professionals were recruited to teach for two years (about 140 such teachers have served in 50 schools in seven states);
- Introducing special education programmes for Orang Asli and indigenous children and their parents.

The Orang Asli Education Transformation Plan 2013-2017 shows positive outcomes. Enrolment has increased to almost 40,000 in 2013. Although dropout rates have decreased, 25 per cent of Orang Asli pupils still drop out during the primary–secondary school transition period, while another 27 per cent drop out during the secondary years. Amongst efforts taken to reduce this problem is the introduction of a special curriculum (*Kurikulum Standard Sekolah Rendah Orang Asli dan Penan* or KAP), which takes into consideration their needs, and K9 comprehensive model school, which includes hostels.

Since parental involvement is critical, the Adult Class for Indigenous Parents (Kelas Dewasa Ibu-Bapa Orang Asli dan Pribumi or KEDAP) was introduced to teach parents the 3Rs, basic ICT, basic English communication and life-skills to enable them to assist and guide their children. Response has been positive; from 2008-2013, a total of 18,000 parents participated in this programme.

MOVING FORWARD

While Malaysia's education system has achieved tremendous success in providing access to education, there remains several key challenges with respect to bridging the gap and fully achieving the goal of MDG 2. These include: improving access to education for the poor, hard-to-reach groups or communities in remote areas; developing suitable education programmes for children with special needs; improving the quality of education; and laying the foundation for primary school through preschool programmes.

At a wider level, there are other issues that need to be addressed. For example, in responding to the changing needs of education, teachers need to be innovative, creative and relevant to the evolving role of education towards a more cost-effective education system. To this end, teacher education needs to be further strengthened to improve the quality of teaching. Also, it is timely that provision of second-chance education is seriously looked into for those who have dropped out of school.

Access to education

With participation rates of over 95 per cent, the key challenge is a "last mile" problem to provide access for marginalised groups – school dropouts, children living in hard-to-reach and remote areas, or children with special needs.

Those not in school at primary and secondary levels

It is a difficult task to reach the remaining children who never enrolled in school. They comprise those who cannot attend school as they need special assistance and care, who live in remote areas, who attend nonregistered MOE schools (e.g., *sekolah pondok*), who are home schooled⁶⁶, or who cannot afford to attend school. In 2014, the number of children aged six to 11 who were not in a registered school was estimated to be 58,600⁶⁷, the lowest since 2000. The highest estimate of such children was in 2007 at 185,400.

⁶⁶ There are eligibility conditions for home schooling and conditions imposed on it by the MOE.

⁶⁷ This is a 2013 figure of an estimated number of children aged six to 11, i.e. 2.9 million minus the total primary school enrolment of 2.8 million. MOE data (2014).

Dropouts are another challenge. The number of children who have dropped out of primary school in 2014 was 7,542⁶⁸. There has been a remarkable decline in dropout rates in primary schools: declined from 3 per cent in 2001 to 0.3 per cent in 2014 (using cohort method). Additionally, during the primary to secondary school transition in 2014, an estimated 12,898 children did not continue to MOE schools. As with the primary school dropouts, there has been a big decline in transition dropouts from primary to secondary schools: from 9.54 per cent in 2001 to 2.71 per cent in 2014. Similarly 16,000 students did not continue from lower to upper secondary, that is, from Form 3 to Form 4. It is noted that the transition rates do not fully reflect dropouts because students could have moved from public schools to private or non-public schools. Better data collection of non-public school enrolment data could help inform on this situation.

In Sabah and Sarawak, one of the causes of primary–secondary school transition dropouts is due to children not having accessibility to secondary education. Primary schools are located in or around their community, which accounts for the high enrolment at primary level. However, secondary schools are mostly available in towns and cities, far from the interior or remote areas. Hence, there are significantly lower completion rates at the secondary level compared to primary level (compare **Table 2.1** and **Table 2.2** for Sabah and Sarawak).

Most dropouts are from poor or low income families⁶⁹ where children are under pressure to leave school early to earn an income and support the family, care for siblings, or marry. A meta-analysis⁷⁰ of studies on this topic revealed that low academic achievement, low interest in learning and disciplinary problems were some of the main factors contributing to dropouts. Except for those who have committed criminal offenses and are reprimanded by the police, students who are expelled from school can still register in another school.

Juvenile offenders can continue to receive education at the Integrity School or at the Henry Gurney School, under the jurisdiction of the Prisons Department with teachers from the MOE. The former is for inmates under 21 years of age, with school facilities separated from other prisoners. The latter is a rehabilitation centre for youth. Both follow the national curriculum and prepare students for public examinations.

There are community efforts that address the issue of dropouts by providing these children with second opportunities for education. **Boxes 2.2** and **2.3** provide some examples that help complement the government's efforts in this regard. It is vital to note that these programmes also receive government support and sponsorship but remain outside of the national education system.

⁶⁸ Dropout numbers were obtained from MOE (2014 unpublished but made available upon request).

⁶⁹ MOE-UNESCO (2004) "Dropouts in Malaysian Primary Schools: Causes and Intervention Programmes", Kuala Lumpur. This study was cited in the Malaysia MDG2010 Report. More recent data are not available.

⁷⁰ MOE (2005). "Dropout Census of MOE schools", EPRD, MOE. This study was cited in Malaysia MDG2010 Report.

Box 2.2: Examples of community-level efforts in addressing dropouts in Malaysia

The Department of Orang Asli Development (Jabatan Kemajuan Orang Asli or JAKOA) started the *Program Jom Ke Sekolah* or *Program Mesra Didik* to prepare students in transition to secondary school. This programme focuses on Year 6 students. They are engaged in activities like games, talks and excursions to increase their confidence to take on secondary school life. The Tamil Foundation (an NGO) started a similar programme to work specifically with Tamil youths who are from lower socioeconomic backgrounds in Klang Selangor. Both programmes have many similarities.

For better parental engagement, JAKOA encourages parental involvement through the KEDAP programme run by MOE and by JAKOA. The programme is intended to help Orang Asli parents appreciate the value of education and acquire basic skills to support

their children in education. As for the Tamil Foundation, the Parents Assuring Students Success (PASS) programme is intended to help parents gain key skills to monitor, guide, and provide a conducive learning environment for their children.

By working with the child and the parents, both organisations have been able to reduce dropouts at the transition level within their own communities.

Box 2.3: Other examples of community-level efforts complementing larger-scale efforts in addressing dropouts in Malaysia

Abandoned and Street Children

Sekolah Bimbingan Jalinan Kasih was established in August 2013 by MOE for abandoned and street children in collaboration with the Social Welfare Department, National Security Council and NGOs such as Nur Salam Foundation and Chow Kit Foundation. The school provides preschool to secondary education using a modified national curriculum with emphasis on basic vocational education. The aim is to ensure that homeless and abandoned street children have access to basic education, platforms for work opportunities and are equipped with skills and knowledge to be independent. Counselling teachers are also available to provide guidance to the students. As of November 2013, a total of 86 children had enrolled in this school⁷¹.

Dropouts with disciplinary issues

MySkills Foundation is a community-based, NGO that was established in 2011. Its main mission is to provide a second chance for “at-risk” youth to acquire fundamental social, living and workplace skills so that they can be gainfully employed. Hence, they cater to dropout students and students with below average grades by providing an effective transition programme to help them

obtain sustainable employment. MySkills Foundation initiated the Primus Institute of Technology, a nonprofit social solidarity enterprise where their students pursue vocational skills in electrical, mechatronics, legal secretary and welding. Additionally, a key component of the programme involves using a transformation model to develop social and living skills.

The Foundation caters to about 200 to 300 students per cohort, of whom about 100 students in each cohort are sponsored by the Malaysian government. In general, most students come from dysfunctional families. It was found that 93 per cent of the students had been exposed to violence, 44 per cent were exposed to alcohol, and 14 per cent were exposed to drugs. Some of the students were involved in gangsterism and crime with some of them previously held in detention centres and police stations. A tracer study on the 2013/2014 cohort showed that 63 per cent of the students had obtained employment, and 8 per cent were pursuing further education. These results demonstrate that there is indeed value in providing a second chance for at-risk youths.

⁷¹ *Ibid.*

Reaching out to hard-to-reach children

The primary to secondary transition dropout rate amongst Orang Asli used to be as high as 30 per cent (**Box 2.4** shows the trends within this community). To overcome the dropout problem, specific programmes were implemented, which include using indigenous teachers and utilising an alternative curriculum for Orang Asli with a minimum adequate syllabus and a curriculum that has been contextualised to the communities⁷². Special Model K-9 schools⁷³, which aim to address the transition dropout phenomena from Year 6 to Form 1 have been set up for the Orang Asli community. This programme has been extended to the Penan community in Sarawak in 2013.

In 2008, the MOE and JAKOA introduced KEDAP, a special curriculum for indigenous parents with children in school. The programme offers short lessons of a few hours per day running into 25 weeks, and provides monetary allowances to compensate for income loss for the time in class. Costing RM35 million, the programme attracted 18,000 participants up to 2010.

Despite the positive response, there is a need to improve modules and transport, and move beyond the 3Rs of reading, writing and arithmetic. By educating adults, the programme hopes to raise their awareness and appreciation for education and that they will then encourage their children to continue their education in schools. It will be important to examine the effectiveness of this programme in reducing the Orang Asli dropout rates.

Some of the indigenous peoples of Sabah and Sarawak live in the interior or remote coastal areas. While primary school is within reach in many parts of the interior, smaller communities are still not served, especially in remote areas. These are part of the “last mile” of Malaysia’s development challenges.

Box 2.4: Education trends amongst the Orang Asli

The participation rates of Orang Asli in primary education are estimated at an average of about 97 per cent over the period of 2000 to 2010. Each year, there were 3,500 to 4,000+ Orang Asli students that enrolled in MOE primary schools (**Table 2.8**) with the majority attending 100 per cent Orang Asli schools located near their village. Participation rates at secondary school are lower given that a substantial percentage of students do not make the transition from primary to secondary school, although progress has been made to reduce dropouts at this stage over the years (**Figure 2.5**). Still, the Orang Asli dropout rate at this stage is much higher than the national dropout rate of 3.5 per cent in 2012.

⁷² Malaysia, Ministry of Education. (2013). *Malaysia Education Blueprint 2013-2025*, pp.4-21.

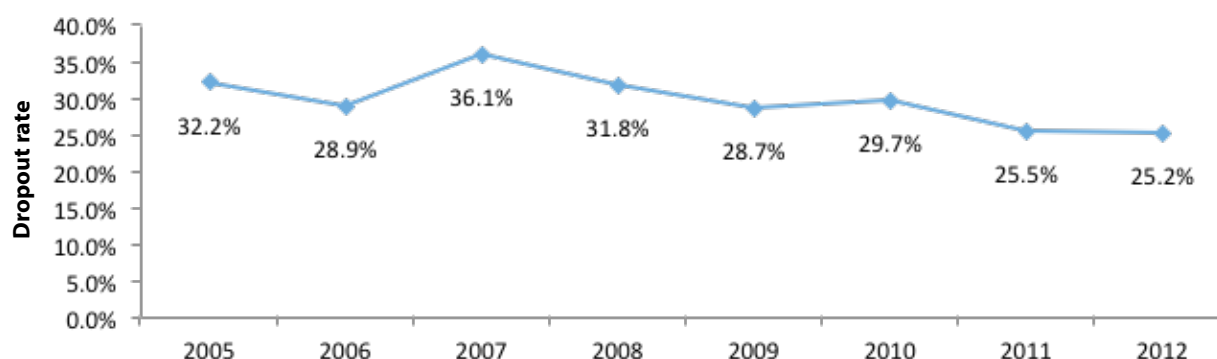
⁷³ Malaysia, Ministry of Education (2013). *Malaysia Education Blueprint 2013-2025*, pp.4-21 (a transformation plan for Orang Asli education)

Table 2.8:
Enrolment of Orang Asli students in MOE schools, 2000–2013

Level	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Year 1	3,819	3,729	3,876	4,226	4,225	4,160	3,860	3,977	4,251	3,845	4,146
Year 2	3,817	3,775	3,827	4,354	4,535	4,537	4,315	4,088	4,371	4,500	4,334
Year 3	3,809	3,635	3,834	4,012	4,598	4,852	4,725	4,416	4,240	4,476	4,624
Year 4	3,611	3,459	3,674	3,820	4,258	4,564	4,719	4,576	4,271	4,183	4,503
Year 5	3,504	3,424	3,554	3,827	4,012	4,224	4,746	4,543	4,465	4,321	4,335
Year 6	3,144	2,849	3,333	3,368	3,726	3,814	3,775	4,266	4,423	4,411	4,271
Total Primary	21,704	20,871	22,098	23,607	25,354	26,151	26,140	25,866	26,021	25,736	26,213
*Estimated participation rate	99.4%	95.4%	97.5%	104.5%	102.7%	99.4%	90.6%	91.8%	98.3%	89.0%	96.1%

**Note: Estimated by UNCT using the Population Census data from DOSM to estimate the population of eligible children of official school-going age for Year 1 as the denominator. Source: Malaysia, Department of Orang Asli Development (JAKOA), Pelan Strategik Kemajuan Orang Asli (number of enrolments) UNDP-EPU-UNICEF, Orang Asli National Development Plan Project Report, unpublished, 2014 (estimated participation rates)*

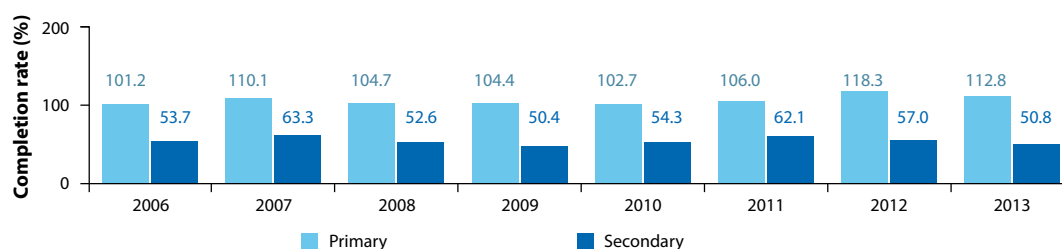
Figure 2.5:
Orang Asli dropout rate at transition from primary to secondary level, 2005–2012



Source: UNDP-EPU-UNICEF, Orang Asli National Development Plan Project Report, unpublished, 2014

The Orang Asli have exceeded 100 per cent completion rate at the primary level. This implies that there are more students enrolled in Year 6 than the number that had enrolled in Year 1 for that cohort year. This is likely the case due to late registration of children into primary education and the fact that these children are placed into the primary level according to their age. The completion rate at secondary school level is much lower with only 50.8 per cent of students completing a full course of secondary school until Form 5 (**Figure 2.6**). This is much lower than the national completion rate for secondary school of 90.4 per cent in 2013.

Figure 2.6:
Completion rate of Orang Asli students in primary and secondary school, 2006–2013



Source: JAKOA, Data from PSKOA booklet and Data Maklumat Asas Program Pembangunan Minda dan Pendidikan (2006-2013)

Children with special needs

Children with special education needs are officially defined in Malaysia as children with visual, hearing, speech, and physical disabilities, learning difficulties or any combination of disabilities and difficulties. The 2013 regulations are applicable to government and government-aided schools, and the eligibility of students into the national special needs education is extended not only to those who are “educable” but also, after a probation period, to children determined by a panel to be suitable to attend special needs education.

There is no comprehensive data on the number of children with disabilities. It is estimated that 9 per cent of all children with disabilities who are of primary school age were enrolled in special needs education in 2010⁷⁴. This number does not take into account children who receive education in private schools, in home schooling or in other organisations. Even though there is no data on this issue, the statistical data from student enrolment and number of special education classes that is steadily increasing each year show a visible improvement in the special education stream in Malaysia despite many shortcomings such as the shortage of qualified teachers, professional support, and schooling options for children

with special education needs. These include Special Education Schools that cater to students with the same type of disabilities; the Special Education Integrated Programme, where special classes in regular schools are dedicated to children with special needs; and the Inclusive Education Programme, where one to five students with special education needs are integrated into mainstream classes⁷⁵.

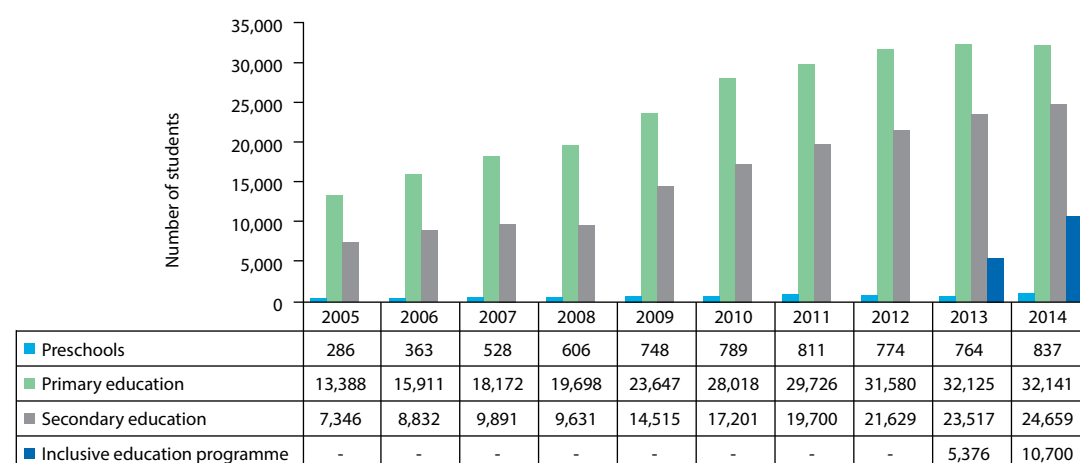
Student enrolment in the special education stream has increased over the past 10 years. In 2005, 21,020 students were enrolled; in 2014, 68,337 students were enrolled. The most dramatic enrolment increases were observed in primary and secondary education. As of 2014, there were 837 students enrolled in preschools, 32,141 in primary education, 24,659 in secondary education and 10,700 in the Inclusive Education Programme (Figure 2.7)⁷⁶.

⁷⁴ Children with disabilities in Malaysia. Mapping the Policies, Programmes, Interventions, and Stakeholders, (2013).

⁷⁵ Malaysia. Ministry of Education. (2015). Malaysia National Education for All Review Report: End of Decade Review.

⁷⁶ Malaysia. Ministry of Education, Special Education Division statistics.

Figure 2.7:
Enrolment in special education by level of education, 2005–2014



Source: Malaysia, Ministry of Education, Special Education Division statistics, 2015.

Education for children of non-citizens

Children of parents who are not Malaysians or who are not in the country legally cannot study in public schools, but other educational facilities are available for them. Nonformal and informal educational services are provided by the private sector, humanitarian, welfare and faith-based organisations, international organisations and NGOs. Most of these educational services are in the form of community-based schools, for example, the NGO Humana runs schools with support from the Indonesian government for children in plantations in the state of Sabah.

In 2004, the MOE and UNICEF conducted a joint study⁷⁷ of these nonschooling children to propose solutions to the issue. UNICEF has collaborated with the MOE, Federal Sabah Task Force and other partners to support two Alternative Learning Centres in Kg. Numbak in Kota Kinabalu and Kg. Bahagia in Sandakan, which have provided basic education to over 900 children with IMM13⁷⁸ documents. In addition, the government has approved 177 other alternative education centres run by NGOs (see **Box 2.5** for an example of one of the centres) and private organisations, with enrolment totalling 15,039 students as of 2013⁷⁹.

Box 2.5: Example of an alternative education centre run by NGOs for refugees

The Malaysian Social Research Institute (MSRI), an NGO, opened the SAHABAT Support Centre in 2011 and is catering to 910 families (3000 refugees and asylum seekers) mainly from Afghanistan, Iran, Iraq, Pakistan, Palestine and Syria. The school programme offers full time schooling to around 100 children aged 4 to 18, supporting students who have gaps in their education and students who wish to learn at their own pace. The goal is to place students at the right grade level. The school benefitted children in getting access to education and at the same time normalizing their lives and families while living temporarily in Malaysia. In 2013 they opened a preschool for younger children.

⁷⁷ Malaysia MOE-UNICEF (2004), *Dropouts in Malaysian Primary Schools: Causes and Intervention Programmes*.

⁷⁸ IMM13 – immigration document issued to refugees from the Philippines

⁷⁹ Malaysia, Ministry of Education (2015). *Malaysia National Education for All Review Report: End of Decade Review*.

Quality of education

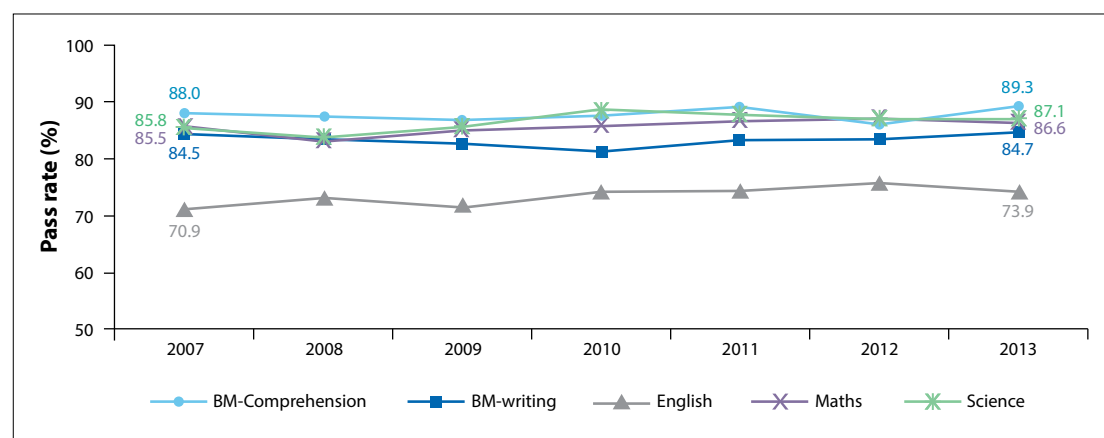
Having successfully provided Malaysian children with universal primary and secondary education, the government's next challenges are to inspire creativity, foster innovation, improve the quality of education and student outcomes, and make the education system efficient and effective. The Malaysia Education Blueprint 2013-2025 has outlined a clear vision and has developed plans and strategies for the transformation of the education system.

The quality of education can be measured by input variables, such as pupil to teacher ratio, mean class size, and percentage of trained teachers, and by outcomes, such as performance in national or international assessments. The MDGR 2010 report commented that Malaysia already had a high level of input indicators. It was and is the student outcomes that need attention.

Primary School Achievement Test (UPSR)

The UPSR is the first standardised national examination taken in Year 6. Between 400,000 and 500,000 students take it annually. The percentage of candidates with minimum competency level⁸⁰ has gradually increased from 49.5 per cent (2000) to 65.7 per cent (2013). As can be seen (**Figure 2.8**), the 2007–2013 trend shows steady performance, with 80 per cent of students passing all subjects except English.

Figure 2.8:
Pass rates in selected subjects in the UPSR, 2007–2013



Note: BM, Bahasa Malaysia (national language).

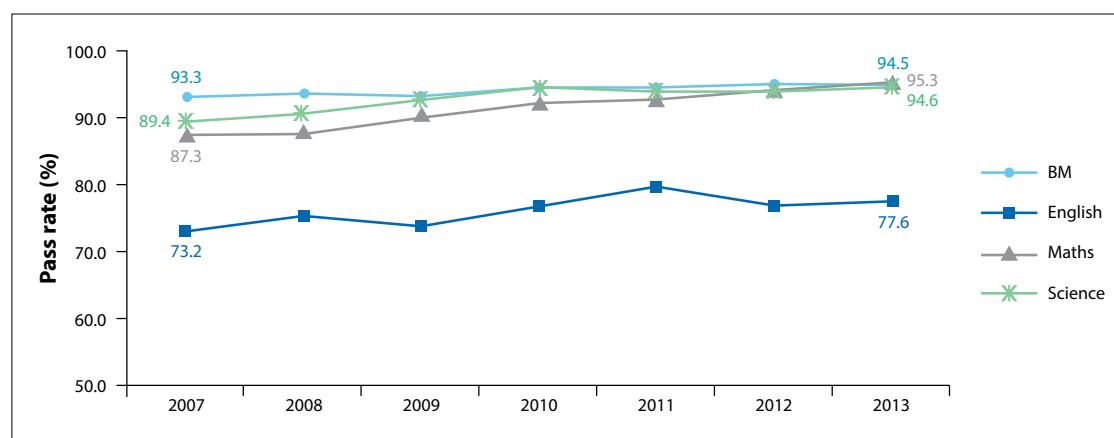
Source: Malaysia, Department of Statistics, Social Statistics Bulletin, Various Issues.

⁸⁰ Minimum competency level refers to the students who score grades A, B or C.

Lower Secondary Evaluation (PMR, 1993–2013)

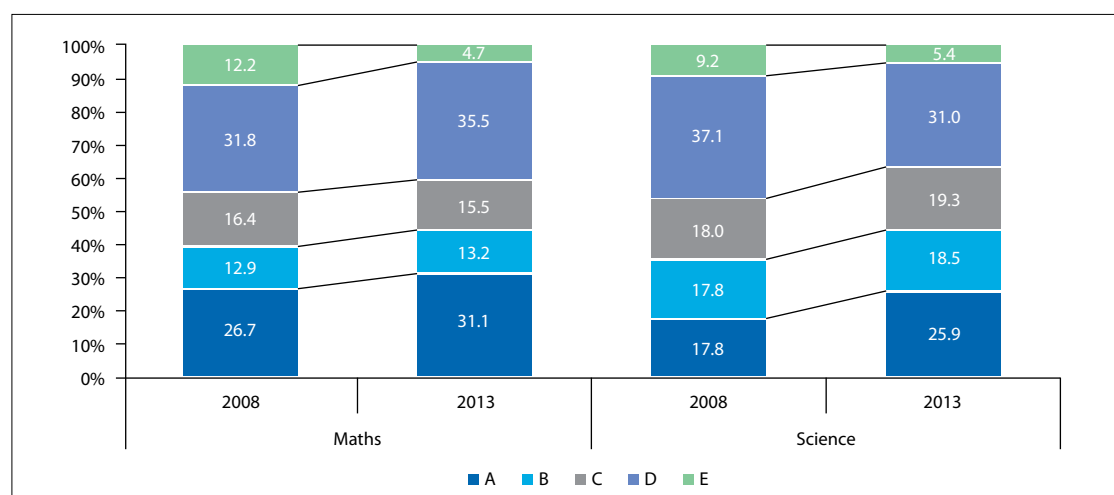
The PMR is the second public examination taken after nine years in school. The PMR results also show that the English results are lagging behind those of Bahasa Malaysia (BM), Maths and Science (**Figure 2.9**). Pass rates in English have increased from 60 per cent in 2001 to 78 per cent in 2013. Between 2007 and 2013, the percentage of students with passing grades in Maths and Science had increased from 87 and 89 per cent, respectively, to 95 per cent for both subjects. Upon further examination, this was due to the increase in the percentage of students scoring grade 'A' in Maths and Science (**Figure 2.10**). Of greater concern, however, is the high percentage of students receiving grade 'D' or the minimum competency level, which is relatively higher than other pass grades. In fact, about a third of the students only achieve the minimum competency level in their PMR Maths and Science.

Figure 2.9:
Pass rates in selected subjects in the PMR, 2007–2013



Source: Malaysia, Department of Statistics, Social Statistics Bulletin, Various Issues.

Figure 2.10:
Breakdown of grades received for Maths and Science in the PMR. (2008 and 2013)



Source: Malaysia, Department of Statistics, Social Statistics Bulletin, Various Issues.

Form Three Assessment (2014)

The PMR has been implemented since 1993 and ended in 2013. In 2014, it was replaced by the Form Three Assessment, which is an assessment giving more focus on the acquisition of holistic and integrated knowledge, skills and values as well as the Higher Order Thinking Skills. Students receive the following reports with the implementation of Form Three Assessment, namely: School Assessment; Psychometric Assessment (provides information on students' intellectual, interest and inclination) and Physical, Sports & Co-curricular Activity Assessment (provides information about students' participation, involvement and achievement in cocurricular and extracurricular activities).

International comparison

While student performance in public standardised exams have shown steady improvements, Malaysia remains in the bottom third of countries based on student performance in international assessments, specifically the Trends in International Mathematics and Science Study (TIMSS) and Program for International Student Assessment (PISA)⁸¹. Although these two international assessments are tested on 14+ (TIMSS) and 15+ (PISA) students, it raises caution about the education quality of primary and lower secondary education given that the foundations learnt during the first nine years of schooling would contribute to their performance. Based on the TIMSS 2011 results, 35 per cent of Malaysian students did not meet the minimum competency level in Mathematics and 38 per cent in Science. The percentages of students achieving the advanced competency level are also extremely low at 2 per cent for Mathematics and 1 per cent for Science.

A comparison by the World Bank⁸² was made between the PISA 2009 results for Malaysia and Republic of Korea. The finding shows that Malaysia is lagging behind at both the high and low end of the skills distribution. The Level 3 (passed) result for Malaysia is 13 per cent for Mathematics and 19 per cent for Science whereas for Republic of Korea it is 24.4 per cent for Mathematics and 33.1 per cent for Science. In addition, the Level 1 (failed) score for Malaysia is quite high at 25 per cent for Mathematics and 11 per cent for Science. Republic of Korea recorded low percentage of failures with only 1.9 per cent in Mathematics and 1.1 per cent in Science.

⁸¹ International tests such as TIMSS and PISA are solid measures, but they are fairly general as they have to track educational quality across many countries. They are useful reminders of where Malaysia students stand with respect to their peers in the subjects and concepts that are being tested. Nevertheless, the importance of high quality, consistent assessment of the educational programmes and initiatives in influencing student achievements and outcomes is much greater. The practice of advanced countries, such as the United Kingdom and the United States of America in publishing and discussing their educational systems and outcomes is internationally recognised and has resulted in high levels of educational quality.

⁸² Malaysia Economic Monitor High Performing Education, 2013.

Hence, the Malaysia Education Blueprint 2013-2025 has set out steps to improve the quality of education. The aspiration is that every student will attain knowledge, thinking and leadership skills, bilingual proficiency, ethics and spirituality and a national identity. At a national level, the aim is to achieve 100 per cent enrolment at all levels by 2020, be amongst the top third of nations in global assessments such as PISA and TIMSS within 15 years, reduce regional, socioeconomic and gender gaps by half by 2020, and encourage students to embrace diversity and shared values. Additionally, initiatives being pursued by MOE to improve science and mathematics educational outcomes include increasing the number of Higher Order Thinking Skills questions in public examinations, as well as working with the Ministry of Science Technology and Innovation (MOSTI) and the Malaysian Industry-Government Group for High Technology to enhance the interest in science, engineering and mathematics amongst students.

CONCLUSION

Malaysia surpassed the MDG 2 goal of providing universal primary education for boys and girls even before 2000. During the MDG period, free education became available until the upper secondary level. Major gains were made when the public schools programme expanded into the hard-to-reach areas, by increasing the number of teachers and teaching facilities, thus realising the universal primary education objective. The government also started various programmes such as special needs education, vocational education, sports and arts programmes, and special programmes for the Orang Asli and Penan. To ensure that the poor and socially disadvantaged remain in school, financial support programmes, food aid programmes as well as education of parents were also provided. Education was then made compulsory for all children to ensure that no child was left behind. These achievements were made possible through large investments in education. After having successfully made education compulsory at the primary level and made automatic promotion at the secondary level, Malaysia's next challenge is to improve the quality of education, specifically student outcomes and the performance of teachers while transforming the educational institutions into an efficient and effective system.

As the country moves forward, there are several 'last mile' challenges that remain such as reaching out to children in very remote areas and to children of marginal groups, such as indigenous and special needs children; increasing completion rates at all levels of school; and improving equity and quality of student outcomes while also delivering educational services in an efficient and cost-effective manner.

ANNEX 2.1

TARGETS AND INDICATORS

Table 2.9:
MDG 2 Targets and Indicators

Target	Indicator	Definition
Target 2a: Ensure that, by 2015, children everywhere, boys and girls, will be able to complete a full course of primary schooling	2.1 Net enrolment ratio in primary education	<p>As Malaysia practises a system of automatic promotion and hence has very few repeaters, the net enrolment ratio is equal to the participation rate. The participation rate is the percentage of the relevant population attending school. The formula is:</p> $\text{Participation rate (per cent)} = \frac{\text{Total enrolment in school}}{\text{Total school-age population}} \times 100$ <p>For primary school, the school-age population is children between 6+ and 11+ and calculated using the number of live births for each age group. For secondary school, the school-age population is children between 12+ and 16+.</p>
	2.2 Proportion of pupils starting Year 1 who reach last grade of primary	<p>The completion rate is the percentage of students enrolled in the first year of a particular education level who complete their education at that level. This indicator measures an education system's success in retaining students from one grade to the next as well as its internal efficiency. Various factors account for poor performance on this indicator, including low quality of schooling, discouragement over poor performance and the direct and indirect costs of schooling. Students' progress to higher grades may also be limited by the availability of teachers, classrooms and educational materials⁸³.</p> <p>The completion rate in primary education is the percentage of Year 1 students who completed primary education six years later. For secondary education, it is the percentage of Form 1 students who completed their secondary education five years later. The formula is:</p> $\text{Completion rate (per cent)} = \frac{\text{Total enrolment in last grade in current year}}{\text{Total enrolment in first grade when they entered}} \times 100$ <p>Disaggregated data on completion rates and dropout rates should be treated with caution. While dropout rates from MOE schools are useful to show patterns and to draw comparisons, students leaving MOE schools to join private schools that are not registered with MOE and home-schooling are considered dropouts from MOE schools and private schools registered with MOE. Dropout rates also do not account for transfers occurring between private schools. Thus, dropouts from MOE schools do not necessarily mean dropouts from the education system.</p>
	2.3 Literacy rate of 15–24-year olds, women and men	<p>The youth literacy rate reflects the outcomes of the primary education system over the previous 10 years or so, and is often seen as a proxy measure of social progress and economic achievement. The literacy rate refers to the percentage of the population who are able to read and write a short simple statement with understanding⁸⁴. Malaysia uses school attendance as a proxy.</p> <p>Literacy rate (per cent) = Percentage of population who had ever attended school</p> <p>This Report uses data from the annual Labour Force Survey.</p>

⁸³ United Nations, *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*, version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.ashx>, accessed on 18 May 2015.

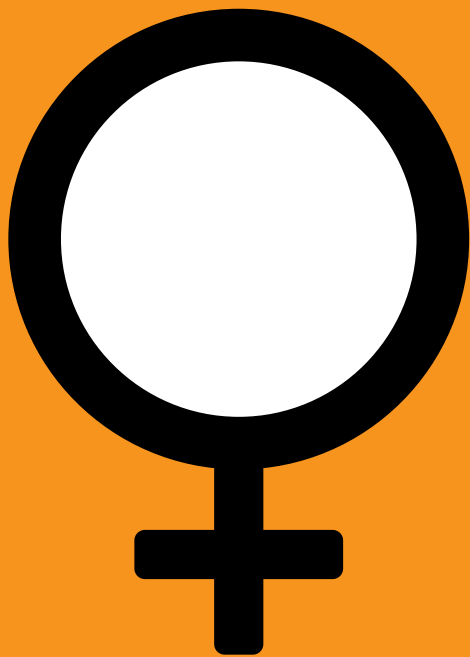
⁸⁴ Ibid.

ANNEX 2.2

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MDG 3



**PROMOTE GENDER
EQUALITY AND
EMPOWER WOMEN**

INTRODUCTION

The third Millennium Development Goal (MDG 3) has one target:

- Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015



Gender equality is a core development goal, a human right and a vital catalyst for social justice and development. In 1979, the UN General Assembly adopted the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which provided a basis to realise equality between women and men⁸⁵. Global recognition of the importance of women empowerment as a goal for development was later gained at the 1994 International Conference on Population and Development (ICPD) in Cairo and at the 1995 Fourth World Conference on Women in Beijing where nations acknowledged that meaningful and rapid strides in public health, education, protection of environment and economic development would lag or be impossible without basic rights for women within family and society. This was later reflected in the Millennium Summit and Millennium Development Goals⁸⁶. In 1995, Malaysia acceded to the CEDAW and pledged to implement the 1995 Beijing Platform for Action. Additionally, Malaysia adopted the MDGs in 2000, which included MDG 3, the goal of promoting gender equality and empowering women. This goal is measured by three indicators, which cover education, employment and political participation, as further described in **Annex 3.1**.

Malaysia has made remarkable progress in gender equality and empowerment of women since its formation in 1963. In 1970, the gender disparity between boys and girls enrolling in primary education had largely disappeared and this parity has been maintained until today. Similarly, achievements in lowering child mortality were shared between boys and girls since the 1970s⁸⁷. These outcomes were reflected in the improved equality in opportunities to access education and health services. Since the 1990s, women have attained higher levels of education and there has been progress in their health status. There have also been incremental improvements in their labour force participation and mobility as well as increases in their involvement in entrepreneurship.

Using composite indexes, the Gender Inequality Index shows an improvement in both overall score and international ranking between 2010 and 2013⁸⁸. Similarly, the Malaysia Gender Gap Index has shown that gender inequalities have declined from 0.34 in 1980 to 0.20 in 2013⁸⁹. Prior to 2010, Malaysia's international ranking had been declining for the gender-related development index (GDI) from 2001 to 2007 and gender empowerment measure (GEM) from 2003 to 2009, amid small increases in the overall score. These patterns indicate sustained efforts are needed to continue improving gender equality and empowerment of women in the future.

This chapter begins by reporting the trends in education, employment, decision-making roles and gender-based violence. In the second part of the chapter, factors that have contributed to these trends and the issues that remain or are emerging are discussed.

⁸⁵ CEDAW provides the basis for realising the equality of women and men through ensuring equal access to and equal opportunities in public and political life. This includes the right to vote and stand for election as well as the right to education, health and employment. The Convention also reaffirms the reproductive rights of women. CEDAW defines what constitutes discrimination against women and establishes an agenda for national action to end such discrimination. Source: United Nations Entity for Gender Equality and the Empowerment of Women, *Convention on the Elimination of All Forms of Discrimination against Women: Overview of the Convention*, viewed at <http://www.un.org/womenwatch/daw/cedaw/> on 25 July 2015.

⁸⁶ When the MDGs were put forth in 2000, women's groups were dismayed that the goal was limited only to education and that the rights to reproductive health were not explicit amongst the MDGs. Through much lobbying, the aspect of reproductive health was later included in the MDG framework in 2005 under MDG 5 as a second target of achieving universal reproductive health. Source: UNESCAP, ADB and UNDP Asia-Pacific Aspirations: *Perspectives for a Post 2015 Development Agenda - Asia-Pacific Regional MDGs Report 2012/13*.

⁸⁷ United Nations, Department of Economic and Social Affairs, Population Division. 2011. *Sex Differentials in Childhood Mortality*. New York. The statistics for Malaysia reported that under-five mortality in the 1970s was 56 deaths per 1,000 live births for males and 46 per 1,000 live births for females. These rates fell to 32 per 1,000 live births for males and 27 per 1,000 live births in the 1980s. As of the 2000s, under-five mortality for males has fallen to 13 per 1,000 live births and for females, 11 per 1,000 live births.

⁸⁸ United Nations Development Programme. *Human Development Reports, 2010-2014*.

⁸⁹ Malaysia. Ministry of Women, Family and Community Development. (2014). *Statistics on Women, Family and Community Development*.

TRENDS OF GENDER EQUALITY IN EDUCATION

Ratio of girls to boys in education (Gender Parity Index)

As early as the 1970s, Malaysia had largely narrowed the gender disparity in primary education and it has since reached gender parity (**Table 3.1**). In fact, Malaysia has a significant double achievement in terms of enrolment and completion: it eliminated gender disparities while achieving near universal primary education over the years (see chapter on MDG 2). The nation also increased the transition of children from primary to secondary education, for boys and girls alike. In the 2000–2014 period, transition rates for boys increased from 88 per cent to 96 per cent and from 91 per cent to 98 per cent for girls, while GPI was maintained between 1.04 and 1.00⁹⁰.

At secondary and tertiary educational levels, girls have outnumbered boys for more than a decade (**Table 3.1**). While the GPI is relatively close to '1' in secondary education, the gender disparity is greater in upper secondary compared to lower secondary, in favour of girls⁹¹. This implies that boys either dropped out in the lower secondary or in the transition to upper secondary levels.

Moving up to tertiary level, the disparity in favour of girls is even more marked with a GPI of 1.6, a level considered to be far from gender parity⁹². Indeed, MDGR 2005 reported an upward trend in female enrolments into tertiary education since the 1990s. As of 2013, females accounted for about 56 per cent of all tertiary-level enrolments (average of public and private institutions) (**Table 3.2**).

This trend is not only occurring in Malaysia. As of 2011, females outnumber males in secondary education in 45 developing countries, and in tertiary education in 60 developing countries. In the case of Malaysia, the performance of girls in examinations is better⁹³, and data show higher completion rates for girls in secondary schools. In 2014, the completion rate of girls in secondary school was 96 per cent, while that of boys was 86 per cent (see MDG 2 chapter). Social and cultural norms, such as the perceived confidence that boys with lower educational attainments can still secure employment compared to girls, also influence these trends⁹⁴.

Table 3.1:
GPI at different levels of education, selected years

Education level	1990	2000	2009	2013
Primary	1	1.01	1.01	1.00
Secondary	1.05	1.09	1.06	1.07
Tertiary	1.08	1.37	1.6	1.31

Note: Gender Parity Index (GPI) for participation rates is the ratio of the Gross Enrolment Ratio of females to males. A GPI of '1' refers to gender parity, while less than '1' refers to a gender disparity in favour of boys and vice versa.

For secondary level, take note that the GPI for participation rate has been at around 1.06 to 1.07 since 2005 until 2013.

Source: 1. Malaysia. MDG Report 2010 (Year 1990 GPI for all education levels and 2009 GPI for tertiary education level)

2. Malaysia. Ministry of Education, 2014

⁹⁰ Malaysia. Ministry of Education. Malaysia EFA End of Decade Review Final Report 2014 and Malaysia, MOE, Educational and Research Division (EPRD) data for 2014.

⁹¹ United Nations Girls' Education Initiative (UNGEI) (2011). Why are Boys Underperforming in Education?: Gender Analysis of Four Asia-Pacific Countries. Available at http://www.unicef.org/eapro/report_why_are_boys_underperforming_FINAL.pdf, accessed on 3 June 2015

⁹² Classification used in UNGEI (2011). Parity is reached when GPI is 0.97-1.03. Parity is close to being reached when GPI is 0.95-0.96 (in favour of boys) and 1.04-1.05 (in favour of girls). Parity is far from being reached when GPI is below 0.80 (in favour of boys) and 1.25 (in favour of girls).

⁹³ UNGEI. (2011). Why are Boys Underperforming in Education?: Gender Analysis of Four Asia-Pacific Countries.

⁹⁴ Ibid.

While females dominate the higher education enrolments, their dominance is not across the board for all levels of qualifications and fields of study. Rather, there are noticeably more female enrolments in Certificate to Postgraduate Diploma levels and in the Arts and Science streams (**Table 3.2**). The female percentage of total enrolment is noticeably smaller at the Masters and PhD levels (between 30 and 45 per cent) except Masters enrolments in the public higher education institutions. Similarly, gender parity for technical courses⁹⁵ has yet to be achieved, whether in public or private institutions. As of 2013, females made up only 40 per cent of those enrolled in technical courses.

For the field of study in public and private universities between 2009 and 2013,⁹⁶ females had much higher enrolment than males in Education, and Health and Wellness. To a lesser extent, females also outnumbered males in Social Science, Business and Law, and Arts and Humanities (**Table 3.3**). In contrast, males had higher enrolment in Engineering, Manufacturing and Construction⁹⁷. In 2009, there were noticeably more males enrolled in Science, Mathematics and Computer, but this had gradually reached gender parity by 2012. Gender parity is close to being achieved in Services and Agriculture and Veterinary, contributing to breaking gender stereotypes in career choice.

Table 3.2:
Percentage of female enrolments in tertiary education by qualification and stream of study pursued, 2009 and 2013

Year	2009		2013	
Institution type	Public	Private	Public	Private
By qualification (% females of total enrolment)				
Certificate	59.3	46.2	-	49.9
Diploma	59.1	57.9	59.5	54.0
Degree	62.5	50.5	63.1	49.4
Post-graduate diploma	74.4	51.9	57.5	-
Masters	54.2	43.2	59.3	54.5
PhD	39.4	35.8	44.8	32.6
Total	60.3	52.4	61.0	51.6
By stream of study (% females of total enrolment)				
Arts	67.3	56.0	66.6	54.7
Sciences	63.1	60.0	64.5	54.5
Technical	38.7	21.7	43.2	32.7
Total	60.3	52.4	61.0	51.6

Note: Technical stream includes mechanical engineering, civil engineering, electrical engineering, and other fields of engineering, agriculture, food management, manufacturing, construction, and commerce and fashion studies.

Source: Malaysia, Ministry of Higher Education (MOHE), 2009 – quoted from Malaysia MDGR 2010 (for 2009) Note that MOHE and MOE merged in 2013)

Source: Malaysia, Ministry of Education (MOE), Higher Education Division, 2014 (for 2013)

⁹⁵ The technical stream includes mechanical engineering, civil engineering, electrical engineering, other fields of engineering, agriculture, food management, manufacturing, construction, commerce and fashion studies. As mentioned in the Malaysia Education Blueprint (2013-2025), technical courses will prepare for further study, while vocational courses like electronics, automotive, catering, computer programming are more career oriented.

⁹⁶ Estimated by taking the percentage of girls enrolled in a specific field out of total girls enrolled and dividing this by the percentage of boys enrolled in the same field out of total boys enrolled. This was done for each field of study for each year.

⁹⁷ Malaysia, Ministry of Education, Higher Education Indicators 2013.

Table 3.3:
University enrolments by gender and GPI by field of study, 2009 and 2013

Year	2009			2013		
Field of study	Male	Female	GPI	Male	Female	GPI
Education	26,385	59,295	1.76	30,937	58,420	1.45
Arts and Humanities	41,075	47,121	0.90	32,917	49,096	1.14
Social Science, Business and Law	124,324	196,520	1.24	138,650	219,257	1.21
Science, Mathematics and Computer	61,605	63,156	0.80	63,249	76,580	0.93
Engineering, Manufacturing & Construction	112,331	58,041	0.40	114,975	74,716	0.50
Agriculture and Veterinary	3,446	4,481	1.02	7,338	9,369	0.98
Health and Wellness	21,612	71,429	2.59	28,229	60,034	1.63
Services	13,981	16,995	0.95	19,445	24,336	0.96
General programmes	-	-	-	17,784	20,168	0.87
Total	404,759	517,038		453,524	591,976	

Source: Ministry of Education, Higher Education Indicators 2013

Ratio of literate females to males based on school attendance

An important outcome of universal primary education is closing the literacy gap amongst youth aged 15–24. In Malaysia, the percentage of the population that ever attended school is used as a proxy for literacy rate (see MDG 2). Based on this measure, Malaysia's literacy rate was 98.7 per cent for males and 97.2 per cent for females in 1990. This achievement has been sustained with literacy rates for males being 98.1 per cent and for females being 98.3 as of 2014. In other words, the ratio of literate females to males aged 15 to 24 has been around 1 for the entire MDG period. This achievement is also reflected at state levels⁹⁸. Taking the whole population aged 15 and above into consideration, females had a lower literacy rate in 1990 at 78.5 per cent, while males had a rate of 91.5 per cent.

This gender gap gradually narrowed as more females attended school. In 2013, the literacy rate of females aged 15 and above was 92.1 per cent, while that of males was 96.1 per cent.⁹⁹

In fact, the percentage of population in Malaysia who never attended school has declined from 10.8 per cent in 2000 to 7.9 per cent in 2010. Such declines have been observed in every age group for males and females alike¹⁰⁰. In terms of educational attainment in 2010, 16.4 per cent of the Malaysian population above age 25 attained at least post-secondary education, 50.9 per cent at least upper secondary education, and 68.2 per cent at least lower secondary education. This attainment is largely shared by both genders, although the GPI shows that males still have a slight advantage over females¹⁰¹. Nonetheless, the female population in Malaysia has achieved a similar educational attainment as their male counterparts until the post-secondary levels.

⁹⁸ Malaysia, Department of Statistics. (Various years). Labour Force Surveys. (Various years).

⁹⁹ Ibid.

¹⁰⁰ Malaysia, Department of Statistics, Population Census, 2000 and 2010.

¹⁰¹ UNESCO Institute for Statistics Educational Attainment Dataset, accessed at <http://data.uis.unesco.org> on 10 June 2015.

Gender parity in educational outcomes

Educational outcome is just as important as access to education. The quality of the education received has significant implications for future opportunities and choices. To be fully empowered through education, one needs to be able to continuously learn, apply and create knowledge and develop skills. School attendance and educational attainment therefore needs to be complemented by better educational outcomes for the desired effect.

School attendance as a proxy of literacy rate is easy to measure, but it has its limitations. A more exact way involves testing literacy skills. Literacy testing is difficult to implement for the whole population but can be done at subpopulation level such as for certain age groups. This has been done in Malaysia since 2010, whereby children aged 7 to 9 nationwide are screened for their competency in basic literacy and numeracy skills (LINUS programme). Students with weaker literacy and numeracy skills are then followed up with remedial interventions as discussed in the MDG 2 chapter. At Year 1, it was apparent that boys lagged slightly in numeracy and literacy of the national language. However, gender gaps largely disappeared with both genders achieving 99 per cent literacy and numeracy¹⁰² by the end of Year 3. This indicates that gender parity is being achieved in basic literacy and numeracy at the early years of formal education.

National examination results can also be used to investigate gender parity. There are three national examinations that students take, respectively at the end of primary, lower secondary and upper secondary. Based on the analyses of national examination results¹⁰³, girls have outperformed boys in all four national exam subjects of Bahasa Malaysia¹⁰⁴, English, Mathematics and Science in primary (Year 6) and lower secondary (Form 3) levels. As students move to upper secondary level, the disadvantage of boys further widens.

This outperformance by girls has also been reflected in international examinations such as the Trends in Mathematics and Science Study (TIMSS) examination. This was most markedly observed in the 2011 results where girls scored significantly higher than boys in all content and cognitive domains¹⁰⁵ in Maths and Science. Interestingly, this was not always the case. In the 1999 TIMSS examination, there was no significant difference between the genders in all content domains. Positive attitudes for studying Maths and Science were also equal between genders. In fact, boys had actually scored significantly higher than girls in Science in 2003. Although performance of both girls and boys subsequently declined in TIMSS 2007 and 2011 examinations, the decline has been larger for boys than girls.

¹⁰² UNCT's calculations based on data provided by Ministry of Education based on three cohorts of students.

¹⁰³ This exercise was conducted by Goolamally and Ahmad in 2010 in research on the under performance of boys for the UN Girls' Education Initiative. These results were reported in UNGEI (2011) *Why are Boys Underperforming in Education?: Gender Analysis of Four Asia-Pacific Countries*.

¹⁰⁴ Bahasa Malaysia is the national language of Malaysia.

¹⁰⁵ For Mathematics, content areas include Fractions, Measurements, Data visualisation and Probability, Algebra and Geometry. For Science, content areas include Life Science, Earth Science, Physics, Chemistry, Environmental and natural resources, Science inquiry and nature of science. Cognitive domains refer to the domains of knowing, applying and reasoning.

TRENDS OF GENDER EQUALITY IN EMPLOYMENT

The gender indicator for employment is the share of female employment in the non-agriculture sector. It reflects the accessibility of women to non-agriculture employment, although inequalities and vulnerabilities, such as contractual work with no work benefits can exist there. Other indicators such as labour force participation, level of education, wage differentials, sectoral and occupational segregation are also examined in order to obtain a holistic view of women's employment. The MDG 1 chapter complements this section with the discussion on vulnerabilities, mainly in terms of women's share in more vulnerable occupations, such as own-account workers and unpaid family workers, and in the informal sectors.

Data for this section were largely drawn from the Labour Force Surveys. 'Employed' is defined as employers, employees, own-account workers and unpaid family workers. The sum of 'employed' and 'unemployed' persons is the total labour force¹⁰⁶, and the labour force statistics include both formal and informal sectors.

Share of women in employment in the non-agricultural sector

The number of persons in Malaysia's labour force has increased from 5.1 million persons in 1980 to 13.9 million persons in 2014¹⁰⁷. The distribution of men and women has been fairly stable with women comprising 34 per cent of the labour force in 1980 and rising slowly to 38 per cent in 2014. Women's participation has changed noticeably in this period (**Figure 3.1**).

Malaysia's economy has undergone significant restructuring since the 1970s, from a largely agriculture-based economy to one that is based on manufacturing and services. In tandem with the sectoral changes in the economy, the nature of female employment also shifted considerably away from agriculture.

With the rapid growth of non-agricultural employment opportunities, the share of women in the agriculture sector fell from 41 per cent in 1975 to 26 per cent in 2014. Correspondingly, the share of women in the non-agricultural sectors grew from 29 per cent in 1975 to 40 per cent in 2014.

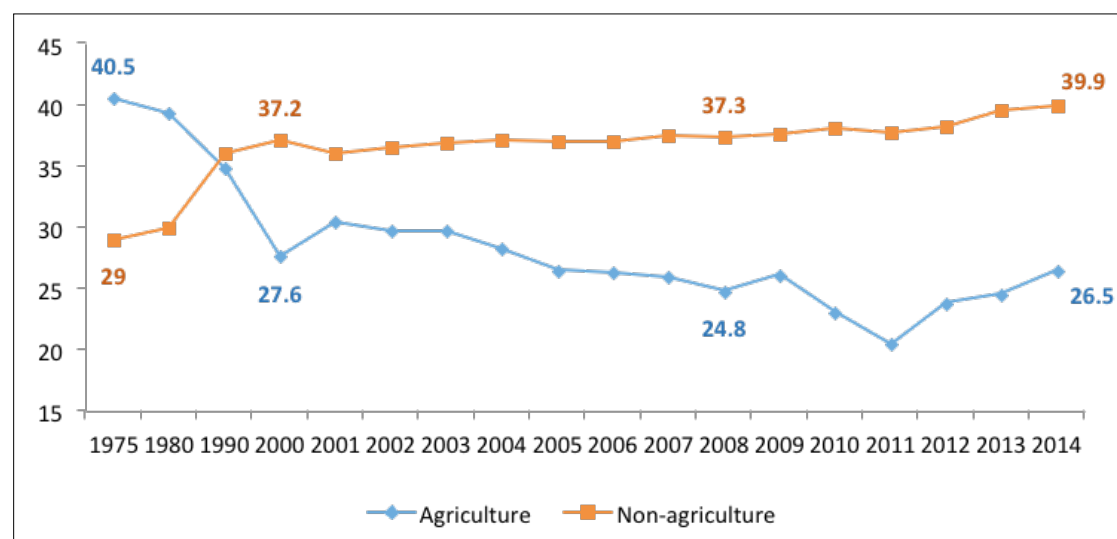
At state level, Johor, Pulau Pinang, Selangor, Melaka and Federal Territory of Kuala Lumpur¹⁰⁸ had a higher share of women in non-agricultural sectors in 1990. These differentials have narrowed, and by 2014, the share of females in non-agricultural sectors in all states was close to the national percentage of 40 per cent.

¹⁰⁶ The labour force includes citizens and non-citizens aged 15 to 64 years.

¹⁰⁷ Includes own-account workers, unpaid family workers, employees and employers. The Labour Force Surveys include persons working in the informal sectors.

¹⁰⁸ In FT Kuala Lumpur, there were only about 800 persons in the agriculture sector in 2013, of which 200 were women. Also, there were no women employed in the agricultural sector in FT Putrajaya.

Figure 3.1:
Proportion of women (%) in agriculture and non-agriculture sectors, 1975–2014



Note: 1975 figures are for Peninsular Malaysia only (MDGR 2005)

Source: 1. Malaysia, Department of Statistics, Labour Force Survey, various years
2. Quoted in MDGR 2005 and 2010 and computed from Labour Force Surveys, various years.

Other female employment patterns

Labour force participation

Labour force participation rate (LFPR) refers to the number of persons in the labour force who are working or looking for work, out of the total working age (15–64) population. Female participation¹⁰⁹ in the labour force has remained around 45 per cent in 2000 and 49.5 per cent in 2012. In 2010, the government announced a target of at least 55 per cent female participation in the labour force by end of 2015. In the 11MP (2016–2020), a new target of 59 per cent by 2020 was set. In 2013, female LFPR reached 52.4 per cent thus breaking the 50 per cent glass ceiling and has continued to rise to 53.6 per cent in 2014. Malaysia's female LFPR is also still lower than the OECD average of 61 per cent¹¹⁰. The female LFPR is also lower than that of males (80.4 per cent), with the female-male ratio being 0.67 in 2014.

This pattern was the same in urban and rural settings, although gender disparity is larger in rural settings (**Figure 3.2**). Between 2000 and 2010, the LFPR of urban women remained the same, while that of rural women declined. The decline in female LFPR in rural areas was due to the combined result of staying in school longer, reduced participation in agriculture activities and fewer non-agricultural jobs in rural areas¹¹¹.

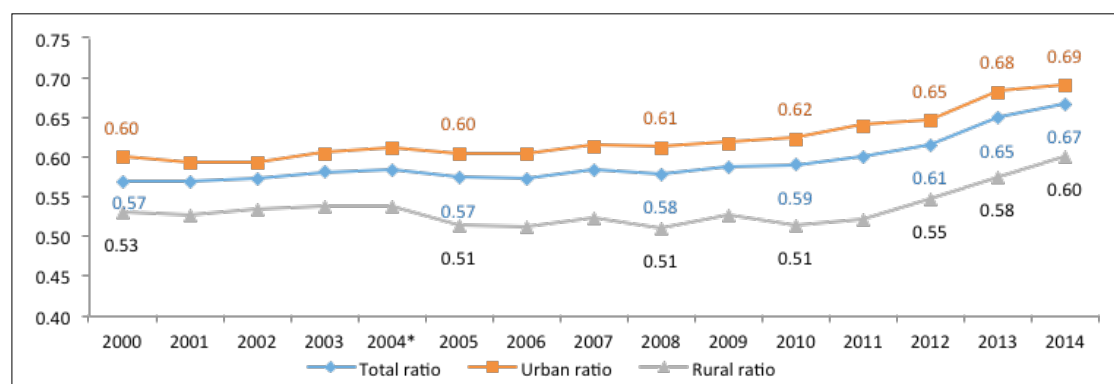
Declines in female LFPR were observed amongst Indian and Other Bumiputera women between 2000 and 2010, and this is also reflected in the gender gap ratio (**Table 3.4**). As for the other ethnic groups, the narrowing of the gender gap in this period was largely due to an increase in the female LFPR. Since 2011, the female LFPR in all ethnic groups has increased more than the male LFPR, resulting in a narrowed gender gap. As of 2014, the most marked increase in female LFPR was observed among women in the Others category.

¹⁰⁹ Female labour force includes female citizens and non-citizens.

¹¹⁰ See OECD average for female LFPR: https://stats.oecd.org/Index.aspx?DataSetCode=LFS_SEXAGE_I_R

¹¹¹ Malaysia, Ministry of Women, Family and Community Development and United Nations Development Programme (2014). *Study To Support The Development Of National Policies And Programmes To Increase And Retain The Participation Of Women In The Malaysian Labour Force: Key Findings And Recommendations*.

Figure 3.2:
Female-to-male labour force participation ratios by rural/urban location, 2000–2014



Note: A ratio of 1.0 would indicate equal labour force participation rates.

Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years.

Table 3.4:
Female-to-male labour force participation ratios by ethnic group, selected years

Year	Malays	Other Bumiputera	Chinese	Indians	Others	Non-citizens
2000	0.56	0.54	0.57	0.57	0.48	0.66
2010	0.60	0.53	0.61	0.55	0.56	0.64
2013	0.66	0.61	0.68	0.61	0.74	0.65
2014	0.68		0.68	0.63	0.62	0.66

Note: A ratio of 1.0 indicates equal labour force participation rates. For 2014, Malays and Other Bumiputera are not disaggregated.

Source: Malaysia, Department of Statistics, Labour Force Survey Report, various years

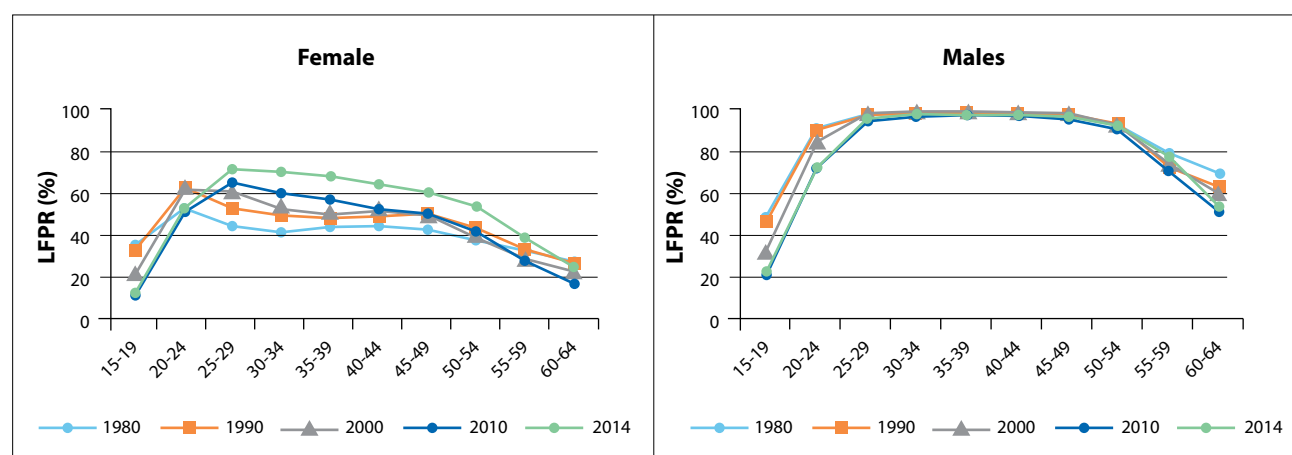
Age-specific LFPR does change and interesting trends have emerged over a 30-year period. **Figure 3.3** shows the male and female LFPR between 1980 and 2014. In 1980, there was a double hump (bimodal) in the female LFPR indicating that women entered the labour force but then left, presumably to start a family. Some returned to the labour force later after their children had grown. At that time, most women were employed in the agriculture sector, which was more flexible as people could leave and return to the labour force. As the economy changed to a manufacturing and services-based economy, the double-hump phenomenon disappeared (unimodal). Other sociocultural factors, such as certain rigidities around seniority in career advancements and promotions in the non-agricultural sector, could prevent females from easily leaving and then returning to the labour force.

Between the 1980s and early 2000s, female participation peaked at 60 per cent at the age of 20–24 before declining as women left the labour force (**Figure 3.3**). From 2000 onwards, this peak in LFPR has shifted to the age group of 25–29 in part due to the delay of joining the labour force because of education, delayed marriage and child bearing¹¹². The decline after this peak has also become less steep especially since 2014, with more women aged 30 and above staying longer in the workforce compared to earlier years. Hence, the younger age curves shifted to the right. This is a global phenomenon,

specifically in countries where more women have greater access to education, especially tertiary education.

For the male LFPR, the education effect sees a delay in joining the labour force (curve shifting to the right). The male LFPR stayed at almost 100 per cent until retirement age. With retirement age being extended from 55 to 60, the LFPR shifted further to the right. The 2010 and 2014 curves show this phenomenon for both men and women.

Figure 3.3:
Female and male LFPR by age groups, 1980–2014



Source: Malaysia, DOSM, Labour Force Time Series

Situation of women in labour markets

Level of education

As educational attainment increased in Malaysia, there was a corresponding decline in the proportion of the labour force with primary education or less. In 2001, there were more women in the workforce with secondary education (52.0 per cent) than education at primary or lower levels (29.9 per cent). By 2014, women still had secondary education (50.5 per cent), but those with tertiary education (33.5 per cent) outnumbered those with primary education (16 per cent).

Nevertheless, women with less education are more likely to be outside the labour force than women with secondary or tertiary education. The study by the Ministry of Women, Family and Community Development and UNDP in 2014 showed that women with lower education were less likely to have access to childcare services; in turn limiting their employment options.

¹¹² The mean age at first marriage for females increased from 23.5 years in 1980 to 25.1 in 2000 and to 25.7 as of 2010. The mean age for bearing a first child increased from 26.8 years in 2006 to 27.3 years in 2011. Also the total fertility rate has declined from 3.4 children per woman in 1991 to 2.1 in 2012. Sourced from Malaysia, Department of Statistics, Population and Housing Census 2000 and 2010; and Malaysia, Ministry of Women, Family and Community Development, National Population and Family Development Board, Malaysia Population and Family Survey 1994 and 2004.

A noticeable proportion of women with tertiary education were also leaving the labour force as shown by the fact that about 48 per cent of the country's labour force with tertiary education were women despite women dominating tertiary education enrolments at 56 per cent in 2013. Given that women with tertiary education are more likely to afford child care services, this suggests that their decisions may be influenced by other sociocultural determinants. This was supported by a 2014 study whereby marriage and requests by husband or family to stop working were amongst the top reasons for women to stop working, even for those without caregiving needs.

Occupation

In the early 2000s, the female workforce comprised mainly clerical workers (17.4 per cent) followed by service workers and shop and market sales workers (16.9 per cent). Over the years, the female share of the service and sales workers increased by 2.7 times, making this occupation the top female occupation (29.0 per cent) in 2014. As for clerical workers, the percentage has remained largely the same at 17.7 per cent of female workers (2014)¹¹³. In 2001, plant and machine operators and assemblers was the third largest female occupation (14.2 per cent) and was later replaced in rank by technicians and associate professionals jobs in 2008 (15.7 per cent). By 2014, the professional category became the third largest female occupation (14.8 per cent); in 2001, only 5.6 per cent of women were professionals. These patterns indicated a shift towards women being employed in higher occupational categories. The share of women in the top three occupations has increased: in 2001, the top three occupations – managers, professionals and subprofessionals – accounted for 49 per cent of the female labour force and it increased to 61.5 per cent in 2014.

Clerical work has been and still is dominated by women. In 2001, the share of women in clerical work was 64.6 per cent and increased to 74.2 per cent in 2014. The share of women in the professionals group has also gradually increased from 40.4 per cent in 2001 to 55.8 per cent in 2014¹¹⁴. However, the increase in women professionals has not been across the board and occupational segregations are still observed. As of 2014, there were more women dentists (65.7 per cent), lawyers (51.2 per cent), and accountants (50.6 per cent) than men. In contrast, males still dominate occupations such as professional engineers (95.0 per cent), graduate engineers (77.3 per cent), professional architects (81.7 per cent), architects (64.8 per cent), land surveyors (98.7 per cent), obstetrician and gynaecologists (63.9 per cent) and psychiatrists (60.4 per cent). Nonetheless, there have been breakthroughs, among veterinary surgeons and quantity surveyors, for example, occupations that reached close to parity in 2014. The share of women in most professional occupations has been increasing¹¹⁵.

Male-to-female wage ratio

The male-to-female wage ratio reflects the gender earnings differential. A ratio of 1 refers to gender parity, while a ratio of more than 1 means that men earn more than women and vice versa. Female average monthly wages were quite close to their male counterparts (ratio = 1.06) between 2012 and 2014 (**Table 3.5**).

¹¹³ Malaysia. Department of Statistics, Labour Force Survey. Various years

¹¹⁴ Malaysia. Department of Statistics, Labour Force Survey. Various years

¹¹⁵ Malaysia, Ministry of Women, Family and Community Development. Statistics on Women, Family and Community, 2014.

Table 3.5:
Average monthly basic wage and male-to-female wage ratio by gender and occupation, selected years

Occupation	2012			2014		
	Male Wage (RM)	Female Wage (RM)	GWG	Male Wage (RM)	Female Wage (RM)	GWG
Managers	5,672	4,174	1.36	6,883	5,591	1.23
Professionals	4,374	3,394	1.29	5,001	3,950	1.27
Technicians and associate professionals	2,554	2,383	1.07	3,024	2,814	1.07
Clerical support workers	1,895	1,677	1.13	2,161	1,857	1.16
Sales and Service workers	1,542	1,020	1.51	1,800	1,211	1.49
Skilled agriculture, forestry and fisheries workers	1,126	726	1.55	1,422	812	1.75
Craft and related trades workers	1,357	774	1.75	1,608	939	1.71
Plant and machine operators and assemblers	1,374	982	1.40	1,612	1,283	1.26
Elementary occupations	1,035	776	1.33	1,215	846	1.44
Overall	1,947	1,861	1.05	2,280	2,148	1.06

Note: GWG = Gender wage gap (male-to-female ratio); M = male; F = female; GWG = 1 is parity between genders, GWG > 1 is women earn less than men, GWG < 1 is women earn more than men; calculated by UNCT based on average monthly basic wage. Salaries and wages refer to basic salaries/wages, fixed allowances received and include overtime payment.

Source: Malaysia, Department of Statistics, Salaries and Wages Survey Report, various years

The male-to-female wage ratio declined for some occupations but persisted in many others. For managers, professionals, sales and service workers, craft and related trades workers as well as plant and machinery operators and assemblers, gender wage gaps have narrowed. For technical and associate professionals the ratio has stayed the same, while gender disparities have increased the most in the occupations of skilled agriculture, forestry and fisheries workers and elementary occupation workers.

The male-to-female wage ratio is influenced by various factors, including demographics, human capital factors as well as vertical and horizontal segregation¹¹⁶. By removing the effects of various factors, gender

discrimination can be uncovered thus providing a more accurate estimation of the gender wage gap. Using this method, a study by the Institute of Labour Market and Analysis (ILMIA) Malaysia in 2013¹¹⁷ found that women had earned significantly less than men in 2010, despite having the same marital status, years of study, working experience and occupation in the same economic sector. This is not a unique problem in Malaysia, as the OECD¹¹⁸ found that there is a 10 to 20 per cent gender pay gap in most countries. Thus, more work needs to be done to realise the principle of “equal pay for equal work” so that highly educated women are attracted back to work and contribute to the nation’s economic development.

¹¹⁶ Horizontal segregation reflects the fact that men and women are allocated differently across occupations, while vertical segregation describes how men and women work in different status of occupations. Sourced from Goy, S.C and Johnes, G. (2012), Revisiting the Impact of Occupational Segregation on Gender Earnings in Malaysia. *Jurnal Ekonomi Malaysia*: 46(1), pp. 13-25.

¹¹⁷ Institute of Labour Market Information and Analysis Malaysia (2013) Study on Wages Structure in the Major Economic Sector Particularly In NKEA's Industries and its Impact towards Labour Productivity and Capital Intensity. Final Report. The study removed the effects of five key factors from the wage gap, marital status (demographic factor); years of study and working experience (human capital factors); occupation (horizontal/vertical segregation); and economic sector (horizontal segregation).

¹¹⁸ https://www.cesifo-group.de/ifoHome/facts/DICE/Labour-Market-and-Migration/Labour-Market/Anti-discrimination-Gender/Gender-wage-gap-report/fileBinary/Gender-Wage-Gap_dicereport113-db3.pdf

Women and entrepreneurship

In 2011, about 19.7 per cent (126,910) of 645,136 small and medium enterprises (SMEs) were women controlled¹¹⁹. This is much lower than the 36.2 per cent in Taiwan, China (2010) and 31.5 per cent in Australia (2009). Also, the majority of women-owned SMEs are still in the micro category (88 per cent)¹²⁰ and in services (91.7 per cent). Factors that may affect women's participation in entrepreneurial activities include a lack of confidence, training and exposure on all aspects related to entrepreneurship and business, as well as a relatively limited access to funding¹²¹.

GENDER EQUALITY IN LEADERSHIP ROLES

An aspect that is closely linked to the empowerment of women is the representation of women in national parliaments. It reflects women's opportunities in "elected public office" and an indication of their participation in leadership roles. Recognising that women have leadership capabilities, this subsection also explores their participation in leadership roles in the public (civil service) and corporate sectors.

On this front, it should be noted that the Malaysian government has taken efforts to increase women representation in the civil service and corporate sectors. In 2004, the Government of Malaysia announced the

policy to achieve 30 per cent women representation in decision-making positions in the public sector. This was followed by the announcement in 2011 to achieve the same target in the corporate sector by 2016. These policies are not legally binding and their implementation has been done through more persuasive methods, particularly in the corporate sector, such as through establishing the Women Directors Programme and Women Directors Registry in 2012. In May 2015, the 30% Club, Malaysian Chapter¹²², an initiative by the corporate sector for the corporate sector to encourage gender diversity in the boardrooms was launched by the Prime Minister to further promote the 30% agenda.

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Proportion of seats held by women in national Parliament and political sphere

As of 2014, women remain hugely underrepresented in Malaysia's political sphere. Although there have been overall increases in female participation since 1990, there has been no improvement since 2008 in women's share of elected parliamentarians (10.4 per cent), or of the House of Representatives and Senate appointees (27–28 per cent). In comparison to other ASEAN countries, Malaysia's representation of women in Parliament is still

amongst the lowest. Since the 13th General Elections (GE-13) in 2013, the proportion of female Cabinet Ministers and Deputy Ministers at the federal level has increased to 12.3 per cent from 11.4 per cent in the previous Cabinet in 2008. This is mainly due to a reduction in the Deputy Minister positions from 38 to 25. There were still only two female Cabinet Ministers (out of 32) and five female Deputy Ministers (out of 25) in the 2013 Cabinet¹²³.

¹¹⁹ SME Annual Report 2011/12, page 96 based on DOSM's Economic Census 2011. *Profil Perusahaan Kecil dan Sederhana* (page 8), and from http://www.smecorp.gov.my/vn2/sites/default/files/07%20SMEAR_11-12%20ENG%20Economic%20Census%202011_0.pdf

¹²⁰ Microsized SMEs are defined as having fewer than five full-time employees or turnover of less than RM200,000 for services sector and RM250,000 for manufacturing sector.

¹²¹ These aspects include marketing, product development, quality control, technology sophisticated production, business management, finance, import and export business, and business license and loan applications according to the SME Master Plan 2012-2020.

¹²² In the launching speech of the Prime Minister on 8 May 2015, he announced Government Linked Companies (GLCs) will by policy allow their executives to serve as board members in other listed companies and encouraged other Public Listed Companies (PLCs) to do the same. The Prime Minister also announced that PLCs will now be responsible to disclose to Bursa Malaysia the composition of the boards and management of the companies in terms of gender, ethnicity and age.

¹²³ Malaysia, Ministry of Women, Family and Community Development (2014). *Statistics on Women, Family and Community*.

In State Legislative Assemblies, the absolute number, and proportion, of women rose after the 2013 GE-13, where a resurgent opposition alliance gained control of five of the 13 state assemblies. However, women's share of assembly seats remains low, with just 11 per cent in 2014. As for the state government's executive branch (State Executive Council or EXCO), Selangor had the highest number of female EXCO members (four members or 28.6 per cent of the EXCO) after GE-13. This number has since dropped as of 2015 to two EXCO members (18.2 per cent). This is followed by Perak (18.2 per cent) and Kedah (20.0 per cent), which each had two female EXCO members in 2014. All other states had only one female EXCO member each except Terengganu, where there were no female EXCO members.

While appointments into public office are still low for women, female candidates in the general elections rose from 120 to 168 candidates between GE-12 and GE-13. By proportion, women candidates increased from 7.5 per cent to 8.8 per cent of total candidates or a 40 per cent increase. There were 56 women candidates out of 168 who contested for Parliamentary seats in GE-13 while 112 contested for State Legislative Assembly seats. These numbers represented 9.7 per cent and 8.5 per cent of the total Parliamentary and State Legislative Assembly seats, respectively¹²⁴. This suggests that the political participation of women as candidates has increased since GE-12 for both national and state levels.

Table 3.6:
Representation of women and men in political life, 1990–2014

	1990	1995	1999	2004	2008	2011	2013	2014
Number of Elected Members of Parliament (<i>Dewan Rakyat</i>)								
Women	9	13	20	21	23	23	23	23
Men	162	163	173	198	199	199	199	199
Percentage of women (%)	5.3	7.3	10.4	9.6	10.4	10.4	10.4	10.4
Number of Appointed Members of Senate (<i>Dewan Negara</i>)								
Women	10	11	14	19	16	17	17	17
Men	45	57	48	38	44	45	42	49
Percentage of women (%)	18.2	16.2	22.6	33.3	26.7	27.4	28.8	25.8
Number of Elected Members of State Legislative Assembly (<i>Dewan Undangan Negeri</i>)								
Women	15	24	28	40	46	47	65	64
Men	428	474	476	536	530	529	511	512
Percentage of women (%)	3.4	4.8	5.6	6.9	8.0	8.2	11.3	11.1

Source: Malaysia, Ministry of Women, Family and Community Development, *Statistics on Women, Family and Community*, various years

¹²⁴ Malaysia, Ministry of Women, Family and Community Development, 2015

The avenues open to women for political leadership are also few. At the supreme council level of political parties, women representation was only around 10 per cent for 2008–2010 and has stayed largely the same up until 2014. Similarly, women representation as local authority council members ranged from 12.2% in 2008 to 13.6% in 2014 or about 390 council members each year. Women representation in local authorities is considered to be an avenue for building political leadership and the visibility of women leaders given that council members are serving the needs of society at the local grass-roots levels.

Women in leadership and decision-making positions in the public and corporate sectors

Apart from the political sphere, women's participation at decision-making levels in the public and corporate sectors is equally important. As of 2014, the Malaysian Public Service employed a total of 1.4 million civil servants covering 252 schemes of service including the Federal Public Service, the State Public Services, the Joint Public Services, the Education Service, the Judiciary, the Legal Service, the Police and Armed Forces. Besides being a major employer, the public service is an important sphere to consider because those employed have impact on the development and implementation of various national policies, plans and programmes.

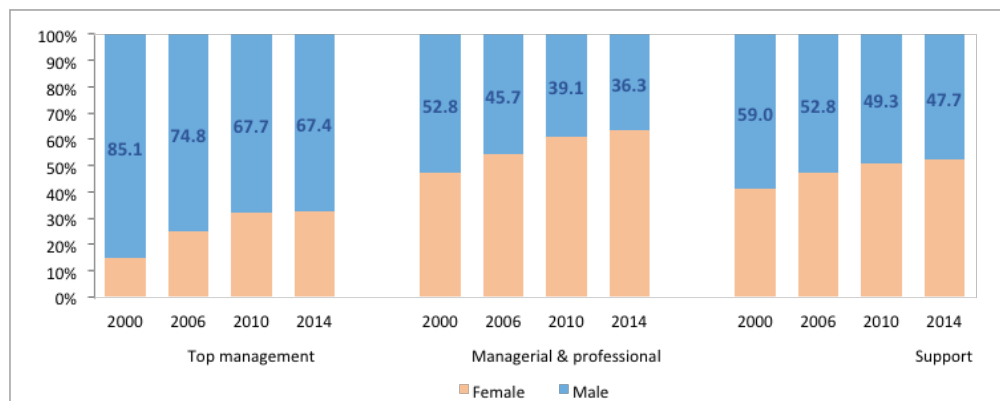
In 2000, the public service generally comprised more males than females, with males making up 85.1 per cent of top management, 52.8 per cent of managerial and professionals and 59.0 per cent of support staff (**Figure 3.3**). At the same time, females only made up close to 42 per cent of the public service. By 2014, more females had entered the public service except in the top management level. Nonetheless, the goal of having women in at least 30 per cent of decision-making positions in the public

sector was reached in 2010, with 32.3 per cent of women being in top management positions. Top management is defined as holding the premier posts in the civil service (the JUSA C¹²⁵ post and above). This figure was more than double the 14.9 per cent achieved in 2000. In 2014, this percentage has risen slightly to 32.6 per cent (**Figure 3.4**).

Amongst the premier posts, women currently occupy 30.4 per cent of Secretary General and 23.4 per cent of Director General (Federal Departments) positions in 2014. This marks a notable increase since 2008 when only 3.8 per cent of Secretary General positions and 15.7 per cent of Director General positions (Federal Departments) were occupied by women. Another breakthrough that has been observed in recent years is the appointment of women in traditionally male-dominated roles. Between 2011 and 2014, there have been appointments of women as the Head of Immigration Department, the Head of Government Security Office and the Head of Research Division, Prime Minister's Department. Women Director Generals have also headed the Companies Commission of Malaysia.

¹²⁵ JUSA C is the lowest post in the Top Management category of the public service. Top management category includes posts with the staff grades of JUSA C to Turus I.

Figure 3.4:
Public service staff by position and gender, selected years



Source: Malaysia, Ministry of Women, Family and Community Development, *Statistics on Women, Family and Community Malaysia*, 2013. Malaysia, Ministry of Women, Family and Community Development, 2015

As for the corporate sector, Malaysia conducted a survey in 2001 amongst the top 50 companies listed in the Kuala Lumpur Stock Exchange (KLSE) and found that women representation in the board of directors was very low at around 6 per cent. Expanding this to all Ministry of Finance (Incorporation) companies in 2005, Malaysia found that women represented only about 12 per cent of boards of directors. Recognising the importance for women representation, Malaysia, in 2011, announced a policy of achieving at least 30 per cent of women in decision-making positions of the corporate sector by 2016. The policy measured women board members in the PLCs in Bursa Malaysia (formerly KLSE) and all public companies registered with the Companies Commission of Malaysia.

As of the end of 2014, Malaysia had achieved a 16 per cent share of women on boards of directors amongst public companies registered with the Companies Commission of Malaysia. Upon further breakdown, the share of women on boards of directors as of 2014 was 10.2 per cent for PLCs, and 18 per cent for non-listed companies. Between 2008 and 2014, the share of women on boards of directors in Ministry of Finance (Incorporation) companies had increased from 12 per cent to 17 per cent. The banking sector also saw an increase in women directorship from 4.9 per cent to 7.9 per cent between 2013 and 2014.

GENDER-BASED VIOLENCE

Gender-based violence is violence that is directed against a woman because she is a woman or that affects women disproportionately. It includes acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion and other deprivations of liberty¹²⁶. Forms of such violence include domestic violence or intimate partner violence, rape, sexual assault, sexual harassment, trafficking in women and forced prostitution of women. While it can occur amongst men and women alike, data and information show that, worldwide, it disproportionately happens to women and girls with girls having lesser capability to escape from abuse.

Recognising that gender-based violence can undermine the health, dignity, security and autonomy of its victims, Malaysia included violence against women as an additional indicator in MDGR 2010's MDG 3 reporting. The additional indicator was measured by two subindicators, namely, domestic violence and rape. It should be noted that gender-based violence is a broader conceptualisation of the term and has been used here in recognition that men and boys and other marginalised groups may be victims of violence as well. However, women and girls still form the majority victims of gender-based violence in Malaysia.

There was a general decrease of gender-based crimes in Malaysia between 2010 and 2014 according to police statistics. **Table 3.7** show trends for different types of violence. While sexual violence declined, domestic violence increased. The incidence of domestic violence averaged at around 12.7 per 100,000 population in 2014 up from 9.6 in 2010, while the incidence of reported rape was 8.4 per 100,000 population, down from 13.7 in 2010. When rape, incest and outrage of modesty were categorised as gender-based violence, the incidence was 27 per 100,000 population in 2014, down from 31.7 in 2010. In comparison to other violence cases, the number of cases reported as sexual harassment is relatively fewer. It was noted, however, these figures could be lower than the actual occurrences as many cases may not have been reported. The Women's Aid Organisation estimates that for rape cases alone, only about 10 per cent of such cases are reported.

¹²⁶ United Nations Entity for Gender Equality and the Empowerment of Women, CEDAW: General Recommendations made by the Committee on the Elimination of Discrimination against Women, General Recommendation No. 19 (11th session, 1992) Violence against women, viewed at <http://www.un.org/womenwatch/daw/cedaw/recommendations/recomm.htm> on 26 July 2015.

Table 3.7:
Cases of violence against women, 2010-2014

Types of violence	2010	2011	2012	2013	2014
Rape	3,182	2,959	2,696	2,518	2,045
Incest	413	342	302	249	304
Outrage of modesty	2,021	1,918	1,775	1,694	1,560
Sexual harassment at workplace	162	136	112	119	102
Total (sexual violence)	5,778	5,355	4,885	4,580	4,011
Domestic violence	2,522	2,462	2,558	3,053	3,545

Source: Royal Malaysian Police, 2015

Domestic violence

Domestic violence or intimate partner violence is violence occurring within a marriage or in a marriage like relationship. While domestic violence may broadly affect wives, husbands, children or other members of the family, it is disproportionately suffered by wives. Domestic violence was recognised in Malaysia as a punishable crime with the passing of the Domestic Violence Act 1994 and its implementation in 1996. In 2011, the definition of domestic violence was expanded to also include emotional, mental and psychological abuse in addition to physical abuse. However, while the Act does not define domestic violence as a specific crime, it does require the prosecution of such acts to be done by matching the alleged acts with any offence available in the Penal Code of Malaysia. Certain forms of psychological abuse therefore may not currently have been redressed under the existing provisions in the Penal Code.

In Malaysia, the prevalence of domestic violence is dependent on reported cases from police statistics. As shown in **Table 3.7**, the number of reported cases has been increasing since 2010 although there may be underreporting of cases. The idea that domestic violence is underreported came from a study of women's well-being and domestic violence in Peninsular Malaysia that was conducted between October 2007 and March 2012 by Universiti Sains Malaysia's Centre for Research on Women and Gender (KANITA)¹²⁷. This study used a broad definition of domestic violence and found that nine out of every 100 women in Peninsular Malaysia had suffered domestic violence at some point in their lives. This may be a serious problem of underreporting when contrasted to official statistics.

¹²⁷ Universiti Sains Malaysia KANITA and UNFPA (2014) *A country level study on women's wellbeing and domestic violence against women (DVAW) using WHO multi-country questionnaire, Executive summary.*

The study further found that only 82.9 per cent of survivors had reported their situation to someone, with only about 9.3 per cent and 7.2 per cent of survivors reporting it to the police and doctor or health worker, respectively. The majority of survivors had reported their situation to parents (28.9 per cent), friends (24.2 per cent) and siblings (21.1 per cent). Most survivors hoped that they would obtain more help from their own family (39.2 per cent), while close to 16 per cent hoped to receive more help from health centres and the police.

Of the 36.4 per cent of survivors who did not seek help, the majority (80.8 per cent) opined that the violence they experienced was normal or not serious, while 55.8 per cent felt that reporting the violence would bring a bad name to the family. There were 53.8 per cent who did not seek help in fear of being embarrassed, ashamed, not being believed or being blamed by the people from whom they sought help. There were also 34.6 per cent who were afraid of losing their children and 11 per cent who believed that they were unable to seek help from others. Much of these reasons are connected to socio-cultural beliefs and gender-role expectations of society. For example, shame in reporting domestic violence may come from the perception that women have the responsibility of keeping the family intact and thus leading to the fear of being blamed for instigating the violence, which led to the breakdown of the family.

These patterns suggest that there is still much to do to increase the awareness and encourage the reporting of violence so that victims can obtain help. Apart from ensuring that capable and gender-sensitive institutional support is available, educating the survivor's first point of help, mainly family as well as the victims themselves, is crucial.

Public education awareness campaigns also need to be stepped up. At the same time, interventions to prevent, protect survivors and their children, effectively prosecute and punish perpetrators and provide redress for victims need to be strengthened and systematic collation of disaggregated data on domestic violence is needed.

Rape¹²⁸

Rape is a criminal offence regulated under Section 375 of the Penal Code. By its legal definition, rape victims are only women and perpetrators can only be men. Further, rape conviction requires the proof of penile penetration. Where rape is committed in an aggravated circumstances including in conjunction with causing other injuries to victim, the punishment is a minimum of 10 years imprisonment but not more than 30 years and shall also be liable to whipping [Section 376 Penal Code]. The Penal Code also provides for the offence of statutory rape where sexual intercourse is committed with a girl below the age of 16 [Penal Code Section 376(2) (e)].

While the number of reported rape offences has declined in recent years, slightly more than half of the rape offences reported in Malaysia involved victims who were 16 years of age and below¹²⁹. By age group, the majority of such cases involved children aged 13 to 16 (**Table 3.8**). States with more rape cases of girls aged 16 and below are Johor, Selangor, Kedah, Kelantan and Sabah for years 2013 and 2014. These five states accounted for 55 per cent of all rape cases (**Table 3.9**).

¹²⁸ Rape as recognised under Malaysian law is limited to penile penetration without consent. Marital rape is currently not recognised in the Penal Code. Sexual intercourse between a man and his wife is not considered to be rape unless the man and his wife are divorced or judicially separated or if there is an injunction restraining the husband from having sexual intercourse with his wife (Section 375 Penal Code). Nevertheless, a husband who causes hurt, threatens or hurts his wife in order to have sexual intercourse can be punished with imprisonment up to 5 years under Section 375A of the Penal Code.

¹²⁹ The proportion is derived from Tables 3.7 and 3.8.

Equally of concern is the increase in younger men and boys as the alleged perpetrators of rape. In 2013, about 21 per cent (591 out of 2,767 cases) of rape cases involved perpetrators who were below the age of 18. This is a huge increase as compared to the year 1997 where the corresponding percentage was only 2.5 per cent (47 out of 1,833 cases)¹³⁰.

Table 3.8:
Number of rape cases involving victims aged 16 and below by age group, 2010–2014

Year	2010	2011	2012	2013	2014
Total rape cases with victims ≤ 16 years of age	1,777	1,652	1,561	1,424	1,243
By victim's age					
Under 6 years old	38	28	36	24	15
6–9 years old	38	48	55	42	45
10–12 years old	138	126	121	110	97
13–16 years old	1,563	1,450	1,349	1,248	1,086

Source: Royal Malaysian Police, 2015

Table 3.9:
Number of reported rape cases by state

State	2013	2014	2015*	2014
Selangor	192	173	33	13.9%
Johor	241	156	23	12.6%
Kedah	112	127	14	10.2%
Sabah	109	118	23	9.5%
Kelantan	134	117	22	9.4%
Sarawak	80	93	17	7.5%
Pahang	107	84	14	6.8%
Perak	80	80	13	6.4%
Kuala Lumpur	65	71	16	5.7%
Negeri Sembilan	81	65	10	5.2%
Terengganu	70	54	14	4.3%
Pulau Pinang	62	46	10	3.7%
Melaka	72	44	6	3.5%
Perlis	19	15	0	1.2%
Total	1,424	1,243	215	100.0%

Note: *Data for 2015 cover only the first three months.

Source: Royal Malaysian Police, 2015.

¹³⁰ AWAM. Press Statement on sexual assault cases in Malaysia, 10 September 2014. Viewed at <http://www.awam.org.my/web/wp-content/uploads/2012/11/AWAM-Press-Statement-on-Sexual-Assault-Cases-in-Malaysia.pdf> on 13 June 2015. Sources of statistics used in press statement were from PDRM Rape Offence Statistics, 2013 and The Rape Report: An Overview of Rape in Malaysia, 2002.

MOVING FORWARD

Factors that contributed to the trends in gender equality

Legislative and policy developments: In line with Malaysia's accession to CEDAW in 1995, several legislations have been enacted or amended to build an enabling environment to address gender equality and eliminate discrimination against women. The rights of Malaysian women are implicitly recognised and guaranteed by the Federal Constitution. In 2001, Clause 2 of Article 8 in the Federal Constitution was amended to include 'gender' so as to prohibit gender discrimination¹³¹.

On the education front, Article 12 Clause 1 of the Federal Constitution ensured that Malaysians had a right to education and this enabled Malaysian women to gain equal access to education early on in the nation's development. In 2003, Malaysia also amended the Education Act 1996 (Act 550) under the Education (Compulsory Education) Regulations 2002 to make primary education compulsory for all Malaysian children. The University and University Colleges Act 1971 also stipulates equal access of male and female Malaysian citizens to educational opportunities.

In terms of entitlements, the 1980 Pensions Act was amended in 2002 to allow widows to continue receiving their husband's pension despite remarrying in order to protect the well-being of widows and their children. The amendment to the Land (Group Settlement Areas) Act in 2002 also allowed wives or ex-wives or the next-of-kin of settlers who have jointly developed the estate to become joint owners of the land settlement. The 1967 Income Tax Act was amended in 1991 to allow married women to have separate assessment from their husband if they chose to. Presently, women taxpayers whose husbands have no taxable income are eligible for taxable relief similar to a male taxpayer whose wife has no taxable income.

In the form of an administrative order, Malaysia undertook several amendments to assist Malaysian women who are married to foreign men. Under the Immigration Circular No. 7, 2007, foreign men married to Malaysian women are allowed to stay in the country for five years (up from one year previously). Foreign women who are divorced or separated from Malaysian husbands after settling in Malaysia can also apply for a social basis pass on a five year basis. In 1999, Malaysia amended the Guardianship of Infant Act 1961 to allow for joint guardianship of children in matters relating to immigration and registration. An administrative order in September 2000 allowed Muslim women to exercise their guardianship rights. In April 2010, Malaysia also allowed Malaysian women married to foreign husbands to administratively apply for citizenship for their children born overseas¹³².

¹³¹ MWFC (2014) *Malaysia Progress Report on the Implementation of the Beijing Declaration and Platform for Action and the Outcomes of the 23rd Special Session of the General Assembly (2000)*.

¹³² Malaysia. Ministry of Women, Family and Community Development

National policies and plans: Malaysia showed its intention to fully integrate women into national development through the adoption of the National Policy on Women 1989. The Policy was aimed to ensure equitable sharing of resources, information, opportunities and the benefits of development between women and men. A visible impact from the Policy was the inclusion of Women in Development as a standalone chapter in the Sixth Malaysia Plan (1991-1995). To operationalise the Policy, an Action Plan for the Advancement of Women was developed in 1992 and reformulated after the 1995 Beijing Conference to integrate strategies from the Platform of Action¹³³. In 2009, the National Policy on Women was reviewed and a new policy and its accompanying plan was adopted. Additionally, the Ministry of Women, Family and Community Development was established in 2001 to address women's empowerment as well as gender and development issues; in 2003, Malaysia adopted the National Social Policy that envisioned every individual to develop his or her optimum potential in a healthy social environment.

Improving the socioeconomic standing of women:

As the structure of Malaysia's economy changed, the nature of women's employment also changed. These shifts have largely been enabled through increased education and training. Various programmes were initiated including microcredit schemes, women entrepreneurship programmes, as well as tax incentives to retain, retrain and re-employ women who have been out of the workforce as described below.

- *Encouraging entrepreneurship amongst women:* To foster greater entrepreneurship amongst women, several supporting agencies such as SMECorp., Perbadanan Usahawan Nasional Berhad, TEKUN, Amanah Ikhtiar Malaysia and other players in the corporate sector have collaborated to encourage business based on models such as start-up company, cooperative, microfranchising, franchising, online business and crowdsourcing for women entrepreneurs both in urban and rural settings. This collaboration is to be further strengthened by focusing on niche areas and premium industries such as knowledge-based industries. Other than just focusing on capital, women entrepreneurship will also be supported with coaching and mentoring programme to encourage businesses to sustain and grow bigger.
- *Retaining women in the workforce and encouraging female labour force participation:* The online portal of *flexWorkLife.my*, which was created to help women return to the labour force, contains a repository of best practices on flexible work arrangements and implementation guidelines, a link to a job board, which offers flexible jobs, information on grants and incentives, amongst others. The Housewives Enhancement and Reactivate Talents Scheme was also launched to educate homemakers/housewives in the latent workforce and to teach them new skills that would enable them to work from home; Other key initiatives include: Women Taxi Drivers Program; 1Malaysia Support for Housewives; and the Get Malaysian Business Online initiative to incentivize small, local businesses to have web presence. A Career Comeback Programme was also launched at the end of 2014 specifically to target professional and semi-professional women who had previously left the labour force but were interested to return.

¹³³ Malaysia's MDGR 2005 provides more detailed explanation of the early development of strategies and programmes under various Malaysia Plans for the advancement of women in development.

Other than providing avenues for work and professional development, the government concentrated on developing support mechanisms for families especially women in terms of the provision of quality and affordable childcare centres in communities and at workplaces by providing subsidies to parents of special cohorts, childcare providers and carers as well as tax deductions for employers who provide childcare services at workplaces. As of May 2015, a total of 3,887 new childcare centres were registered and 250 caregivers had attended PERMATA Early Child Care and Education Course. In order to enhance childcare centre's services, the government through PERMATA had developed the Star Rating System¹³⁴ and will be adopting the system in January 2016.

Supporting the social advancement of women:

To further support women in pursuing their own advancement, Malaysia also applied the National Blue Ocean Strategy (NBOS) into initiatives for Advancement of Women. This included the 1Malaysia Women's Initiative for Self-Empowerment that was initiated to support women socially and economically (NBOS 7); and the Komuniti PERWANI 1 Malaysia, which is a networking group for women (NBOS 8). The objective of the group is to function as a transformation agent in community. Additionally, Malaysia has pursued the target of 30 per cent women representation in the public and corporate sectors as described earlier. Other than that the government will encourage political parties and state governments to increase women participation such as at the candidacy level and as members of supreme council as well as task women with responsibilities that are not traditional such as welfare. The government will continue to provide platforms for awareness, training and advocacy to both men and women.

Increasing legal protection against gender-based violence:

Gender-based violence was recognised for the first time as a constraint to women in participating in development in the Sixth Malaysia Plan (1991-1995). A Plan of Action for the Advancement of Women was approved in 1996, and eliminating violence against women became a national priority¹³⁵. In fact, Malaysia was amongst the first states in the Asian region to adopt a law on violence viz. the Domestic Violence Act 1994¹³⁶. The Act that came into force in 1996 gave recognition to domestic violence and led to the proper police records of such cases. This Act was amended in 2011 to expand the definition of domestic violence from physical abuse to also include emotional, mental and psychological abuse.

The Penal Code was also amended in 1989 and 2006, which led to stiffer punishment of incest and rape. As for sexual harassment, the Employment Act 1955 was amended in 2012 to address the issue of sexual harassment in the workplace. This section empowers the Director General of Labour to direct the employer to establish internal mechanisms at work and to investigate cases related to sexual harassment. Prior to 2012, the Ministry of Human Resources had also issued the Code of Practices on the Prevention and Handling of Sexual Harassment in the workplace in 1999 and a guideline on Handling Sexual Harassment at the Workplace in the Public Sector was established by the Public Services Department in 2005 to eradicate such harassment.

On the front of human trafficking, the Anti-trafficking in Persons Act (ATIP) 2007, which stipulated that trafficked victims will not be prosecuted for illegal entry or charged with entering the country illegally with fraudulent documents provided by traffickers was passed in 2007¹³⁷. ATIP 2007 was amended in 2010 and known as Anti-Trafficking in Persons and Anti-Smuggling of Migrants Act 2007. This legislation was further amended in 2014. The amendment inter alia is on the protection aspect of victims of trafficking in persons.

¹³⁴ The Star Rating System will assess the childcare centres registered with Department of Social Welfare (DSW) as well as childcare centres under Ministry of Rural and Regional Development and Department of National Unity and Integration.

¹³⁵ UNFPA (2010) Health Sector Response to Gender-based Violence Case Studies of the Asia Pacific Region.

¹³⁶ Ibid.

¹³⁷ MWFC (2014) Malaysia Progress Report on the Implementation of the Beijing Declaration and Platform for Action and the Outcomes of the 23rd Special Session of the General Assembly (2000) provides detailed description of the series of legal developments made for the advancement of women.

Increasing public awareness on gender-based violence: Malaysia launched an awareness campaign, *End Violence against Women*, in 2001 to promote the community's role in preventing violence and providing early intervention and support to victims¹³⁸. This joint campaign amongst government agencies, NGOs and the media has been extended to 90 days as of 2014. Legal literacy programmes are held nationwide to increase the community knowledge and awareness in women rights relating to marital issues, divorce alimony, sexual harassment, rape, outrage of decency and exploitations from drug trafficking syndicates and job agency frauds. In 2015, gender awareness was added to the legal literacy programme.

Increasing infrastructure to manage victims of violence: In a bid to increase the reporting of acts or suspicion of domestic violence, human trafficking and child abuse, the Ministry of Women, Family and Community Development set up a dedicated line called *Talian Nur 15999* in 2007 for the public to report and ensure immediate action. On 30 May 2015, this dedicated line was renamed *Talian Kasih 15999*. From 2008 to October 2013, a total of 765 complaints of domestic violence were received through *Talian Nur 15999* and investigated by the Department of Social Welfare. A total of 40 safe houses have also been provided. Of this total, 32 institutions are managed by the Department of Social Welfare in all states and two federal territories, while another eight institutions are distributed across six states and are managed by NGOs¹³⁹.

Initiated by the National Council of Women's Organizations, (NCWO) in the late 1980s the MOH with the cooperation of the Royal Malaysian Police established one-stop crisis centres (OSCC) in all state hospitals with the aim of providing integrated services to victims of gender-based violence at the same location. Apart from therapeutic and medical interventions, the OSCC provide multi-level crisis intervention, counselling and emotional support, temporary shelters and legal assistance. Cooperation by various government agencies and NGOs is the fundamental basis for OSCC. As of 2015, there are 132 hospitals with OSCC across the nation in every state and federal territory. Along with this intervention, with the support of the Commonwealth Secretariat, the NCWO facilitated sensitivity training for the police in the handling of rape cases in partnership with the Royal Mounted Police of Canada in the late 1980s. In conjunction with this, a dedicated rape investigation unit was set up within the Royal Malaysian Police and a standardised rape investigation kit was developed with assistance from the Royal Mounted Police of Canada.

The MOH also launched the Violence and Injury Prevention Programme within the Ministry to increase and strengthen prevention activities including developing a database for domestic violence, rape and sodomy as well as carrying out gender sensitisation training for health personnel to recognise, report and treat victims of gender-based violence¹⁴⁰. Additionally, the Ministry of Women, Family and Community Development is working with women's groups to develop detailed standard operating protocols for each agency in order to ensure uniform and professional response by all agencies that respond to victims. This exercise is called the "Working Together Document" and will be completed by the end of 2015.

¹³⁸ Ibid.

¹³⁹ For the eight safe houses handled by NGOs, there are two in Sabah, two in Perak and one each in Pahang, Johor, Selangor and Penang.

¹⁴⁰ UNFPA (2010) *Health Sector Response to Gender-based Violence Case Studies of the Asia Pacific Region*.

Remaining issues

Bearing in mind the current situation of gender equality and women empowerment in Malaysia and the efforts that have been put in, this subsection explores the remaining and emerging issues that should be considered.

Social construction of gender relations and social expectations: Societal expectations and perceptions continue to influence the behaviour of women and men that can, in turn, impact development outcomes. Based on the information presented in this chapter, gender-based segregation, such as in education streams and occupations; disparities, such as the gender wage gap and in political participation; and violence continue to exist in Malaysia despite the progress that has been made. Gender equality should be mainstreamed in all areas of development, institutions, plans and policies. In order to do so, breaking these perceptions and presumptions is a key challenge that remains to be addressed.

Female labour force participation: Labour force participation is an important component for empowering women given that it improves the autonomy of women, their self-reliance within the household and provides an avenue for personal development and decision-making. Additionally, harnessing the labour force potential of women is important to reduce the vulnerability of households towards shocks and disasters that may impact their economic status and well-being. Increasing female labour force participation, facilitating return and employee retention are therefore remaining issues. It is consistent with the CEDAW provisions (Article 4.1) on women's participation in the labour force.

While the government of Malaysia has been making commendable strides towards family-friendly practices in employment, the sharing of responsibilities (including care needs) still need to be further promoted. Provision of care should be taken when promoting part-time and *flexiwork* arrangements amongst women as these arrangements may in turn reinforce gender divisions at home, and so strategies must be adopted to challenge the prevailing assumption that only women should shoulder the greater burden at home. If women labour force participation is to increase, the empowerment of men to share the responsibilities of the family will be important. Aspects like care leave for men, paternity leave, and *flexiwork* arrangements are remaining areas to pursue in order to lessen the rigidity in the formal labour market. Nonetheless, infrastructural improvements, such as establishing accessible and affordable care services of good quality and improved transportation and mobility, still need to be increased to provide the option for both men and women to be in the workforce, if they so choose¹⁴¹.

¹⁴¹ *Ibid.*

Better capturing of data and information: Better data and information that are disaggregated by gender is critical to enable the formulation and implementation of better policies and plans to support women and their families in the formal and informal sector. This includes data from monitoring and evaluating existing plans and policies. An example where gender-disaggregated data would be useful is in the planning of infrastructural improvements. As mentioned above, accessibility to services, work and home as well as mobility can have a profound impact on how people share responsibilities. By understanding how space and travel needs differ between genders, better infrastructure can be put in place to support them.

Women in decision-making levels and social participation: This is an issue that remains to be addressed given that women representation in the country's political, public and corporate spheres is still lagging compared to regional peers and other developed nations. In fact, this aspect of women empowerment has lowered Malaysia's standing in various gender indexes. On political participation, institutions such as local authorities and political parties need to be further encouraged to better identify, train, empower and involve capable women leaders in their organisations. Similarly, efforts made in the public and corporate sectors need to be sustained in order to continue Malaysia's progress towards better gender balance and diversity at decision-making levels.

Gender-based violence: Addressing gender-based violence is a remaining issue for Malaysia where there is still an average of 3,000 rape cases and close to 4,000 domestic violence cases reported each year¹⁴², and bearing in mind that these figures could be underreported. Such violence can have significant impact on children who witness these events including displays of aggressive or timid behaviours, having frequent nightmares and the increased risk of becoming abusers in the future¹⁴³.

While Malaysia has increased its legal provisions and infrastructure to handle gender-based violence, prosecution rates and reporting rates are still low. An evaluation of the OSCC in 2010¹⁴⁴ also shows that there is much room for improvement in terms of handling of survivors. In particular, the OSCC has challenges in gender-sensitising health workers on how to handle survivors and in sustaining the multi-stakeholder cooperation and services in the long run. These aspects still need to be better addressed.

Additionally, some victims do not seek help because they perceive that violence is normal, that no one would believe them or that they are scared of losing their children. Such perceptions need to be changed and men play equally significant roles in breaking those perceptions. One other aspect of violence that hasn't been fully considered is the issue of control and regulation of women's bodies. The portrayal of women in the media has been increasingly negative, with cases of public shaming of how women dress or behave emerging more frequently, especially on social media. The media's portrayal of women is therefore an important remaining issue to pursue as well.

¹⁴² Royal Malaysia Police and Ministry of Women, Family and Community Development. Obtained from Women's Aid Organisation at http://www.wao.org.my/Police+Statistics+on+Violence+Against+Women+2000-2012_99_6_1.htm#sthash.VSgUWZo9.IG84DdRr.dpuf

¹⁴³ USM KANITA and UNFPA (2014) A country level study on women's wellbeing and domestic violence against women (DVAW) using WHO multi-country questionnaire, Executive summary.

¹⁴⁴ UNFPA (2010) Health Sector Response to Gender-based Violence Case Studies of the Asia Pacific Region.

Emerging areas

Access of women to legal support and justice:

Another aspect that remains to be an issue for future empowerment of women is the access of women to legal support and justice. This aspect has yet to be considered under MDG 3, but it is very important to secure rights, entitlements, assets and guardianship and other human rights of women. On this front, legal provisions, awareness amongst women of their legal rights and the infrastructure that allows women to access legal support are important factors that contribute to women's access to legal support and justice.

In Malaysia, *Jabatan Bantuan Guaman* provides free legal services for noncriminal matters for both *Syariah* and civil law cases especially for those from lower socioeconomic backgrounds (household income <RM25,000 annually). Based on their statistics, the number of advisory services (*Khidmat Nasihat*) has been increasing from 34,454 cases in 2012 to 42,153 cases in 2014. Of this, approximately 67 per cent of advisory services are sought by females. In the same time period, the number of cases filed (*Daftar Kes*) has also increased from 16,453 cases to 18,104 cases. Again, the majority of cases filed has been from females (70–75 per cent). Based on the breakdown by types of cases filed, the majority are *Syariah* family cases (50–60 per cent) followed by civil family cases (25–30 per cent), crime (3 per cent) and other civil cases (13–18 per cent).

These statistics suggest that there are significant numbers of women seeking legal services and being provided with the necessary support to obtain them. However, little is known on the enforcement of the court rulings, in particular in the civil courts. For *Syariah* courts, the *Syariah* Judicial Department Malaysia established the Family Support Division on 22 September 2008 to assist enforcement of maintenance order issued against the husband by the *Syariah* Court for the wife and children. The establishment of the Family Support Division facilitates the wife and children to receive the maintenance as ordered by the court. Meanwhile, if there is any difficulty in the enforcement of maintenance orders, the Family Support Division will temporarily provide for financial assistance. Between 2000 and 2014, the Family Support Division registered 4,259 cases under the Legal Advice Unit with 95.7 per cent of cases solved, while the Enforcement and Implementation of Order Unit registered 2,608 cases of which 63.3 per cent were solved¹⁴⁵. Such frameworks may need to be further explored as it is an important component for allowing women to access justice and exercise their rights. Furthermore, the collection of gender-disaggregated data is vital to ensure that the government is able to accurately evaluate women's access to justice.

Underage marriages and pregnancies: Underage marriages may or may not be linked to gender-based violence. Underage marriages can be approved legally or through customary engagements. In Malaysia, non-Muslims are able to marry when they reach 18 years of age, although non-Muslim females between the ages of 16 and 18 can marry with the authorisation of the Chief Minister. For Muslims, the minimum age of marriage is 16 years for females and 18 for males, with an exception that permits Muslim girls and boys below these ages to marry with the *Syariah* Court's consent.

¹⁴⁵ Malaysia. *Syariah Judicial Department Malaysia*, 2015.

Based on the statistics from the Malaysian Population Census of 2000 and 2010, underage marriages have increased. The 2000 Population Census reported that 1.2 per cent of married women in Malaysia or 53,261 women were aged between 15 and 19 years. In addition, an estimated 6,800 girls below the age of 15 were recorded as married. The 2010 Population Census reported that 82,382 women, constituting 1.4 per cent of married women in Malaysia, were aged between 15 and 19 years and that 73,428 married men, 1.2 per cent of all married men, were between 15 and 19 years of age. The Census, however, did not yield any figure for married women below the age of 15 years.¹⁴⁶

Additionally, health registration statistics of teenage mothers who go for antenatal screenings at public health facilities (see MDG 5 chapter) do shed some light on underage marriages and pregnancies. They show that there were more than 18,000 antenatal visits for teenage mothers in 2011 and 2012¹⁴⁷. This translates to about 4 per cent of all new antenatal cases and 0.7 per cent of females aged 10–19 who are pregnant in each year. Of this, 78 per cent claimed to be married, hence implying that 0.5 per cent of the female population aged 10–19 were essentially married and pregnant¹⁴⁸.

The concern for this is linked to child and maternal health as described in MDG 5. Indeed, the proportion of rape by boys below age 18 has increased to 20 per cent as of 2013, while about half the total rape victims in Malaysia were aged 16 and below. These statistics warrant further investigation as it can potentially undermine the advancement of young women and men in development. Existing reproductive health information with an emphasis on mutual respect of both genders in the school curriculum needs to be enhanced.

Men and boys in gender equality: As Malaysia continues to make progress towards empowering women, it is important that men and boys are also given due consideration under the broader context of gender equality. This is because the dynamics between males and females will inevitably affect one another. One issue to consider is the underperformance of boys in higher levels of education and the implications that this will have on society.

CONCLUSION

Malaysia has done well to advance the development of women in a scope that runs beyond the three indicators under MDG 3. Strictly speaking, Malaysia has achieved two out of the three MDG indicators with the exception being the political representation of women. However, there remains much to do to fully empower women and achieve gender equality for men and women alike. Given the wide implications of gender on other aspects of development, the main challenge that remains is addressing women's concerns in a manner that acknowledges their evolving and multiple socioeconomic roles in a rapidly changing environment.

¹⁴⁶ Malaysia, Department of Statistics, *Population Census 2000 and 2010*.

¹⁴⁷ Ministry of Health only began to disaggregate the antenatal care data by age group of mothers in 2010.

¹⁴⁸ Data on teenage pregnancies from Malaysia Ministry of Health. Annual Report, 2011 and 2012. Data on population of females aged 10 to 19 from Malaysia, Department of Statistics, Population Quick Info Portal, 2015.

ANNEX 3.1

TARGETS AND INDICATORS

Millennium Development Goal 3 (MDG 3) has a single target of eliminating gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015. Despite being very specific to gender equality in education, the indicators under MDG 3 include economic and political spheres. This recognises that eliminating disparities in education alone will be insufficient to fully empower women. In total, three indicators are used to monitor MDG 3 as follows:

Table 3.10:
MDG 3 Target and Indicators¹⁴⁹

Target		Indicators	Notes
Target 3a: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1	Ratios of girls to boys in primary, secondary and tertiary education or Gender Parity Index (GPI)	The ratio of Gross Enrolment Ratio (GER) of girls to boys, at each level of education. The ratio of rates is used to standardise for different sex ratios at birth. A GPI of 1 indicates parity between the sexes. A GPI lower than 1 indicates a disparity in favour of boys and vice versa. This indicator measures gender parity in access and participation of education, which is the first step towards gender equality in education. Eliminating gender disparities at all levels of education improves women's well-being, position in family and society, economic opportunities and returns, political participation and health, including that of her children and family.
	3.2	Share of women in wage employment in the non-agricultural sector	This is a measure of the degree to which women have equal access to paid employment in non-agriculture sectors. This reflects the integration of women into the monetary economy while benefiting from a more regular and largely monetary income. This in turn would be expected to improve women's autonomy, self-reliance within the household and enhance personal development and decision-making power. The indicator also reflects the degree to which labour markets are open to women in industry and services sectors, which affects not only equal employment opportunity for women, but also economic efficiency through flexibility of the labour market and the economy's capacity to adapt to changes over time.
	3.3	Proportion of seats held by women in national parliament	The number of seats held by women expressed as a percentage of total occupied seats. Representation of women in national Parliament is one aspect of women's opportunities in political public life. This indicator is therefore closely linked to empowerment of women. Increasing the presence of women allows new concerns to be highlighted on political agendas, and new priorities to be put into practice through the adoption and implementation of policies and laws.

¹⁴⁹ United Nations, *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*. Version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.ashx>, accessed on 18 May 2015.

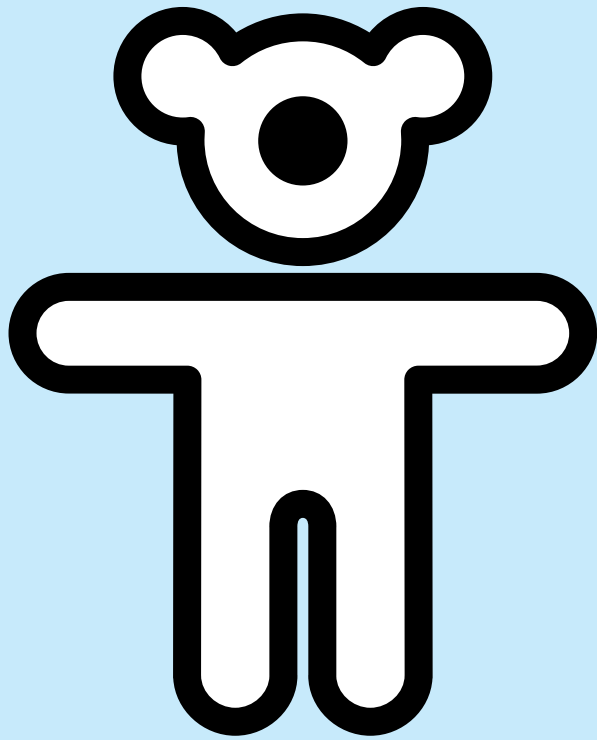
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MDG 4



**REDUCE CHILD
MORTALITY**

INTRODUCTION

The fourth Millennium Development Goal (MDG 4) has one target:

- Reduce by two thirds, between 1990 and 2015, the under-five mortality rate



MDG 4 calls for reducing by two thirds the mortality rate of children under the age of five between 1990 and 2015. Child mortality is an important measure of child well-being. It not only reflects the child's health and nutritional status but also the coverage of interventions promoting child survival and the quality of care received by women before, during and after pregnancy – important elements for better child health outcomes.

Reducing child mortality and improving the well-being of children have always been part of Malaysia's national development goals. Prior to the adoption of the MDGs, the country had already reduced under-five mortality rate (U5MR) by more than 75 per cent and infant mortality rate (IMR) by 70 per cent since 1965. Thus, Malaysia had a head start in child mortality interventions before most other middle-income countries.

Malaysia's child mortality rates have reached levels comparable to that of high income and developed nations. With an already low rate, it is challenging for Malaysia to achieve a two thirds reduction by 2015¹⁵⁰. Equally significant, these low rates have been sustained for more than a decade. Although Malaysia is unlikely to meet a two thirds reduction by 2015, good progress has been made to reduce child mortality. Moving forward, it is important to understand Malaysia's achievements and the factors behind them, describe the scenario in which this MDG will reach an end and their relations to the future development agenda.

¹⁵⁰ Given that Malaysia's 1990 under-five mortality rate (U5MR) and infant mortality rate (IMR) was 16.8 and 13.1, respectively, per 1,000 live births (LBs), a two third reduction of these rates by 2015 would require U5MR to be 5.6 per 1,000 LBs and IMR to be 4.3 per 1,000 LBs in 2015. As of 2013, the average for high income nations for U5MR is 6 per 1,000 LBs and for IMR is 5 per 1,000 LBs.

TRENDS IN CHILD MORTALITY

Under-five and infant mortality rates

As early as the First Malaysia Plan (1966-1970), Malaysia recognised the importance of reducing child mortality. Between 1965 and 1990, Malaysia reduced the under five mortality rate (U5MR) from 70.2 to 16.8 per 1,000 live births. In that same period, the infant mortality rate (IMR) dropped from 48.5 to 13.1 per 1,000 live births. There have been more than 75 per cent reduction of U5MR and 70 per cent reduction of IMR over a period of 25 years (**Figure 4.1**). As of 1990, Malaysia was essentially doing much better than most developing countries and even upper middle-income countries whose U5MR averages were at 100 and 54 per 1,000 live births, respectively, (**Table 4.1**).

Building on these achievements, Malaysia has continued to reduce child mortality rates even further. Low child mortality rates have been sustained for more than a decade since 2000 when U5MR reached 8.9 per 1,000 live births (**Figure 4.1**). Despite these low rates, Malaysia has continued to push child mortality rates even lower: the U5MR and IMR rates were, respectively, reduced to 7.6 and 6.2 per 1,000 live births in 2012. This translates to a reduction of more than half the 1990 levels but still falls short of the two thirds target (**Table 4.1**). Globally, the vast majority of child deaths occur in the first year of life. This scenario is also reflected in Malaysia.

Table 4.1:
Under-five mortality rates and infant mortality rates of Malaysia by selected MDGs and World Bank regions, 1990, 2012 and 2013

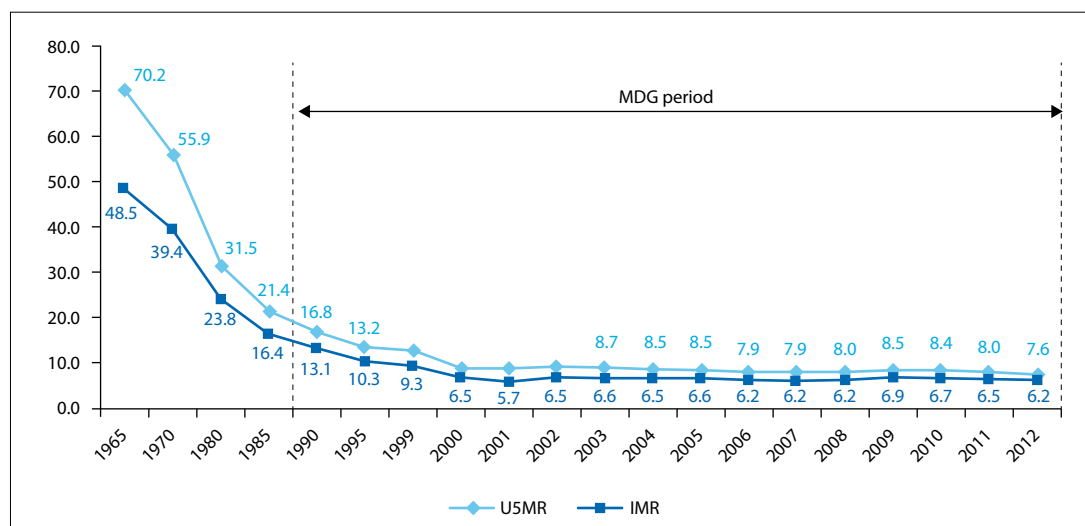
Mortality rates (per 1,000 live births)	Under five		Infant	
	1990	2012 & 2013	1990	2012 & 2013
Malaysia	16.8	7.6*	13.1	6.2*
MDG regions				
Developing	100	50	69	37
Developed	15	6	12	5
World Bank regions				
Upper middle income	54	20	43	16
High income	14	6	12	5

*Note: The rates for Malaysia are for 2012, while the rates for the MDG and World Bank regions are for 2013.

Source: 1. DOSM, Vital Statistics (Malaysia rates)

2. UNICEF, Levels and Trends in Child Mortality Report 2014: Estimates by the UN Interagency Group for Child Mortality Estimation (Regional rates)

Figure 4.1:
Under-five and infant mortality rates, 1965–2012p (per 1,000 live births)



Note: 2012p, preliminary data for 2012

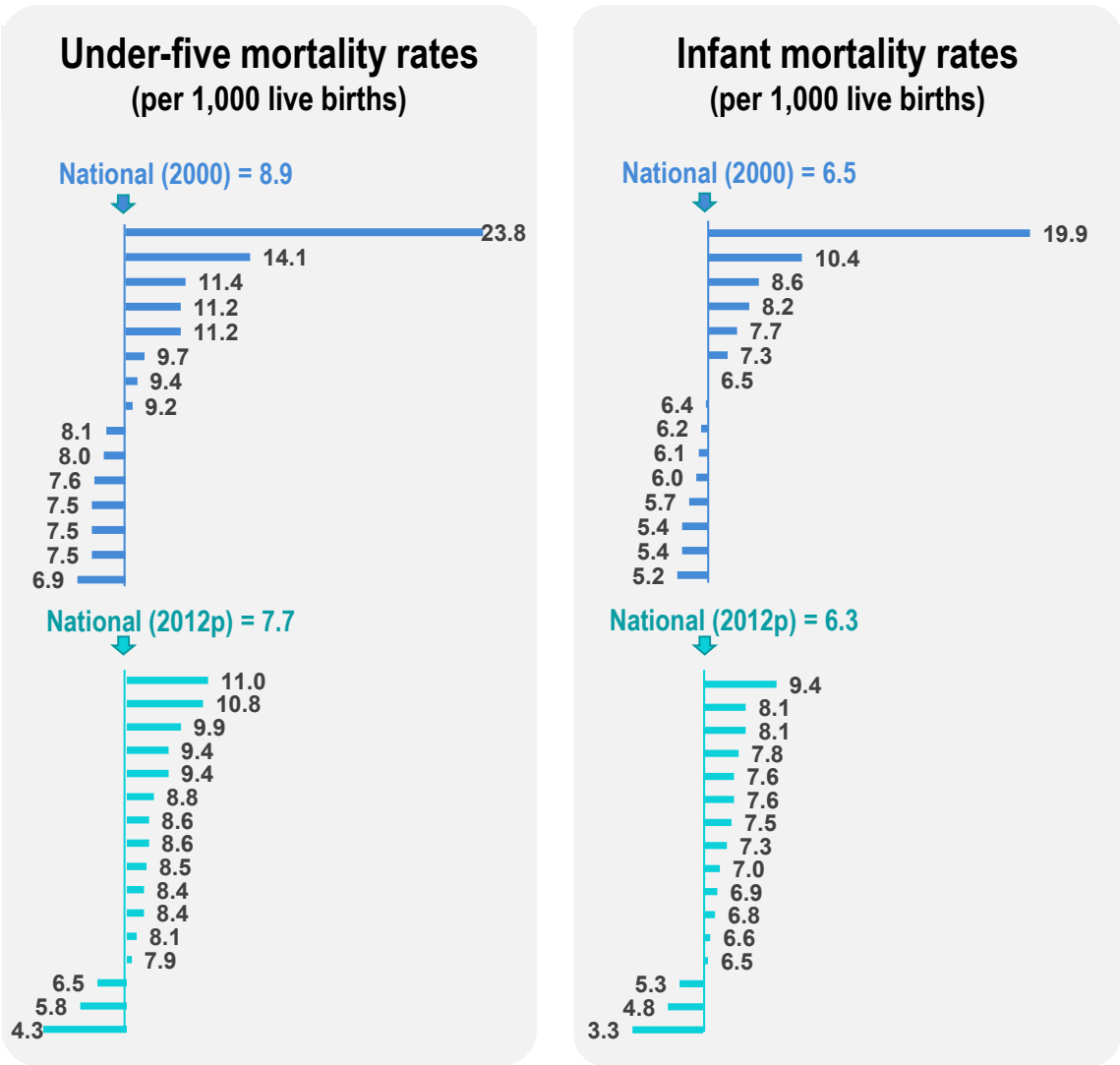
Source: Malaysia, Department of Statistics, Vital Statistics, various years.

The achievements in U5MR and IMR have also been replicated at the state level (**Figure 4.2**). In 2000, most states had U5MR below 10 per 1,000 live births. However, there were still discrepancies between states, with Kelantan, Pahang, Perlis and Kedah as well as WP Labuan having noticeably higher U5MR rates ranging from 11.2 to 23.8 per 1,000 live births.

By 2007, this range had reduced to between 10.8 and 12.1 per 1,000 live births for Kelantan, Pahang, Terengganu and WP Labuan, while other states maintained U5MR of less than 10 per 1,000 live births (reported in MDGR 2010). As of 2012, the majority of states now have U5MR below 9 per 1,000 live births and for those above this rate, the range has further declined to 9.4 to 11.0 per 1,000 live births.

As for IMR, Malaysia still saw a small decrease in national rates despite quite a number of states reporting higher IMR in 2012 compared to 2000. As shown in **Figure 4.2**, this is likely to reflect the fact that all states had achieved IMR lower than 10 per 1,000 live births in 2012, with the majority being below 8 per 1,000 live births.

Figure 4.2:
State and national U5MR and IMR, 2000 and 2012 (per 1,000 live births)



Note: The graphs have been arranged so that the largest figure is at the top of the graph and not arranged by a specific sequence of states. The graph shows the distance between state and national rates; the narrower the spread, the smaller the disparities are between states and between state and national achievements.
Source: Generated from Malaysia, Department of Statistics, Vital Statistics, selected years. (U5MR and IMR data by state)

Proportion of one-year-olds immunised

% 1-year-olds
immunised
(measles, mumps, rubella)

1990	2008	2013p
70%	94.3%	95.2%

Amongst childhood vaccine-preventable diseases, measles is a leading cause of child deaths globally. Recognising the benefits of immunisation, Malaysia has invested significant amounts of time, effort and attention towards increasing the immunisation coverage to prevent childhood target diseases. In 1983, Malaysia first introduced the measles vaccine into the national immunisation programme. By 1990 (base year for MDG 4), 70 per cent of one-year-olds in Malaysia had been vaccinated against measles. In 2002, Malaysia initiated the use of a combined vaccine for measles, mumps and rubella (MMR) to replace the monovalent measles and monovalent rubella vaccines, and to begin immunisation against mumps.

Initially, the impact of MMR was slow in part due to vaccine supply problems and some girls who may have missed vaccination of the rubella vaccine¹⁵¹. In 2004, MMR immunisation coverage for one-year-olds was 33 per cent nationally with significant discrepancies between states. At the time, only Melaka, Perlis and Sarawak recorded more than 70 per cent coverage¹⁵².

By 2008, these issues were resolved and 94 per cent coverage was achieved. As of 2013, the MMR immunisation coverage for one-year-olds in Malaysia had further increased to 95 per cent. This translated to a 62 per cent increase in MMR coverage since 2004. At state level, four states had percentage coverage below 90 per cent as of 2012, namely Kedah, Kelantan, Pahang and Perlis. However, there were also five states (Melaka, Perak, P. Pinang, Sarawak and Selangor) and one federal territory (Putrajaya) where immunisation coverage exceeded 100 per cent¹⁵³, possibly due to immunisation services being given to children from other states or children of non-citizens and/or inaccuracies in immunisation reports from the private sector, as there is no audit mechanism to check the accuracy of the reports made.

Overall, Malaysia has done well to ensure a high percentage of vaccination coverage at national and state levels over the period of 1990 to 2013. The robustness of the healthcare system in delivering vaccination services was demonstrated when Malaysia switched to using the MMR vaccine in 2002 and still achieved high coverage in the first few years that followed. The introduction of newer vaccines to prevent diseases that cause childhood morbidity and mortality reflects the commitment of the government towards child well-being and survival. The vaccine against *Haemophilus influenzae type b* (Hib) disease was introduced into the Expanded Programme on Immunization (EPI), in 2002, when it was still relatively costly; a cost-benefit study showed that with the existing burden of disease, the vaccine was cost-effective.

¹⁵¹ WHO, Dr. Sigrun Roesel, Dr. Kaushik Banerjee (2008), *School Immunization Programme in Malaysia Mission Report, 24 February to 4 March 2008*

¹⁵² Malaysia, Department of Statistics, *Vital Statistics*. (Various years).

¹⁵³ Malaysia, Ministry of Health, *Health Indicators*. (Various years).

Other aspects of child mortality

For more insight into Malaysia's achievements in reducing child mortality, it is important to explore patterns relating to child death, place of death (hospital or non-hospital) and causes (clinical causes and as well as risk factors and determinants) of child death. Understanding these patterns is necessary to identify remaining issues in child mortality and to formulate better intervention strategies.

Child deaths

Based on standard definition used by the Ministry of Health¹⁵⁴, under-five child death essentially covers death occurring in the period between the first day of life (day 0) and less than five years of age. As illustrated in **Figure 4.3**, the under-five period comprises several important and distinct periods in which child death can occur. These include the infant period (day 0 till one year) within which there is the neonatal period (day 0 to 28 days) and the postneonatal period (28 days to one year). The neonatal period is further divided into the early neonatal period (day 0 to 6) and the late neonatal period (day 7 to 27 days)¹⁵⁵.

Examining the patterns relating to child deaths in these periods, it is clear that the majority of under-five deaths originate from infant deaths. In fact, there has been a gradual increase in the percentage of infant deaths. In 2001, infant deaths accounted for 66.7 per cent of all under-five deaths. This contribution increased to 78.3 per cent in 2008 and rose further to 81.6 per cent in 2012.

Globally, a large proportion of infant deaths, about 60 per cent, are neonatal deaths. In Malaysia, neonatal deaths account for 54 per cent of under-five deaths as of 2012. The contribution of neonatal deaths has also gradually increased over time. In 2001, neonatal deaths accounted for 42 per cent of all under-five deaths.

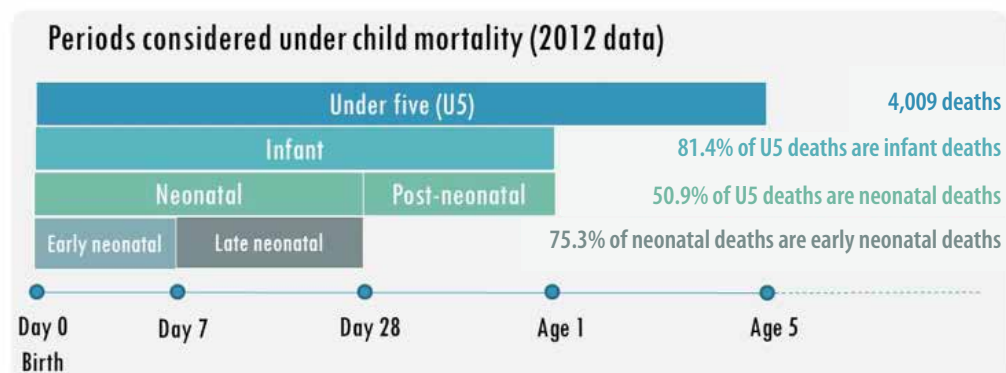
Examining neonatal deaths in greater detail, it is apparent that most neonatal deaths occur within the first week of life (early neonatal). Early neonatal deaths accounted for 76 per cent of all neonatal deaths in 2008 and 78 per cent in 2012¹⁵⁶. These patterns warrant greater attention in order to further reduce U5MR. They underscore the need for strengthening perinatal (including intranatal) and early neonatal care; as has been highlighted by the WHO platform "Every Newborn: An Action Plan to End Preventable Deaths" introduced in 2013 by a global alliance initiated and coordinated by WHO, UNICEF, the Partnership for MCH, working together with several other partners.

¹⁵⁴ Malaysia, Ministry of Health, *Guideline for Stillbirth and Under five Mortality Reporting System*, July 2013

¹⁵⁵ The perinatal period is not included here as it takes into account both early neonatal deaths and stillbirths. Stillbirths are not counted as under-five deaths.

¹⁵⁶ Number of under-five, infant and neonatal deaths were obtained from Ministry of Health, *Health Indicators*, various years. Number of early and late neonatal deaths were obtained from Ministry of Health, Family Health Development Division upon request.

Figure 4.3:
Periods considered under child mortality and proportion of deaths occurring in these periods, 2012



Source: Malaysia, Department of Statistics, Vital Statistics

Box 4.1: Trends in neonatal mortality

Neonatal mortality refers to deaths occurring in the first 28 days of life after birth and is a distinct period within the infant period. Distinguishing it from the post-neonatal period is necessary because they stem from different causes.

Neonatal deaths are closely related to maternal health during pregnancy and to the circumstances of birth delivery, which includes the place of birth and the availability of services especially skilled health personnel to deliver the baby and to provide essential newborn care and, as might be needed, emergency obstetrics care. In contrast, post-neonatal deaths are due largely to socioeconomic and environmental factors that lead to the spread of infectious diseases and other poverty-related deaths. As reported in Malaysia's MDG 2005 Report, neonatal and post-neonatal deaths accounted for roughly the same proportion of infant deaths in 2000. As of 2012, this percentage contribution has now shifted to neonatal deaths contributing 65.7 per cent of all infant deaths.

Similar to the trends achieved for under-five and infant mortality rates, Malaysia had greatly reduced neonatal mortality rates even before the adoption of the MDGs. In 1970, neonatal mortality rates were at about 23 per 1,000 live births nationally. By 1990, this was more than halved to 8.4 per 1,000 live births, and this achievement was comparable to developed countries and high income nations at the time.

Between 1990 and 2007, neonatal mortality rates were again halved to 3.8 per 1,000 live births as reported in Malaysia's MDG 2010 Report. Since then, neonatal mortality rates have increased slightly to 4.0 as of 2012, showing the difficulty of further lowering the rate, which has reached such a low level. This rate is comparable to the rates reported by high income nations today. Again, these achievements of low neonatal mortality rates have been replicated at state levels and the disparities between states have reduced over time.

Table 4.2:
Neonatal mortality rates of Malaysia and selected MDG and World Bank regions, 1990, 2012 and 2013 (deaths per 1,000 live births)

Mortality rates (per 1,000 live births)	Neonatal	
	1990	2012 & 2013
Malaysia	8.4	4.0*
MDG regions		
Developing	36	22
Developed	8	3
World Bank regions		
Upper middle income	24	10
High income	8	4

*Note: The neonatal mortality rates for Malaysia are for 2012, while the rates for the MDG and World Bank regions are for 2013.

Source:

1. DOSM, Vital Statistics (Malaysia) and Ministry of Health

2. UNICEF, Levels and Trends in Child Mortality Report 2014: Estimates Developed by the UN Interagency Group for Child Mortality Estimation (Regional rates)

Place of death

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The place of death is used as an indication of whether medical care had been sought for and provided for the child's illnesses prior to death. In 1993, only 39 per cent of under-five deaths had occurred in hospitals. This has increased to 82.7 per cent as of 2012¹⁵⁷. Over time, a greater proportion of under-five deaths have occurred in hospitals.

% under-five deaths at hospitals

1993 2006 2012p
 39.3% → 76.7% → 82.7%

Cause of death

The leading causes of under-five deaths in Malaysia¹⁵⁸ by the ICD-10 classification are conditions from the perinatal period¹⁵⁹, followed by congenital malformations, deformations and chromosomal abnormalities. In 2012, the former contributed 32 per cent of the 4,176 under-five deaths recorded, while the latter contributed 22 per cent. In general, the leading causes of under-five deaths are unlikely to change by 2015. This is supported by the trends observed from government hospital records on top causes of under-five deaths between 2004 and 2012. Also, the interventions to prevent these leading causes are technically, economically and socially challenging.

¹⁵⁷ Malaysia, Ministry of Health, Family Health Development Division, 2014.

¹⁵⁸ Includes data from public and private hospitals.

¹⁵⁹ The standard definition in MOH's Guidelines for Stillbirth and Under-five Reporting System, July 2013 states that the perinatal period is the period after 22 weeks of pregnancy, birth and first 7 days of life.

It is to be noted that 'Injuries, poisoning and external causes' is the 5th leading cause of death in 2012. The prevalence of home injuries amongst children (less than 7 years old) was 8.2 per cent as reported in the National Health and Morbidity Survey 2011 report. Assessing the contribution of intentional abuse and neglect in causing these deaths is an important step forward to further lower child mortalities and improve child protection.

Figure 4.4:
Top causes for under-five and neonatal deaths, 2012p

Top causes of under-five deaths (2012p)		Top causes of neonatal deaths (2012p)	
Conditions from perinatal period	32.4%	Immaturity	36.5%
Congenital malformations/ deformations & chromosomal abnormalities	22.4%	Lethal congenital malformations	31.2%
Certain Infections & parasitic diseases	8.7%	Asphyxia	11.1%
Diseases of respiratory system	8.1%	Infection	9.2%
Injuries, poisoning & external causes	3.1%		

Note: The Wigglesworth classification of deaths is designed to be used for the perinatal period and hence applies to early neonatal deaths and not the whole neonatal period. It is used here since 79 per cent of neonatal deaths occur in the early neonatal period.

Source: Malaysia, Ministry of Health, Family Health Development Division, 2014 (provided upon request)

The top causes of neonatal deaths¹⁶⁰ in 2012 were immaturity or prematurity (36.5 per cent), lethal congenital malformations (31.2 per cent), asphyxia (11.1 per cent) and infection (9.2 per cent). These trends have remained largely the same over time and are unlikely to change by the end of the MDGs based on the difficulties of identifying and implementing interventions to prevent and manage them.

Immaturity or prematurity contributes between 700 and 800 deaths each year. Between 2008 and 2012, about 60 per cent to 65 per cent of deaths due to prematurity had birth weights of less than 1000 grams. Between 54.5 per cent and 63.7 per cent of these deaths occurred amongst the extreme preterm when the period of gestation was less than 28 weeks¹⁶¹. This situation reiterates the need to improve maternal health including perinatal

especially intranatal care so as to reduce early neonatal deaths. The global initiative "Every Newborn: An Action Plan to End Preventable Deaths" is an opportunity to address this problem.

There are still a number of child deaths for which the causes remain uncertain. For under-five deaths, the cause for 11 per cent is categorised as 'other', while for 2.6 per cent, the cause is 'unknown'. For neonatal deaths, the corresponding percentages are 8 per cent (other causes) and 3 per cent (unknown causes). Also, 4 to 6 per cent of under-five deaths are not certified by health personnel and this may lead to inaccuracies in identifying the cause of death. Tackling these uncertainties will become increasingly important for intervention planning in order to further lower child mortalities.

¹⁶⁰ The Wigglesworth classification of deaths is designed to be used for the perinatal period and hence applies to early neonatal deaths and not the whole neonatal period. Upon advice from MOH, it is used here since 79 per cent of neonatal deaths occur in the early neonatal period.

¹⁶¹ Malaysia, Ministry of Health, Family Health Development Division, 2014.

Child mortality among vulnerable groups

Vulnerable groups in Malaysia may include indigenous communities such as the Orang Asli in Peninsular Malaysia and Orang Asal of Sabah and Sarawak; the urban poor; and persons including children who are undocumented, stateless and refugees whose access to healthcare is often severely compromised.

In the case of Orang Asli, child mortality rates have been much higher than national levels. In 2009 and 2010, U5MR amongst Orang Asli was 24.4 and 22.1 per 1,000 live births, respectively¹⁶². In contrast, Malaysia's U5MR was merely 8.5 and 8.4 per 1,000 live births, respectively. By 2012, Orang Asli under five mortality rates had been further reduced to 21.7 per 1,000 live births¹⁶³, while Malaysia achieved 7.6 per 1,000 live births. Similarly,

IMR amongst Orang Asli was 12.3 and 17.2 per 1,000 live births for 2009 and 2010, respectively, while Malaysia's rate was 6.9 and 6.7 per 1,000 live births, respectively. As of 2012, Orang Asli infant mortality rates were 14.4 per 1,000 live births, while the national rate was 6.3 per 1,000 live births. As for immunisation, the coverage of Orang Asli children with MMR vaccine has reached 94.9 per cent as of 2012.

No statistics are available to determine outcomes for other vulnerable groups, although findings from the Confidential Enquiry into Maternal Deaths (CEMD) show that undocumented (migrant) mothers are at higher risk of maternal death and the link between maternal and child survival is well-known.

MOVING FORWARD

Factors behind Malaysia's child mortality trends

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Government's commitment: Malaysia's achievements in reducing child mortality have been a result of the systematic and purposeful approach that the nation has taken and the long-term commitment given to improving child health. To a large extent, it reflects the success in programmatic health interventions that were reinforced by other public sector programmes.

In the years prior to 2000, the overall development of the country's primary healthcare system allowed medical advances such as vaccines and oral rehydration for treatment of diarrhoea to become widely accessible, even in rural areas. Coupled with efforts to increase access to clean water, improved sanitation and better child nutrition, Malaysia greatly reduced deaths resulting from preventable or treatable childhood diseases and the risks of deaths due to malnutrition.

¹⁶² Malaysia. Ministry of Health, State Health Department.

¹⁶³ Malaysia. Ministry of Health, Unit Perkhidmatan Orang Asli. 2013, Obtained from UNDP-EPU-UNICEF Orang Asli National Development Plan Project Report, 2014.

Contribution of sociocultural determinants of child health:

Health including child health and survival is influenced by a host of secular nonhealth factors, or the range of sociocultural determinants of health. The reduction in child mortality has been contributed to by efforts to reduce poverty, increase literacy, empower women, provide modern transportation, and improve telecommunications and information, especially in rural areas¹⁶⁴. Poverty alleviation programmes of the government have led to better living conditions including housing, safe water and environmental sanitation, and better nutrition and food security.

Maternal and child health services: The availability of child health services and maternal care were also improved through an integrated Maternal and Child Health (MCH) programme and restructuring of the healthcare system. This system has an extensive network of health facilities supported by trained midwives and other health workers¹⁶⁵. Under this comprehensive programme, several specific initiatives have contributed to child survival, such as EPI, Integrated Management of Childhood Illness (IMCI), and young child feeding and nutrition, among others.

In 2000, the Ministry of Health introduced the IMCI approach into the healthcare system. The IMCI programme was implemented in stages in selected states, namely Pahang, Sabah, Sarawak and Kelantan. This change in approach recognised that children often suffer from more than one health condition at a given time. For example, acute gastroenteritis is aggravated by malnutrition.

With the IMCI approach, the well-being of the child was focussed on, instead of a single condition. The approach involved not only health facilities but also families and communities to implement both preventive and curative elements in promoting improved growth and reducing death, illness and disability in children under five years old¹⁶⁶. During the curriculum review in 2014, the IMCI module was proposed to be integrated into the basic training for medical assistants as part of the community health module.

The national immunisation programme became increasingly comprehensive over many decades. Diphtheria-pertussis-tetanus (DPT) vaccine was introduced in 1958, Bacille Calmette-Guérin (BCG) vaccine in 1962, oral poliovirus vaccine (OPV) in 1972, tetanus toxoid (TT) in 1974, measles vaccine in 1983, hepatitis B vaccine in 1989, and Hib and MMR vaccines in 2002. Moreover, the EPI achieved high vaccination coverage between 95 per cent and 98 per cent, an outcome of universal access and utilisation of life-saving healthcare services.

¹⁶⁴ These factors that compounded the effect of health interventions are closely linked to other MDGs. Reference can be made to other chapters in this report for more detail. Child nutrition and poverty reduction are linked to MDG 1, safe water and improved sanitation are in MDG 7, increasing literacy is in MDG 2, empowering women is in MDG 3, and improved telecommunications is in MDG 8.

¹⁶⁵ More detailed description of the enabling environment and key programmes that led to the systematic reduction of child mortality rates in the 1960s to 1990s is available at Malaysia's first Millennium Development Goals Report submitted in 2005.

¹⁶⁶ WHO, 2015.

Expanding the scope of MCH services: Malaysia has continued to improve and expand the interventions to provide better healthcare for children. With child deaths concentrating mainly in the early periods after birth, interventions before birth and immediately after birth were needed. In 2011, the MOH introduced pre-pregnancy care especially for high-risk women. This target group includes women with pre-existing medical conditions, such as diabetes and genetic diseases, and adolescents.

Responding to needs of indigenous and vulnerable children: With regards to vulnerable groups, there has been headway made with indigenous people. In the case of Orang Asli, the MOH in cooperation with the Department of Orang Asli Development (JAKOA) has been improving accessibility of healthcare amongst Orang Asli. In fact, responsibility for healthcare services for Orang Asli was handed to the MOH in 2012 with the aspiration of further improving their health status. Malaysia's MOH currently has an Orang Asli Health Unit dedicated to this vulnerable group.

As of 2013, the Ministry established 71 mobile clinics travelling by land, one mobile unit by waterways and one mobile unit by air (Flying Doctor Service) where Orang Asli communities are visited by healthcare staff on a scheduled basis. In addition there are three health clinics and a hospital with majority Orang Asli staff as available healthcare facilities. JAKOA complements this by providing the transportation services for Orang Asli patients and an accompanying person to reach a clinic and hospital on regular days. The Department also provides assistance in terms of transit centres, welfare services and special funds to pay for certain medical treatments¹⁶⁷.

Additionally, the Ministry has made efforts to improve communication with Orang Asli by conducting briefings with JAKOA for MOH staff on the Orang Asli customs and taboos, increasing the number of Orang Asli health staff, establishing health volunteer programmes among the community and disseminating health information in cooperation with Radio Asyik FM.

Ensuring adequate and reliable information: Having good and strategic information has always been key for Malaysia to take purposeful and systematic steps towards better health including reducing child mortality. As a move to keep better track of under-five deaths, the MOH implemented the System of Notification and Investigation for Under 5 Mortality in 2012. This was followed by the implementation of Stillbirth Notification in 2014 to ensure no duplication of reporting of stillbirths¹⁶⁸. In fact, MOH has implemented a new stillbirth and under-five mortality reporting format for notification (U5MR-N Pindaan 2013) and for investigation (SU5MR-I/2012) nationally since July 2013. The new reporting method has been implemented in both the public and private sectors to improve the surveillance of under-five mortality.

Also, to improve the certification of deaths according to the ICD-10, the MOH is collaborating with the Royal Malaysian Police to improve certification of deaths occurring outside hospitals. In 2014, there have been 1 per cent more deaths being certified by medical personnel in comparison to 2013. This would reduce potential misdiagnosis of the cause of death, which can have a profound effect on identification and implementing strategies and interventions to further reduce child mortality and achieve MDG 4.

¹⁶⁷ Malaysia. Ministry of Health. Unit Perkhidmatan Orang Asli. 2013. Obtained from UNDP-EPU-UNICEF Orang Asli National Development Plan Project Report, 2014.

¹⁶⁸ Stillbirths are not calculated as under-five deaths but are part of perinatal deaths.

Remaining Issues

Notwithstanding the efforts made and the achievements attained, Malaysia has several remaining issues to be addressed in the future human development agenda post-2015. It is critical that the “unfinished agenda” of the health-related MDGs including child survival do not “fall between the cracks” when the pillars of human development are identified and the new agenda is formulated.

Addressing perinatal and neonatal mortality:

Addressing perinatal and neonatal deaths, which contribute to the majority of under-five deaths is a priority, especially deaths due to prematurity. The 2012 WHO report “Born Too Soon: The Global Action Report on Preterm Births” can be a useful guide. There are issues related to the availability of services and technologies. Adequate neonatal intensive care units (NICUs) are needed, both as a team of healthcare providers including specialist doctors and specially trained nurses, and making available the needed equipment. Addressing high incidence of infection from NICUs is another area that remains. It would involve improving the skill of nurses to detect infections, the overcrowding conditions at hospitals and the maintenance of the machines used. Congenital malformations, the other leading cause of perinatal and early neonatal death, points to the need for strengthening and scaling up pre-pregnancy care including screening for high risk cases and the required post-screening interventions. These require sufficient funds and technologies and skilled manpower. In addition, such services will involve addressing moral and religious issues such as termination of pregnancy.

Improving the quality of reporting of child deaths:

There is the remaining issue relating to uncertain cause of deaths, especially deaths that are not certified by a medical personnel as well as inaccuracies in the certification of deaths even by a medical personnel. Besides the cause of death, it is also important to know the circumstances surrounding the death, such as access to and provision of treatment, and whether the death was preventable or avoidable. For example, some deaths may be preventable with certain technologies becoming readily available, but the availability itself is limited by other factors. This can be exemplified by the availability of antibiotics for severe pneumonia, and neonatal resuscitation for neonatal asphyxia and availability of paediatric cardiac surgery services for congenital heart disease. In addition, to further improve the quality and timeliness of the reporting, the use of ICT needs to be given top priority.

Addressing the nonhealth determinants of child health:

Nonhealth aspects that influence health outcomes are becoming increasingly important. For example, deaths due to injury, poisoning and other external causes such as drowning, abuse, and road accidents. It is also necessary to assess the contribution of response to child deaths caused by intentional abuse and neglect. Other issues are in wider context of sociocultural determinants especially poverty and the related issues of food security and adequate nutrition. As more women are going into the workforce, early childcare and safety should be given priority. Such issues are beyond the purview of the health sector and the MOH and will require much wider interagency collaboration and commitments.

Ensuring optimal maternal health: The well-being and health of the mother who bears and cares for the child is a well-known determinant of child survival. Solutions need to extend beyond technical interventions such as screening during pre-pregnancy care. This care needs to incorporate aspects such as reproductive health, family planning spacing and contraceptive use; healthy diet and physical activity; optimal psychological and psychosocial health. Social issues such as meeting the needs of working mothers including maternity benefits and childcare also need to be considered.

Addressing the needs of vulnerable children: Inequity faced by certain vulnerable groups has emerged as a major issue that remains to be addressed. These include children of Orang Asli in Peninsular Malaysia and children of indigenous people of Sabah and Sarawak who reside in difficult-to-reach remote areas and the urban poor. A vulnerable group that has emerged and is increasing in number in the past several years are children whose parents are undocumented, stateless or are refugees. For these children, limited access to healthcare is due in part to their status in the country and their socioeconomic background. While the Ministry of Health recognises the principle of not refusing healthcare to anyone who needs it, there are complex political and societal factors that pose as barriers for these parents and caretakers to access needed services for their child's survival. These factors may include language barriers, fear of being detained or deported, poverty that makes it hard to pay for the non-citizens fee at the public hospitals.

CONCLUSION

Malaysia has done well to reduce child mortality and has made good progress to achieve MDG 4. Even with relatively low mortality rates in 1990, Malaysia has managed to further reduce under-five, infant and neonatal mortality rates by more than half the 1990 levels. These low mortality rates were maintained for more than a decade. Notwithstanding this impressive progress, there are several issues that need to be addressed to further reduce under-five mortality, with more attention on preventable deaths. With optimal use of effective and affordable interventions, Malaysia can contribute to the global initiative to end preventable neonatal deaths.

ANNEX 4.1

TARGETS AND INDICATORS

Table 4.3:
MDG 4 Targets and indicators¹⁶⁹

Target		Indicator	Definition
Target 4a: Reduce under-five mortality rates by two thirds between 1990 and 2015	4.1	Under-five mortality rate (U5MR)	The probability of a child dying before reaching its fifth birthday and is expressed as a rate per 1,000 live births. This is a sensitive outcome indicator of the country's overall development and the health condition of all children under age 5. Under-five mortality levels are also influenced by poverty; education levels (especially of mothers); the availability, accessibility and quality of health services; environmental risks including safe water and sanitation; and nutrition. Also, the majority of deaths in childhood tend to occur before the age of 5 and U5MR accounts for more than 90 per cent of global mortality among children under age 18.
	4.2	Infant mortality rate (IMR)	The probability of an infant dying before reaching its first birthday and is expressed as a rate per 1,000 live births. Infant mortality is an important component of the under-five child mortality and is also reflective of the social, economic and environmental conditions in which children and others live. Infant mortality can be further disaggregated into the neonatal (first 28 days of life) and post-neonatal periods. The former reflects safe delivery and availability of infant resuscitation, while the latter is more influenced by nutrition and succumbing to infectious diseases.
	4.3	Proportion of one-year-olds immunised against measles	The percentage of children aged 12–23 months who received at least one dose of measles vaccine any time before the survey or before the age of 12 months. This indicator is important because it provides indication of the extent of coverage and the quality of the child healthcare system. Also, immunisation is an important component of reducing child mortality and measles is the leading cause of vaccine-preventable infectious diseases of childhood.

¹⁶⁹ United Nations, *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*. Version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.ashx>, accessed on 18 May 2015.

ANNEX 4.2

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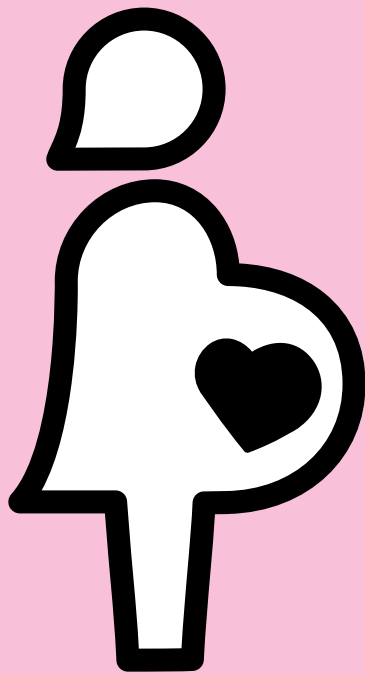
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MDG 5



**IMPROVE
MATERNAL HEALTH**

INTRODUCTION

The fifth Millennium Development Goal (MDG 5) has two targets:

- Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
- Achieve, by 2015, universal access to reproductive health



Maternal health has gained international attention since the WHO Safe Motherhood Initiative launched in 1987. Later, sexual and reproductive health and rights – which include maternal health in its scope – obtained global attention at various international platforms, notably the United Nations International Conference on Population Development in 1994, and at the Fourth World Conference on Women in 1995. This attention has contributed to the incorporation of maternal health into the MDGs as MDG 5. This goal has the target of reducing maternal mortality by three quarters between 1990 and 2015 to be measured by two indicators – the maternal mortality ratio (MMR) and the proportion of births attended by a skilled health personnel. In 2005, MDG 5 was expanded to incorporate another target – achieving universal access to reproductive health.

Through the Safe Motherhood Initiative and other efforts to promote sexual and reproductive health and rights, and even prior, Malaysia had already made much progress to improve maternal health. This was most markedly demonstrated by the dramatic fall in MMR before the 1990s. Building on these early achievements, Malaysia has continued to commit towards improving maternal health. While it is unlikely that the MDG 5 targets will be met by 2015, Malaysia has sustained a low MMR for the whole MDG period. In fact, the MMR figures were much lower than the average for developing and upper middle income nations even in 1990.

In absolute numbers, the number of maternal deaths is relatively low. In 2012, there were only 122 maternal deaths out of 508,774 live births reported for that year. Hence, a single death can significantly influence the MMR. For instance, the highest numbers of deaths in 2012 were reported in Sabah (20), Selangor (22), and Johor (18). However, Selangor maintained a MMR below national rates due to the large denominator (number of live births). In contrast, Pahang and Penang had exceeded the national MMR rates, although there were only eight and six deaths, respectively.

To move forward, we need to appreciate the achievements of Malaysia thus far and to examine the current trends preventing maternal death. This chapter will also endeavour on unresolved issues and their influence on our future moving forward.

TRENDS IN REDUCING MATERNAL MORTALITY

Maternal Mortality Ratio

Since independence, great strides have been made to lower the maternal mortality ratio (MMR). Between 1957 and 1970, the nation had essentially halved MMR from 280 to 142 per 100,000 live births (LBs). In the 20 years that followed, the MMR continued to fall and finally reached 18.6 per 100,000 LBs in 1990. This figure was later found to be an underestimation when a more structured system for death reporting and investigation was initiated in 1991, namely the Confidential Enquiry into Maternal Deaths (CEMD).

In recognition of the CEMD initiative, Malaysia subsequently used the 1991 figure of 44 per 100,000 LBs as the baseline for measuring MMR reductions under MDG 5. Despite having a higher MMR, Malaysia had still achieved a 69 per cent decline in MMR between 1970 and 1991. Using 1991 as the base year instead of 1990, Malaysia must achieve a MMR of 11 per 100,000 LBs to fulfil the three quarter reduction by 2015.

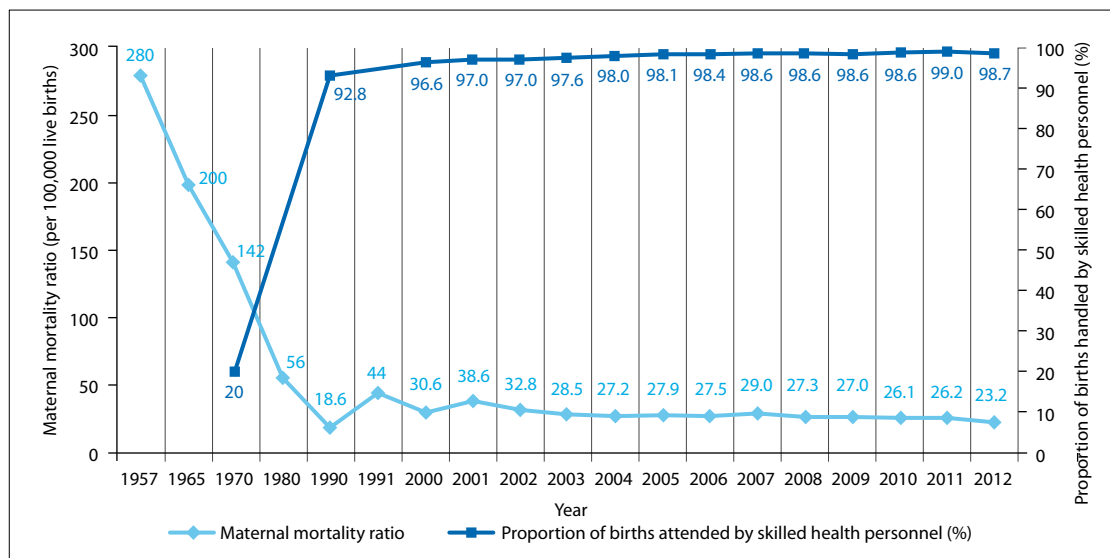
In 2004, Malaysia's MMR reached 27.2 per 100,000 LBs but then plateaued at this level for the next five years. The MMR only began to decline again from 2010 onwards, albeit marginally. As of 2012, the MMR was 23.2 per 100,000 LBs (**Figure 5.1**) and this translated to a 42 per cent decrease since 1991. Based on the "law of diminishing returns", it will be extremely difficult to further reduce such a low MMR, and it is therefore unlikely that Malaysia can achieve a three quarter reduction by 2015. Nevertheless, Malaysia has successfully maintained its MMR at much lower levels than developing and upper middle income regions. **Table 5.1** shows that Malaysia has achieved a lower MMR in 2013 than countries in the Asia Pacific Region, where the average is 184 per 100,000 LBs.

This achievement at the national level is reflected at state levels, which have recorded steadily declining MMRs. As reported in MDGR 2005, the MMR had been highest in most rural states and lowest in most urbanised states in the 1970s and 1980s. From 1980 to 2000, there was a significant narrowing of state differentials and improvements in all states. As of 2012, this pattern has been largely sustained, with most states achieving MMRs close to the national levels. In the period of 2000 to 2012, there have been only five states that consistently reported higher MMRs than national levels. In four of these – Kedah, Kelantan, Negeri Sembilan, Pahang – the MMR was higher than the national figure for seven years. The fifth state, Sabah, recorded MMRs higher than the national figure for nine years.

Proportion of births delivered by skilled health personnel

An important contributing factor to the reduction of the MMR is the access to professional care during pregnancy and childbirth. Between 1970 and 1990, the proportion of births attended by skilled health personnel (safe delivery) increased markedly from 20 per cent to 92.8 per cent. This corresponded to a 69 per cent decline in the MMR. However, the rate of decline in the MMR became less dramatic from the late 1980s onwards as the proportion of births attended by skilled health personnel reached above 90 per cent. Indeed, as Malaysia continued to increase safe deliveries to 98 per cent in 2004 and maintained these levels since, the MMR has almost plateaued (**Figure 5.1**). This suggests that there are other factors that warrant further examination.

Figure 5.1:
Maternal mortality ratio (deaths per 100,000 live births) compared to proportion of births attended by skilled health personnel (1991–2012)



Source: 2000–2012 Malaysia, Department of Statistics, Vital Statistics, various years; 1991–1995, Malaysia, Ministry of Health, Family Health Development Division

Table 5.1:
Maternal mortality ratio of Malaysia and selected MDG and World Bank regions, 1990, 2000 and 2013 (deaths per 100,000 live births)

	Year	
	1990	2013
Malaysia	44 ^a	23.2 ^b
MDG regions		
Developing	430	230
Developed	26	16
World Bank regions		
Upper middle income	120	57
High income	24	17

Note: ^a The MMR for Malaysia is for 1991. Data from this year is used as the baseline because it is a more accurate figure obtained from the Confidential Enquiry into Maternal Deaths that was initiated in 1991.

^b The MMR for Malaysia is for 2012, while the rates for the MDG and World Bank regions are for 2013.

Source: 1. DOSM, Vital Statistics (Malaysia rates)

2. WHO (2014), Trends in maternal mortality: 1990 to 2013. Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division (Regional rates)

Other patterns in maternal mortality

MMR differentials by ethnicity

As reported in MDGR 2005, a conspicuous feature of the MMR at the beginning of the 1970s was the noticeable differences across ethnic groups. In 1970, the Bumiputera MMR (211 per 100,000 LBs) was more than five times higher than the Chinese (49 per 100,000 LBs) and twice that of Indians (100 per 100,000 LBs). As the healthcare system improved, especially in rural areas, ethnic differentials narrowed. By the late 1990s, all ethnic groups had MMR rates below 50 per 100,000 LBs. Nonetheless, the urbanised Chinese, who had significantly higher contraceptive rate and lower fertility, recorded lower MMR than other ethnic groups.

This pattern has largely been maintained throughout the 2000s with ethnic differences remaining small. The Chinese still had the lowest MMR followed by the Indians and the Bumiputera, who could be disaggregated into Malays and Other Bumiputera¹⁷⁰. As of 2012, all ethnic groups had MMRs below 30 per 100,000 LBs except the Others category, which includes non-citizens (65.9 per 100,000 LBs). In the entire period of 2000 to 2012, Others and Other Bumiputera had higher MMR than other ethnic groups with respective medians being 56.7 and 34.4 per 100,000 LBs. In contrast, the medians for Malays, Indians and Chinese were 28.0, 23.6 and 12.9, respectively, per 100,000 LBs. These patterns suggest that there may still be some barriers faced by Others and Other Bumiputera in obtaining better maternal care, be it social or physical in nature.

The marked MMR difference between citizens and non-citizens was documented in the MDGR 2010 although it was based only on Sabah data. Between 2001 and 2013, non-citizens accounted for about 20 per cent of all maternal deaths each year. The higher MMRs of non-citizens were associated with their lower socioeconomic status and education, which is associated with their low contraceptive use and high parity. Significantly, women who are not citizens generally have inadequate or no antenatal care, and often deliver under unsafe conditions. Even if they do get to a health facility, it is often too late when complications have set in, resulting in, poor and fatal outcomes.

MMR differentials by age

Older women (age above 40) and adolescents (age 19 and below) have higher risks of developing complications during pregnancy and childbirth. The highest MMRs were recorded among women in the 45–49 age group with a median MMR of 104 per 100,000 LBs (**Table 5.2**). The MMR of teenagers (below 19) were 25 per cent to 30 per cent higher than women of age 20–24.

¹⁷⁰ Other Bumiputeras include the Kadazan/ Dusun, Bajau, Murut, Iban, Bidayu, indigenous groups of Sabah and Sarawak and Orang Asli of Peninsular Malaysia.

One apparent trend to note is the gradual increase since 2007 in the MMR for adolescents (aged 15–19) (**Table 5.3**). Although the number of deaths is less than 10 a year, the adolescent MMR has increased from 18.5 in 2007 to 38.2 in 2012 per 100,000 LBs. As for women ages 40–44 and 45–49, large fluctuations in MMR were observed from one year to another, and they are in part due to the small number of births in these age groups (denominator). **Table 5.3** shows the impact of small number of deaths to the MMR. Almost 80 per cent of LBs in Malaysia are amongst women between the ages of 20 and 34, while only about 4 per cent are delivered at an age of more than 40.

Table 5.2:
Median maternal mortality ratio by age group for the period of 2000–2012
(per 100,000 live births)

Age group	Median MMR (2000–2012p)
Below 19	25.8
20–24	18.0
25–29	18.9
30–34	26.8
35–39	44.1
40–44	77.4
45–49	104.8

**Median is calculated by UNCT based on the MMR by age group data from 2000 to 2012p.
Data Source: Malaysia, Ministry of Health, Family Health Development Division*

Table 5.3:
Adolescent maternal mortality ratio, 2007–2012

Year	Number of maternal deaths	Live births	MMR
2007	3	16,027	18.5
2008	3	17,698	16.9
2009	4	19,125	20.9
2010	6	19,231	31.1
2011	6	19,538	30.7
2012	7	19,717	35.5

Sources: 1. Maternal deaths: CEMD Report Malaysia 2006–2008
2. Maternal deaths: Malaysia Ministry of Health, Family Health Development Division, 2009–2012
3. Live birth from Department of Statistics, Vital Statistics, 2007–2012

Causes of maternal death

Unlike a death in other age and sex categories, a maternal death is unique in terms of having a well-accepted universal definition and classification. The death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the cause of death is defined as a *pregnancy-related death*. A *maternal death* is a death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. A maternal death can be from direct or indirect causes. *Direct maternal deaths* are those resulting from obstetric complications of pregnancy, delivery and the postpartum, interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above. Deaths from pregnancy-induced hypertension and postpartum haemorrhage or from complications of anaesthesia are classified as direct maternal deaths. *Indirect maternal deaths* are those resulting from previously existing diseases, or from diseases that developed during the pregnancy and that were not due to direct obstetric causes but aggravated by the physiological effects of pregnancy. For example, deaths due to aggravation of existing cardiac or renal disease are indirect maternal deaths. Therefore, a pregnancy-related death may be a maternal death, but it is not always so, because it may be an accidental or incidental death.

Maternal deaths therefore can be largely classified as direct or indirect¹⁷¹. Most maternal deaths are attributable to direct deaths (~80 per cent), while the remainder are attributable to indirect deaths (~20 per cent). In terms of the stage of pregnancy in which deaths occur, most maternal deaths occur in the puerperium period, the 42 days after pregnancy (60 per cent to 70 per cent). There were only 15 per cent to 25 per cent of deaths occurring in the antenatal period.

The majority of maternal deaths as reported in CEMD were indirect deaths, due to associated medical conditions of the pregnant woman, hypertensive disorders in pregnancy; and direct deaths due to obstetric embolism, postpartum haemorrhage, puerperal sepsis and obstetric trauma. These causes accounted for 80 per cent of maternal deaths in the 1990s. Between the 1990s and 2012, the percentage of direct maternal deaths attributed to postpartum haemorrhage and obstetric trauma has gradually declined, while indirect deaths associated with medical conditions has doubled since 2000.

¹⁷¹ Fortuitous deaths are coincidental deaths from unrelated causes that occur in pregnancy or the puerperium and are not included in maternal mortality ratio calculations.

Place of delivery

For obvious reasons, home deliveries, especially those attended by an unskilled person, are at higher risk of maternal death than institutional deliveries. Besides having a skilled attendant, institutional deliveries have immediate access to basic emergency obstetrics care (BEmOC), and in some institutions, also comprehensive emergency obstetrics care (CEmOC)¹⁷². Understandably institutional deliveries were promoted in the mid-1980s. The maternal death rate for home deliveries was 110.6 per 100,000 deliveries in 2011, while that of government hospitals was 9.9 and private hospitals was 13.3 per 100,000 deliveries. Also, between 75 per cent and 78 per cent of home deliveries in 2012 and 2013 were not attended by skilled health personnel. In 1985, institutional deliveries at government hospitals and clinics, private hospitals and maternity homes only accounted for 54.9 per cent of all deliveries but increased to 75.2 per cent by 1990 and 94.6 per cent in 2000. In 2013, 98.5 per cent of births are institutional deliveries and only 1.5 per cent are home deliveries.

TRENDS IN ACHIEVING UNIVERSAL ACCESS TO REPRODUCTIVE HEALTH

The second target under MDG 5 focuses on reproductive health, aiming to ensure universal access to reproductive health. It is noteworthy that the aim is not expressed as reproductive health “services”, underscoring the importance of other inputs especially information on the right to reproductive and sexual health. This will go a long way towards improving maternal and child health as well as reducing both maternal and perinatal mortality. Additionally, this target is a significant contributor to the advancement of the other MDGs such as gender empowerment (MDG 3), better child health (MDG 4), overall poverty reduction (MDG 1) and halting the spread of HIV (MDG 6), among others. While universal access is difficult to define, the four indicators for this target – antenatal care coverage, contraceptive prevalence, unmet need for family planning and adolescent birth rate – can give a valid and reasonably accurate measure.

Antenatal care coverage

Antenatal care essentially monitors the well-being of the mother and the unborn fetus during the pregnancy period. Health problems in pregnant women can be prevented, detected and treated during antenatal care visits. In 1990, Malaysia had an antenatal coverage of 78.1 per cent for the first visit. This increased steadily to 91.9 per cent in 2007 and has since reached 98.0 per cent in 2013. Indeed, Malaysia has sustained first visit antenatal coverage at an average of 93 per cent over the period of 2007–2013¹⁷³. As a comparison, the proportion of at least one antenatal care visit has been at 83 per cent globally for the period of 2007–2014¹⁷⁴.

¹⁷² Facilities with basic emergency obstetrics care (BEmOC) are able to perform all seven signal functions that include: 1) administration of parenteral antibiotics; 2) administration of oxytocic drugs; 3) administration of anticonvulsants; 4) manual removal of placenta; 5) removal of retained products; 6) assisted vaginal delivery; and 7) neonatal resuscitation with bag and mask. A CEmOC facility is one which can perform all seven BEmOC signal functions as well as two other signal functions, namely caesarean sections and blood transfusions.

¹⁷³ Malaysia, Ministry of Health, (Various years), Health Indicators.

¹⁷⁴ WHO, 2015. Global Health Observatory data, Antenatal care: Situation, viewed at http://www.who.int/gho/maternal_health/reproductive_health/antenatal_care_text/en/ on 5 June 2015.

Based on a review of the effectiveness of different antenatal care models, WHO currently recommends a minimum of four antenatal care visits. They include interventions for tetanus toxoid vaccination, screening and treatment for infections and other noncommunicable diseases, and identification of warning signs during pregnancy.

In Malaysia's case, the average antenatal visits per mother¹⁷⁵ can be found within the Health Management Information System. Between 1990 and 2012, the average antenatal visits per mother increased from 6.6 to 10.0 visits. Indeed, this has remained above nine visits per mother since 2004¹⁷⁶, suggesting that the majority of mothers received more antenatal visits than the minimum recommended by WHO. Nonetheless, this inference needs to be made with caution given that an average or arithmetic mean is susceptible to extreme numbers in the range¹⁷⁷.

Contraceptive prevalence rate and unmet family planning needs

In 1974, Malaysia reported a contraceptive prevalence rate (CPR) of 26.3 per cent. This doubled to 52 per cent by 1984 and has remained around 50 per cent since then. The 2004 Malaysian Population and Family Survey (MPFS), which covered Peninsular Malaysia only, reported a CPR of 51.8 per cent (**Table 5.4**). As for unmet needs (solely for limiting births among married women), it was reported to be 24.7 per cent – indicating a very high level of unmet needs by definition of the MDG indicator¹⁷⁸. Based on these figures, the total demand for contraception in Peninsular Malaysia was 76.5 per cent in 2004, and about 68 per cent of this demand had been satisfied by contraceptive use¹⁷⁹.

In the most recent MPFS, preliminary results reported the CPR to be 54 per cent for the whole of Malaysia in 2014. This level is still lower than that of neighbouring countries in the region. For unmet needs, preliminary analysis reported it to be 15.9 per cent, taking into account both unmet needs for limiting and spacing births for Malaysia. This is a moderately high level of unmet needs with greater unmet needs being for limiting births compared

to spacing births (**Table 5.4**). In 2014, the total demand for contraception in Malaysia was 70.5 per cent, and close to 77 per cent of this demand had been satisfied by contraceptive use. Modern contraception methods were more popular as reported in the 2004 MPFS and preliminary 2014 MPFS reports. The pill was the most commonly used method among married women.

Disaggregating further, the 2004 MPFS found that the three major ethnic groups¹⁸⁰ had similar unmet needs. Rural married women were reported to have slightly higher unmet needs, while married women in the age groups of 45–49 years, 40–44 years and 20–24 years had the highest unmet needs. State-wise, Kelantan and Pulau Pinang had the highest unmet needs, while Negeri Sembilan and Selangor had the lowest. Based on the preliminary results for MPFS 2014, the age groups of 45–49 years, 15–19 years and 42–44 years had the highest unmet needs. Kedah and Perlis had the highest unmet needs, while Melaka and FT Kuala Lumpur had the lowest.

¹⁷⁵ Includes visits to public and private healthcare facilities.

¹⁷⁶ Malaysia, Ministry of Health, Annual Report. Various years

¹⁷⁷ Another measure such as the median may provide a more valid picture. However, at present, only the average or mean number of antenatal visits per mother is available.

¹⁷⁸ Unmet needs of 25 per cent or more is considered very high, and values of 5 per cent or less are regarded as very low based on the definition of MDG indicators as described at United Nations, Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources. Version updated on 19 November 2012.

¹⁷⁹ Percentage of demand satisfied is calculated by dividing the contraceptive prevalence rate by the total demand for contraception. The total demand for contraception is the sum of contraceptive prevalence rate (met needs) and the unmet needs for family planning.

¹⁸⁰ The three major ethnic groups in Malaysia are the Malays, Chinese and Indians.

Table 5.4:
Contraceptive prevalence (any method) and unmet need for family planning by selected characteristics, 2004 and 2014

Year	2004 (Peninsular Malaysia)	2014p (Malaysia)
Contraceptive prevalence rate (Any Method)	51.8 %	54.0 %
Unmet need for family planning		15.9 %
- Limiting	24.7%	12.6 %
- Spacing	NA	3.3%

Note: 1. The 2004 survey did not ask about delaying childbirth. The data refer only to women who wanted to stop childbearing.
 2. Data for 2014 are the preliminary findings of the 2014 MPFS.

Source: Malaysia, National Population and Family Development Board, Malaysian Population and Family Survey 2004 and 2014

Adolescent birth rate

Pregnancy during adolescent years poses greater health risk to the mother. Pregnancy amongst unmarried adolescent girls and young women is often unintended and maybe additionally unwanted, and therefore often ends in induced abortion, which is likely to be unsafe, or the abandonment of the newborn baby. Adolescent fertility is measured by adolescent birth rate (ABR).

In Malaysia, the ABR has essentially declined from 28 births per 1,000 adolescent women in 1991 to 13 births per 1,000 adolescent women in 2004. Since then, the ABR has been sustained at around 13 to 15 births per 1,000 adolescent women. This translates to almost half the 1991 rates and is considered to be a low rate globally¹⁸¹. In fact, Malaysia's ABR is lower than the average of developed regions in 2005–2010, which was 24 births per 1,000 adolescent women.

Taking ethnic differentials into account, declines in ABR were observed for all ethnic groups in the 1990s and early 2000s. The most significant declines in ABR were observed among the Indians and Others with a three-fold reduction, respectively between 1991 and 2012. In 2012, Other Bumiputera (32 births per 1,000 adolescent women) and the Others, which include non-citizens (23) still have moderately high ABR. These subpopulations represent 11.7 per cent and 9.5 per cent of Malaysia's total population, respectively. The Chinese have the lowest ABR of six births per 1,000 adolescent women followed by the Indians (8) and Malays (11).

¹⁸¹ United Nations, Department of Economic and Social Affairs/ Population Division (2013). *Adolescent Fertility since the International Conference on Population and Development (ICPD) in Cairo*. Adolescent birth rate (ABR) considered high is greater than 80 births per 1,000 women aged 15–19; ABR is moderate if between 19 to 80 births; and ABR is low if less than 19 births.

While ABR has been low, it is important to recognise that adolescent mothers (aged 15–19) delivered an average of 17,000 LBs each year¹⁸² within the period of 2000–2012p, and the numbers have been steadily increasing as shown in **Table 5.5**. These figures include both married and unmarried adolescents.

Based on the findings from the National Health and Morbidity Survey 2011 (NHMS 2011), the prevalence of sexual activity among students in Form 1 to 5 was 8.3

per cent¹⁸³, with the prevalence among males greater (9.6 per cent) than females (7.1 per cent). Of the students who were engaged in sexual activity, 50.6 per cent reported having their first sexual experience before age 14, while only 32.2 per cent had used a condom and 43.7 per cent had used other birth control methods the last time they had sex¹⁸⁴. These findings suggest that reproductive health education needs to be further strengthened in Malaysia.

Table 5.5:
Live births by age group of mother (Malaysia), 2000–2012

Year	Under 15 year old	15–19 years old
2000	187	16,424
2001	208	17,736
2002	188	15,703
2003	576	15,476
2004	564	15,793
2005	209	15,543
2006	678	14,935
2007	182	16,025
2008	188	17,510
2009	214	18,911
2010	213	19,018
2011	228	19,310
2012p	214	18,317

Source: Malaysia. Department of Statistics, Vital Statistics, various years

¹⁸² Malaysia. Department of Statistics, Vital Statistics, various years

¹⁸³ This translates to an estimated population of 172, 545 students between Form 1 to 5 who had ever engaged in sexual activity as of the study.

¹⁸⁴ Ministry of Health, National Health and Morbidity Survey 2011

MOVING FORWARD

Factors behind the maternal health trends in Malaysia

Malaysia's significant decline in maternal mortality early on in its development has been due to several factors.

Development of rural health services: The rapid development of rural health services led to the decline in maternal mortality between 1955 and 1975. The increase in skilled personnel to attend to deliveries and the introduction of specific programmes such as the Maternal and Child Health (MCH) Programme in health centres and midwife clinics¹⁸⁵ contributed to this outcome. Additionally, the interim and well-envisioned strategy in the 1970s–1980s to engage traditional birth attendants (TBAs) as partners in health, greatly improved the efforts to increase antenatal care coverage and safe delivery, thus reducing maternal deaths. The partnership strategy with TBAs proved successful with rapid declines in deliveries conducted by TBAs, increases in hospital deliveries and growing acceptance of TBAs by professional midwives and nurses. Additionally, efforts to expand accessibility to MCH care for remote and underserved populations were increased since the 1980s. An example of MCH services for the Orang Asli is described in the MDG 4 chapter.

Adopting specific approaches: In 1978, the High Risk Approach in MCH service was introduced. A Colour Coding System was used to tag mothers according to their level of risk and to follow up with them accordingly. Specific training modules for nurses were developed and taught, the capacities of midwives were increased and a referral system was strengthened to complement this. While recognising that risk cannot really be assessed accurately (and that every pregnancy can potentially end in an unexpected outcome), Malaysia decided to continue with this approach.

Assuring quality of care: The MOH began the Quality Assurance Programme and Quality Management System in the mid-1980s to track progress (outcome), standardise care, and identify outliers that needed further improvement and targeted efforts. This was expanded with the adoption of the Total Quality Management System in the early 1990s and was improved in 1999 when process indicators were included to allow for earlier intervention. From the mid-1970s, Malaysia started to profile the cause and contributory factors to deaths, and introduced the CEMD in 1991 to systematically and uniformly collect data and investigate contributory factors in a timely manner¹⁸⁶. These efforts have sustained low maternal mortality until today.

¹⁸⁵ Yadav, H. (2012) A review of maternal mortality in Malaysia. *eJSME* 2012: 6 (Suppl 1): S142-S151

¹⁸⁶ Malaysia MDGR 2005. More details on the early efforts in reducing maternal mortality are available in Malaysia MDGR 2005.

Introducing and updating strategies and interventions:

Through the 2000s, Malaysia continued to improve maternal care through several initiatives. In recognition of the importance of the first 42 days after delivery, the MOH revised its home visit guidelines and scheduled from eight to nine visits, that is, on Days 1 to 4, 6, 8, 10, 15 and 20. In addition, nursing audits are currently conducted regularly and the guidelines for treating mothers during the postnatal period are in place. In terms of improving obstetric emergency care, regular obstetric drills on the management of obstetric emergencies and red alert system were conducted. Guidelines for several conditions were also developed for use in MOH hospitals, such as a consensus statement on the management of adherent placenta; guidelines for termination of pregnancy; and a protocol for the use of Bakri balloon catheter to manage postpartum haemorrhage.

Making lifesaving drugs available at point of need:

Availability of drugs like magnesium sulphate and dexamethasone has also enabled immediate interventions to be initiated at the ground level rather than at a secondary or tertiary level. The thromboprophylaxis that is now continued from the time of delivery to seven days after has been important in reducing embolic deaths.

The establishment of the National Obstetric Registry in 2009 provides the MOH with baseline data on the obstetric outcome and performance of the labouring mother and the newborn. This has allowed the MOH to hone the areas of need and to focus attention and resources to address the issues. The incidence of anaemia and obstetric outcome of the extreme age groups are some of the information that has allowed Malaysia's MOH to target its intervention strategies. The MOH also introduced the Maternal Death Response and Surveillance review in 2011. This has allowed the Ministry to address issues as and when they are identified rather than to institute changes in more gradual manner.

Ensuring adequate coverage through outreach services:

For communities in remote areas, the MOH established the mobile clinic or Klinik Bergerak 1 Malaysia (KB1M) and flying doctors services. This is also an effort towards reducing deaths from nonclinic cases and cases that were lost to follow-up. The mobile teams mainly cover the Orang Asli and the populations in remote Sabah and Sarawak but also island and estate communities.

Getting more accurate information on maternal deaths and ensuring timely response:

Reference has been made to the contribution of CEMD introduced in 1991 towards the improvement in the quality of information on maternal deaths. Greater access to forensic services and postmortems would provide the evidence base for maternal deaths. In many cases it even allowed a more accurate cause of death to be established. Further involvement of other agencies such as the police also allowed more accurate data collection and documentation.

Introducing pre-pregnancy care: Pre-pregnancy clinics have been introduced nationwide in a phased manner to address the issue of the increasing number of maternal deaths due to underlying medical conditions. This programme serves to optimise the patient's medical condition before she embarks on her pregnancy to ensure an optimal outcome for both the woman and child. It requires patients with regular follow-up on medical conditions to be advised on birth spacing and contraceptives.

Addressing the relatively low and static prevalence of contraceptive use: The MOH also introduced the Effective Family Planning programme in mid-2011 for high-risk women based on the findings that 60 to 70 per cent of maternal deaths were amongst women who never practised modern methods of contraception. As of years 2012 and 2013, the percentage of high-risk female clients practising effective family planning was 71 per cent and 73 per cent, respectively. Tracing the 2012 cohort year, there were also 60.7 per cent of identified high-risk female clients who had already practised family planning for two years.

The MOH has also strengthened family planning services for postnatal patients and post-abortion patients. In recent years, these services have also been provided to unmarried women and adolescents in accordance with guidelines.

The MOH is also increasing efforts to counter the deaths amongst nonclinic cases and cases that were lost to follow-up. In October 2012, MOH issued an order¹⁸⁷ for government hospitals to alert health clinics on the admission and discharge of high-risk mothers, especially those who took "At Own Risk" discharge. The MOH also issued an order¹⁸⁸ for private hospitals and clinics to inform health clinics on high-risk mothers who refuse referral, or default treatment or who are facing social problems.

Addressing barriers to seeking care: Through personalised care and providing support for those with unplanned pregnancies, the MOH is working to reduce deaths among mothers facing social barriers to seeking and receiving care such as unmarried women, adolescents, and mothers with financial difficulties. This is a bid to reduce deaths from unsafe deliveries and abortions and to reduce the numbers of babies being abandoned. As of 2014, official police statistics reported 103 cases of baby abandonment. This change in approach essentially respects the privacy of the patient, is nonjudgemental and confidential.

Addressing adolescent pregnancy: In 2008, the MOH developed a module and trained healthcare providers on "Engaging the Adolescents using HEADSS Framework" to enhance their knowledge and skills in working with adolescents in a friendly and nonjudgemental manner. In 2011, the MOH developed the "Guideline for Managing Sexual Reproductive Health Problems amongst Teenagers in Health Clinics". This guideline took into consideration the legal, ethical, rights and sociocultural perspectives related to adolescents; it highlighted the importance of intervening holistically, based on the principle of acting in the best interest of the child and with the intent to reduce harm. Since 2010, MOH statistics have been disaggregated by the age of the mother and additional information of adolescent mothers, like marital status, current school attendance, collected at health clinics to better understand and provide more personalised care to the patient. Additionally, collaborations with other agencies, such as the Social Welfare Department, have been established.

¹⁸⁷ The order issued by MOH was Surat Arahan KPK kepada JKN 11 Okt 2012, based on Surat Pekeliling KPK Bil.9 / 1988 – Prosedur Mengenai Pesakit Yang Ingin keluar Dari Hospital Dengan Kemahuan Sendiri. New revision; Surat Pekeliling KPK Bil. 11 / 2013 – Prosedur Mengenai Pesakit Yang Ingin keluar Dari Hospital Dengan Kemahuan Sendiri.

¹⁸⁸ The order issued by MOH was (Arahan Pekeliling KPK) - Arahan Pelaporan Kes Ibu Hamil Berisiko Tinggi ke Klinik Kesihatan KKM oleh Pengamal Perubatan Swasta Mengikut Arahan Ketua Pengarah Kesihatan (KPK) Bil 1 tahun 2012.

The Adolescent Health Policy was introduced in 2001. The National Adolescent Health Plan of Action (2006-2020) as well as the National Policy on Reproductive Health and Social Education (PEKERTI) and its Action Plan were introduced in 2009. These have paved the way for increased access to reproductive health education, information and services for adolescents and youth. Through the efforts of the National Population and Family Development Board, a milestone was achieved when Reproductive Health and Social Education Programme (PEKERTI) was integrated into the National Service Training Curriculum in 2011. As of February 2015, the programme has reached 267,121 teenagers.

The PEKERTI programme (specifically the Training of Trainers) has been extended to communities and other agencies that work directly with preteens and teenagers. This includes the Ministry of Education, Teacher Training Institutes and the Ministry of Youth and Sports. Through the programme, teens are empowered with skills to deal with sexual reproductive health issues such as assertive techniques to deal with peer pressure in high risk situations, and knowledge on sexually transmitted diseases. Additionally, youth-friendly centres known as kafe@TEEN were established in 2005 and upscaled since 2008 to increase the access of youth to reproductive health information and services. Presently, there are 14 centres nationwide that have reached more than 1.2 million youth.

Remaining issues

Notwithstanding the achievements attained so far, several issues still remain to be addressed in the future agenda.

Sustaining achievement: Sustaining the efforts for reproductive health interventions, such as family planning and contraception use, and meeting the unmet needs for family planning, is an important remaining issue.

Expanding CEMD to include near miss cases: For countries with small numbers of maternal deaths, the information from death audits is not adequate for lessons to be learnt. The death audit may provide lessons only on a few causes of death. This calls for conducting an audit of “near miss” cases, those where the mother survived. The near miss audit will provide an avenue to assess and to study on the deficiencies and process failures that may have occurred. This will allow us to address any weaknesses and correct the processes. In Malaysia, near miss audits are not yet widely-practiced and there is a need to formalise and strengthen their implementation.

Improving competencies of healthcare providers to reduce/eliminate substandard care: There are issues relating to the suboptimal care and competencies of healthcare providers. Apart from being able to recognise the severity of conditions and act on their prevention or treatment, healthcare providers also need to deal with emergencies as well as the more social aspects of reproductive health. Therefore there is a need to improve not only “hard” technical skills but also the “soft” skills of patient-centred care. At the very least, a respect for privacy, confidentiality and a nonjudgemental attitude are needed especially for patients facing social barriers.

Addressing the broader, sociocultural determinants of maternal and reproductive health: As technical aspects directly linked to maternal health are improved, social factors become increasingly important determinants. Many such factors lie beyond the jurisdiction of the MOH. Better alignment of development efforts, coordination and partnerships with other government agencies, nongovernmental and civil society organisations as well as with the public is needed. This still remains an issue that needs to be resolved. Specific examples that require this joint effort include addressing teenage pregnancies, strengthening sexual reproductive health education and increasing contraception prevalence rates.

Keeping track of newer trends and their implication for maternal and reproductive health: On a more cautionary note, “gentle birthing”¹⁸⁹ is an emerging trend. Often these deliveries are not handled by skilled health personnel hence increasing risks to mothers. To a certain extent, this emerging trend may be due to a lack of knowledge on the birthing process and the complications that can occur.

CONCLUSION

Malaysia has made much progress to improve maternal health. The MMR declined dramatically, while the proportions of safe deliveries and antenatal coverage increased substantially. Since 1990, Malaysia has continued to sustain those achievements at levels much better than developing and upper middle income nations while also reducing adolescent birth rates to low levels. However, much remains to be done. Indeed, Malaysia continues to commit to improving maternal health through adjusting programmes and approaches to meet changing scenarios and needs. While it will be extremely challenging for Malaysia to reduce the relatively low MMR in 2015 by three quarters from the 1990 level, concentrated and focussed commitment and efforts, and the identification and implementation of evidence-based interventions can contribute to further reduction of maternal mortality, and achieve universal access to reproductive health. Malaysia is poised to make a meaningful contribution towards the global goal of Ending Preventable Maternal Mortality (EPMM)¹⁹⁰, an initiative begun in 2013 by partners including WHO, UNFPA, United States Agency for International Development (USAID), Maternal and Child Health Integrated Programme (MCHIP) and others.

¹⁸⁹ “Gentle birthing” refers to drug-free and natural birthing options.

¹⁹⁰ WHO (2015). *Strategies toward ending preventable maternal mortality (EPMM)*.

ANNEX 5.1

TARGETS AND INDICATORS

This goal originally had only one target to reduce the maternal mortality ratio. The additional target, of achieving universal access to reproductive health by 2015, was integrated into the MDG framework as Target 5B at the World Summit in 2005. This decision essentially recognised the importance of sexual reproductive health as a key element underpinning development¹⁹¹.

Table 5.6:
MDG 5 Target and Indicators¹⁹²

Target	Indicators		Notes
Target 5a: Reduce by three quarters, between years 1990 and 2015, the maternal mortality ratio.	5.1	Maternal mortality ratio (MMR)	The number of maternal deaths per 100,000 live births in a specified year that result from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental cases) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy ¹⁹³ . This indicator reflects the capacity of the healthcare system to provide effective healthcare and address complications during pregnancy and childbirth. Fortuitous deaths, those 'deaths from unrelated causes that happen to occur in pregnancy or the puerperium are not included in MMR calculations. This category accounts for about 40 per cent of pregnancy-related deaths in Malaysia ¹⁹⁴ .
	5.2	Proportion of births attended by skilled health personnel	The proportion of total live births that are attended by skilled birth attendants who are able to provide adequate antenatal, intrapartum, postpartum as well as newborn care. They are also able to attend to obstetric emergencies and complications that may arise in the course of normal labour. This indicator focusses on the access to professional care during pregnancy and childbirth, particularly in the management of complications. This indicator has a strong inverse relationship with MMR.

¹⁹¹ WHO (2011) *Universal access to reproductive health: Accelerated actions to enhance progress on Millennium Development Goal 5 through advancing Target 5B*.

¹⁹² United Nations, *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*. Version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.aspx>, accessed on 18 May 2015.

¹⁹³ WHO. 2015. *Health statistics and Information systems: Maternal Mortality Ratio*. <http://www.who.int/healthinfo/statistics/indmaternalmortality/en/>

¹⁹⁴ Malaysia MOH, Family Health Development Division, 2014.

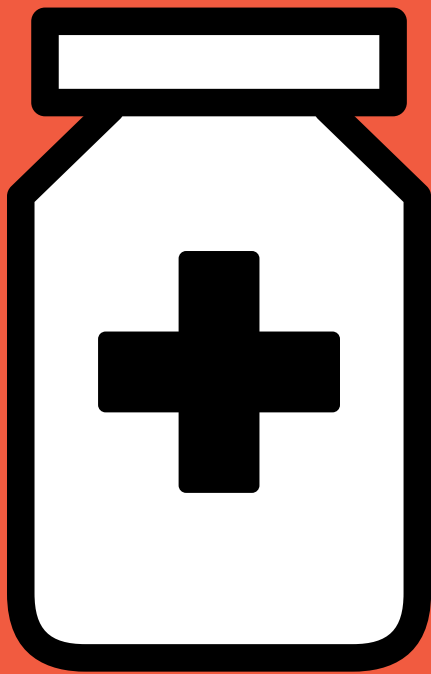
Target 5b: Achieve, by 2015, universal access to reproductive health.	5.3	Contraceptive prevalence rate	The percentage of married women of reproductive age (aged 15 to 49) who are currently using, or whose sexual partner is currently using at least one contraceptive method. This indicator serves as a proxy measure of access to reproductive health services. It is a useful measure of progress especially when considered with information on women's knowledge of family planning or accessibility and the quality of family planning services. The sum of contraceptive prevalence and unmet need for family planning determines the total demand for contraception.
	5.4	Adolescent birth rate	The number of live births born to women aged 15 to 19 (adolescent women) per 1,000 adolescent women. This indicator is important because very early motherhood increases the risk of maternal death at childbirth. It also jeopardises the well-being of the mother and their children as young mothers often forego education and socioeconomic opportunities while children born to adolescent mothers are at greater risk of dying in infancy or childhood and, if they survive, have fewer opportunities in education. High adolescent birth rate may also indicate an unmet need for family planning amongst young women, many of whom may want to delay pregnancy.
	5.5	Antenatal care coverage (at least one visit)	The percentage of women aged 15 to 49 with a live birth at a given time period that received antenatal care provided by a skilled health personnel at least once during their pregnancy. Antenatal care is important because it presents an opportunity to identify and treat conditions that increase the risk of pregnant women to maternal death due to indirect causes or that affect the well-being of their infants.
	5.6	Unmet need for family planning	The percentage of women of reproductive age (aged 15 to 49) who are either married or in a consensual union, and who are fecund and sexually active but are not using any method of contraception and report not wanting any more children or wanting to delay the birth of their next child for at least two years. This indicator shows the gap between women's reproductive intentions and their contraceptive behaviour. Unmet needs of 25 per cent or more are considered very high, and values of 5 per cent or less are regarded as very low.

ANNEX 5.2

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MDG 6

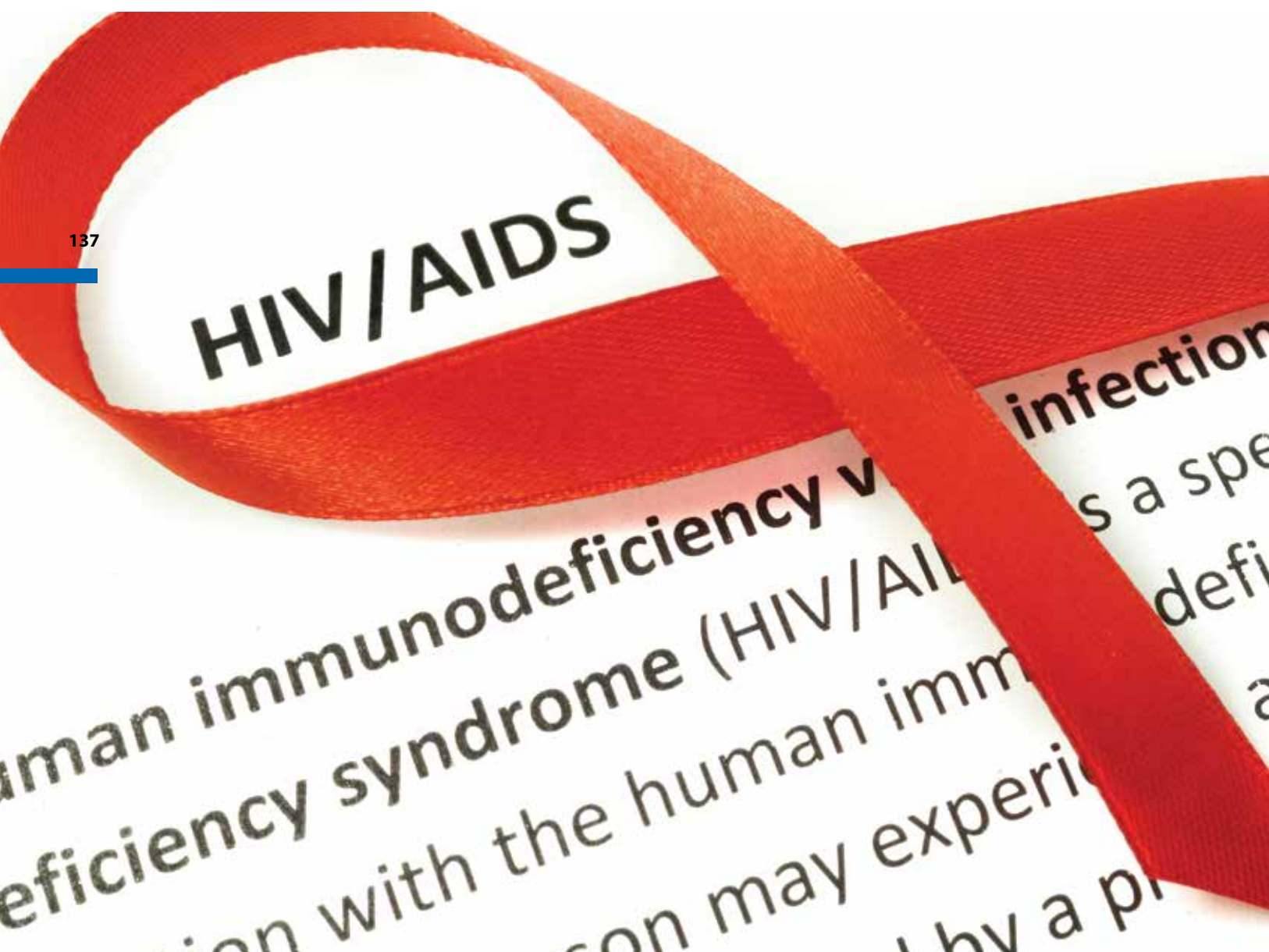


**COMBAT HIV/AIDS,
MALARIA AND
OTHER DISEASES**

INTRODUCTION

The sixth Millennium Development Goal (MDG 6) has three targets:

- To have halted by 2015 and begun to reverse the spread of HIV/AIDS
- To achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it
- To have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.



MDG 6 is dedicated to combating and reversing the spread of infectious diseases such as HIV/AIDS, malaria and other major diseases such as tuberculosis, among others. Infectious diseases spread rapidly and can have a profound social and economic impact on development that is not always commensurate to the disease burden.

Malaysia has achieved considerable success in the control of infectious diseases over time. The last case of endemic smallpox in Malaysia occurred in the 1950s. Since 1970, Malaysia has eradicated polio, as well as made sharp declines in malaria and tuberculosis. In fact, disease patterns have shifted from predominately communicable to noncommunicable types. In 2014, communicable, maternal, perinatal and nutritional conditions contributed 16 per cent to total deaths, whereas noncommunicable diseases contributed 73 per cent¹⁹⁵.

While acknowledging Malaysia's success in infectious disease control, there is reason to be ever cautious of the threat of its emergence or re-emergence. The outbreaks of Nipah viral encephalitis in Malaysia in 1998¹⁹⁶ and severe acute respiratory syndrome (SARS) in 26 countries in 2003¹⁹⁷, as well as the global pandemic of Influenza A (H1N1) pdm09¹⁹⁸ and the most recent 2014 Ebola epidemic in West Africa¹⁹⁹, are examples that remind us of the impact of emerging infectious diseases and the need to strengthen healthcare systems in order to build resilience. Additionally, the recurring outbreaks of dengue and the re-emergence of tuberculosis also argue for the need for continuous vigilance.

This chapter on MDG 6 examines the trends and status of three infectious diseases in Malaysia, namely HIV/AIDS, malaria and tuberculosis. The goal has three targets that call for the halt and reversal by 2015 of these three diseases and universal treatment of HIV/AIDS by 2010. These targets are monitored through 10 indicators, which have been adapted to the Malaysian context. Proxies are also used where the indicators are not available.

HIV/AIDS

The first case of HIV infection in Malaysia was reported in late 1986. By the time the MDGs were adopted in 2000, there had been 38,340 reported HIV cases in Malaysia, of which 4,723 cases had developed into AIDS and 3,568 lives had been lost in HIV/AIDS-related deaths. Through continuous and dedicated efforts, Malaysia has successfully halted and reversed the spread of HIV/AIDS ahead of the MDG target year of 2015. However, Malaysia has still quite a way to go in terms of achieving universal access to HIV/AIDS treatment. This subsection examines the trends and patterns in HIV/AIDS, the factors behind Malaysia's achievements and the issues that need to be taken forward.

¹⁹⁵ WHO, *NCD Country Profiles 2014*.

¹⁹⁶ WHO, *Global Alert and Response (GAR)*, 1999-Hendra-like virus (Nipah virus) in Malaysia, 15 April 1999, accessed at http://www.who.int/csr/don/1999_04_15/en/ on 21 May 2015

¹⁹⁷ WHO, *International travel and health*, SARS (Severe Acute Respiratory Syndrome), accessed at <http://www.who.int/ith/diseases/sars/en/> on 21 May 2015

¹⁹⁸ WHO, *Global Alert and Response (GAR)*, Pandemic H1N1) 2009 – update 60, accessed at http://www.who.int/csr/don/2009_08_04/en/ on 21 May 2015. Nomenclature for the virus has now been standardised to avoid confusion with the old seasonal A(H1N1) viruses. The standard nomenclature can be found at http://www.who.int/influenza/gisrs_laboratory/terminology_ah1n1pdm09/en/.

¹⁹⁹ WHO, *Media centre*, Ebola virus disease, April 2015, accessed at <http://www.who.int/mediacentre/factsheets/fs103/en/> on 21 May 2015

Box 6.1: HIV/ AIDS and indicators to measure progress

The human immunodeficiency virus (HIV) is a virus that destroys and impairs the function of immune cells. Infected individuals gradually lose their body's immune function and become more susceptible to a wide range of secondary infections and diseases that people with healthy immune systems could normally fight off (immunodeficient). The most advanced stage of HIV infection is referred to as acquired immunodeficiency syndrome (AIDS). This spectrum of conditions emerged after a series of epidemics sometime after the 1950s in several nations, mainly in Africa. It became a full-scale global pandemic in 1985 with significant presence on every continent. Some important indicators used to monitor HIV/AIDS include:

Notification rate refers to the number of new cases detected per 100,000 population. **Mortality rate** is the number of deaths caused by a disease per 100,000 population. **Treatment coverage** is expressed as the percentage of people receiving treatment out of total eligible population (for HIV this refers to antiretroviral therapy or ART).

Total new cases and notification rate of HIV/AIDS

Since 1986, the total number of new HIV cases reported each year increased to a peak in 2002 before gradually declining to present levels (**Figure 6.1**). In 2002, notification rates were at 28.45 per 100,000 population with 0.82 per cent of those screened being HIV positive.

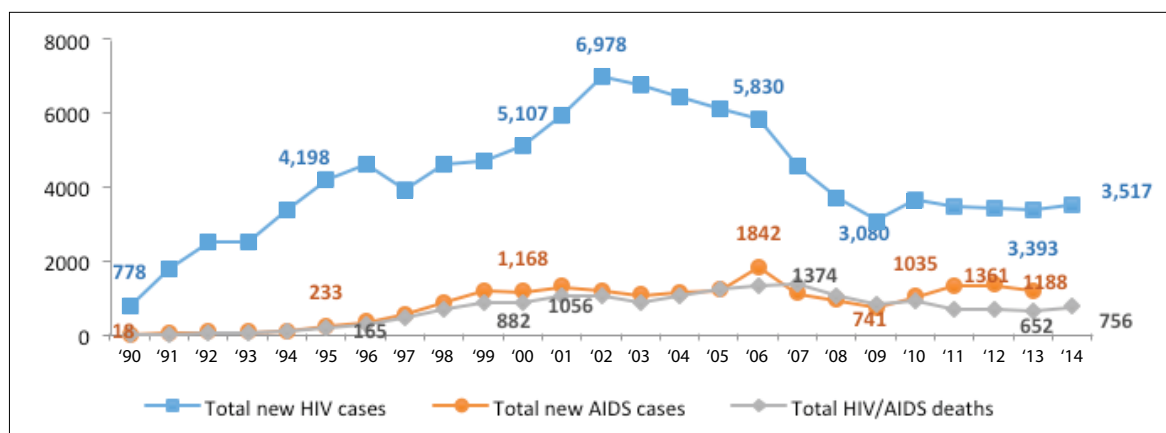
Since 2002, Malaysia has managed to halt and reverse the spread of HIV/AIDS. In 2014, approximately 1.5 million screening tests were undertaken, with only 0.09 per cent of those screened being HIV positive (3,517 new HIV cases). HIV notification rates have also declined to 11.69 per 100,000 population in 2014 after a slight increase in 2010. This remains close to the nation's target to reduce incidence rates to 11 per 100,000 population by 2015. In fact, the number of new cases reported in 2014 is about 50 per cent less than in 2002, although it should be noted that this has plateaued at around 3,500 cases for the past five years.

Looking more specifically at AIDS, notification rates have generally been lower than that of HIV (**Figure 6.1**). The number of new AIDS cases reported each year was highest in 2006 at 1,842 cases. This translated to a notification rate of 6.91 per 100,000 population for AIDS. Post 2006, AIDS notification rates have fluctuated at 4 per 100,000 population with about 1,200 new AIDS cases reported in 2013.

Number of HIV/AIDS-related deaths and mortality rates

As shown in **Figure 6.1**, the number of HIV/AIDS-related deaths had increased over time to reach a peak in 2007. Since then, the number of reported deaths fell by more than half from 1,374 deaths to 756 deaths in 2014. The mortality rate for HIV/AIDS in Malaysia was 0.06 per 100,000 population in 1990. This peaked at 5.06 in 2007 and has since declined to 2.51 in 2014, respectively, per 100,000 population.

Figure 6.1:
Total new HIV/AIDS cases reported and total HIV/AIDS-related deaths, 1990-2014



Source: Malaysia, Ministry of Health, Disease Control Division, HIV/AIDS Sector, 2014

Access to treatment for HIV/AIDS

The increase in accessibility and affordability of antiretroviral therapy (ART) treatment has been crucial in reducing HIV/AIDS-related deaths. National guidelines indicate that treatment is for all patients with AIDS regardless of CD4 count²⁰⁰. For asymptomatic persons who are HIV positive, based on the 2006 revision of WHO treatment guidelines, the initiation of ART is considered when the CD4 cell count falls below 350 cells per mm³ and recommended below 200. Since the start of the ART access programme in early 1990s, Malaysia has provided ART to 9,962 persons living with HIV or estimated treatment coverage of 37.3 per cent in 2009²⁰¹. In late 2009, WHO adjusted the treatment provision guidelines to initiate treatment when their CD4 cell counts fall to 350 cells per mm³ or lower. This allowed patients to qualify for treatment and access treatment earlier. As of 2014, treatment coverage is estimated at 47.6 per cent with 21,654 out of 45,476 eligible patients receiving treatment. In Malaysia, close to 88,093 people were reported to be living with HIV as of 2014²⁰².

Other patterns in Malaysia's HIV/AIDS situation

Distribution of HIV cases by risk factor, gender, ethnicity, and age

The HIV epidemic in Malaysia was initially driven by the transmission amongst people who inject drugs (PWID) through sharing of needles. From 1990 to 1996, the percentage of HIV cases amongst PWID increased from 60 per cent to 83 per cent, as reported in MDGR 2010. Since 1996, there has been a gradual decline in the number of HIV cases attributable to PWID from 74.7 per cent in 2000 to 19.3 per cent as of 2014. In fact, injecting drugs has no longer been the main risk factor for reported HIV cases since 2010; and sexual transmission, in particular heterosexual transmission, is now the most important risk factor (**Figure 6.2**).

²⁰⁰ Malaysia. Ministry of Health. Guidelines for the management of adult HIV infection with antiretroviral therapy, 2011

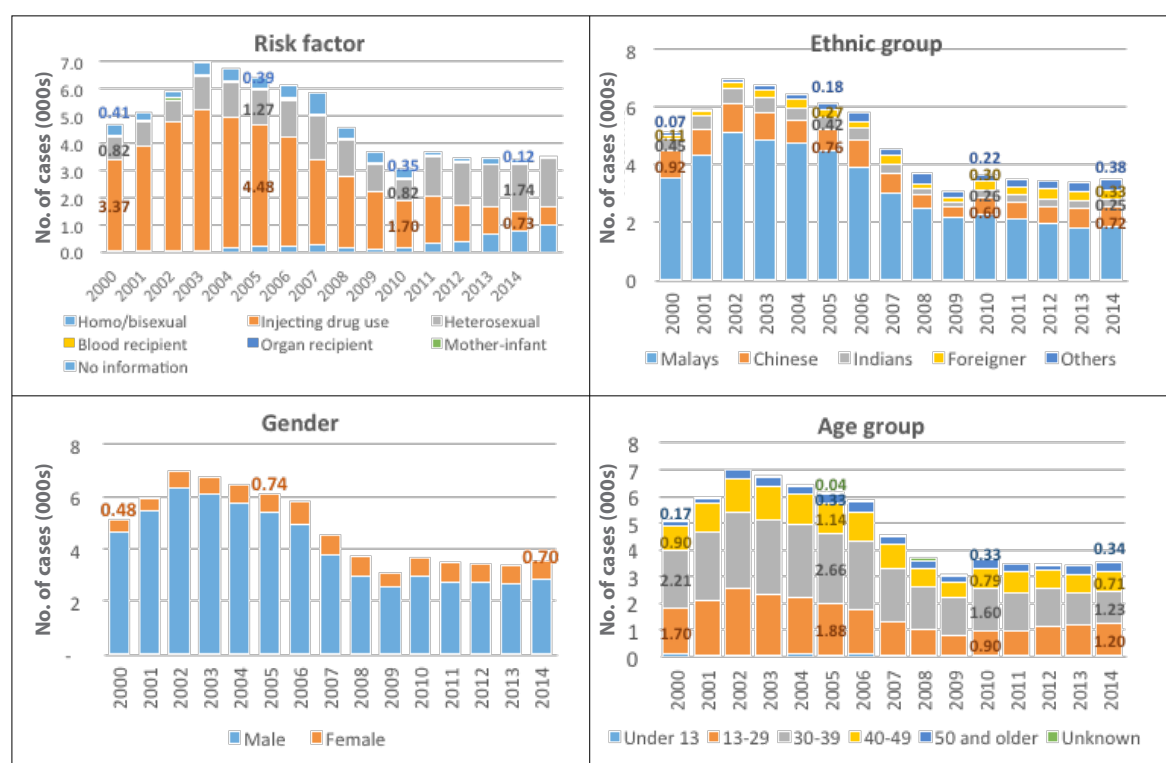
²⁰¹ Malaysia. Ministry of Health, Disease Control Division, HIV/AIDS Sector, 2015

²⁰² Malaysia, Ministry of Health. Global AIDS Response Progress Report (GARPR) 2014

For heterosexual transmission, new HIV cases increased from 821 cases in 2009 to 1,768 cases in 2014. As for homosexual or bisexual transmission, there has been a more than fourfold increase in new HIV cases from about 162 cases to 984 cases between years 2009 and 2014. With the decline in drug-related cases and the increase in sexual transmission cases, the latter now accounts for 78.2 per cent of all reported new HIV cases of which more than 50 per cent were heterosexual transmissions.

On a much lesser scale, mother-to-child transmissions still occur, contributing to less than 2 per cent of new cases reported in 2014. The remainder are mainly cases where there is no information on the risk factor. There were close to no cases originating from the risk factors of blood and organ transfusion in the entire period. In fact, Malaysia had started a safe blood programme as early as 1985, a year before Malaysia's first HIV case. The programme has since been strengthened.

Figure 6.2:
New HIV cases reported by risk factor, gender, ethnic group and age group, 2000–2014



Note: For 2014 data on risk factor, blood recipient and organ recipient are considered the same category and there is a new category of risk factor named "Needle prick injury". In 2014, there were two such cases notified.

Source: Malaysia, Ministry of Health, Disease Control Division, HIV/AIDS Sector, 2015

In terms of gender, there are more male cases of HIV than female cases. As reported in MDGR 2005, this pattern likely reflected the fact that injecting drug use was the most prominent risk factor and most people who inject drugs were males. Similarly, there were more new HIV cases involving Malays given that most PWID cases involved Malays. As of 2014, males still contributed to the majority of cases

(80.2 per cent) with only 700 to 800 new cases involving females each year since 2002. Examining the male and female cases separately by risk factor, it is apparent that the main risk factor for females was heterosexual transmission. For males, this used to be predominantly PWID. However, as of 2014, this has shifted towards being predominantly heterosexual transmission (**Table 6.1**).

Table 6.1:
Distribution of new HIV cases reported by gender and risk factor, 2012–2014

Gender	Year	Homo/ Bisexual	PWID	Hetero- sexual	Organ/ blood donation	Vertical	Unknown
Female	2012	1.5	4.6	85.0	0.0	3.0	5.9
	2013	0.7	3.3	88.6	0.0	4.1	3.3
	2014	0.7	1.9	92.4	0.1	2.6	2.2
Male	2012	23.8	36.2	33.8	0.0	0.9	5.2
	2013	28.1	26.4	41.2	0.0	0.8	3.4
	2014	34.7	23.7	39.9	0.0	0.6	1.1

Source: Malaysia, Ministry of Health, Disease Control Division, HIV/AIDS Sector, 2015

In terms of ethnic group, the number of new cases reported for Malays, Chinese and Indians has generally declined since the peak in 2002. In contrast, the number of cases from 'Others' has more than doubled from 128 cases in 2002 to 383 cases in 2014. Nevertheless, Malays (52.3 per cent) and Chinese (20.4 per cent) still contribute the majority of cases in Malaysia as of 2014. By age group, there appears to be some increasing trends for HIV new cases among the 20–29 and 30–39 year age groups, while that of the 13–19 age group has shown a stabilising trend in the period 2011 to 2013.

Key populations

The HIV epidemic in Malaysia shows the characteristics of a concentrated epidemic as defined by WHO, that is, the HIV prevalence is at less than 0.5 per cent in the general population, while prevalence for the key affected populations is more than 5 per cent. The key affected populations identified are: PWID, female sex workers, men who have sex with men, and transgender persons.

Recognising the concentration of HIV among these populations and the effect of their behaviours on the spread of the disease, bio-behavioural studies (BBS) were conducted. This started with the study of PWID with HIV -associated risk behaviours in 1997/1998 involving more than 7,000 persons in 26 drug rehabilitation centres. From the study it was estimated that 13.9 per cent of respondents had HIV/AIDS, 65 per cent shared injecting equipment and only 21 per cent used condoms with their regular sex partner. Since then other smaller studies in select locations have been conducted in 2004, 2009 and 2010. In 2012, an Integrated Bio-Behavioural Surveillance (IBBS) survey was conducted nationwide (**Table 6.2**).

Among the key populations, HIV prevalence was highest in 2012 among PWID (18.9 per cent) followed by men who have sex with men (7.1 per cent), transgender persons (4.7 per cent) and female sex workers (4.2 per cent). The majority of PWID used sterile injection equipment (97.5 per cent) and had been reached by intervention programmes (86.5 per cent). This was considerably wider than that of female sex workers and men who have sex with men, where only about 57 per cent had been reached by intervention programmes. However, the percentage of those who knew their HIV status and who had knowledge of transmission mode was still low among the key populations. The use of condom with their most recent partner was also widely variable with female sex workers and transgender persons reporting more condom use than the other two groups.

These patterns suggest that while intervention programmes have reached more than half of these populations, the reach has not been equal. Also, considerable effort is still needed in education on how HIV is transmitted and how risks of spreading the diseases to others can be reduced, for example, through early testing and condom usage. Other individuals who may be at risk of being infected include: intimate sexual partners, clients, and children through vertical transmission from mothers who are HIV positive.

Table 6.2:
Key findings from the Integrated Bio-Behavioural Survey (IBBS) amongst key affected populations, Malaysia, 2012

Indicators	PWID (n=1,906)	FSW (n=864)	MSM (n=414)	TG (n=929)
HIV prevalence	18.9 %	4.2 %	7.1 %	4.7 %
Tested and knew results	78.4 %	76.1 %	79.1 %	80.5 %
Knowledge of modes of transmission	53.8 %	35.4 %	40.4 %	40.2 %
Reached by intervention programmes	86.5 %	57.8 %	56.8 %	79.1 %
Condom use with most recent partner/ client	72.2 %	83.9 %	76.7 %	83 %
Used sterile injecting equipment	97.5 %			
Sexually active	45.7 %			
Paid for sex	20.2 %			
Sold sex				84.9 %
Injecting drugs		4.2 %	5.3 %	2.5 %
Had sexual partners who inject drugs		7.7 %	5.4 %	7.7 %
Used recreational drugs before sex		20.8 %	24.6 %	22.6 %
Consumed alcohol before sex		39.9 %	33.8 %	37.0 %
More than 6 male partners in the past 6 months			5.4 %	
Sex with female partners			13.9 %	

Note: PWID = people who inject drugs, FSW= female Sex Worker, MSM = men who have sex with men, TG = transgender persons
Source: Malaysia, Ministry of Health, Malaysia: Global AIDS Response Progress Report (2013)

State-level epidemic

Historically, the bulk of new HIV cases reported have been contributed by the states of Selangor, Johor, Kelantan and the Federal Territory of Kuala Lumpur. In the earlier stages, this was likely to have been a reflection of the concentration there of PWID. Similar to the national trend, these states saw a peak in new HIV cases in the early 2000s followed by dramatic declines in later years. As for states with low notifications, most have managed to maintain that as of 2014 with very slight fluctuations over the years.

In contrast, the number of cases from Sabah and Sarawak has steadily increased since 2001, although absolute numbers in 2014 are still lower than that of Pahang, Selangor, Johor and FT Kuala Lumpur, which bear the bulk of the disease burden. In fact, there have been some increases in new HIV cases reported in the last three locations since 2009. Looking at cases by risk factor, cases from Peninsular Malaysian states were historically due to sharing of infected needles, while cases in Sabah and Sarawak were sexually transmitted. Sexual transmission is now the main risk factor and the bulk of new HIV cases are still found in Peninsular Malaysia.

Moving forward

Factors behind HIV/AIDS trends in Malaysia

Malaysia's efforts to control the spread of HIV/AIDS date back to 1985 when the National AIDS Task Force was formed to formulate policies and to coordinate AIDS prevention and control activities. In that same year, HIV/AIDS was included as one of the notifiable diseases. Malaysia developed the first HIV/AIDS Plan of Action in 1988 and revisited it again in 1998. The country has since continued the national response through the National Strategic Plan (NSP) 2006-2010 and most recently, NSP 2011-2015. Through the NSPs, Malaysia implemented several key programmes that have contributed to its achievements.

The Harm Reduction Programme (HRP) is one of Malaysia's responses to the country's HIV/AIDS epidemic. It started as a pilot project in 2005 and was then implemented nationwide in 2006²⁰³. This programme was aimed towards reducing, if not altogether, halting HIV infection amongst people who were injecting drugs and sharing their needles and syringes. It included Opiate Substitution Therapy and Needle and Syringe Exchange. Other harm reduction services were provided such as voluntary counselling and testing, the provision of ART, treatment for sexually transmitted infections, counselling, health education, social welfare, job placement, and rehabilitation. The programme has been a factor in reducing new HIV cases among those injecting drugs from 60.4 per cent in 1990 to 19.3 per cent in 2014 and remains at the heart of Malaysia's response to HIV and AIDS.

²⁰³ WHO 2011. *Good practices in Asia : Effective paradigm shifts towards an improved national response to drugs and HIV/AIDS*.

In controlling the spread of HIV due to vertical transmission, Malaysia has pursued the Prevention of Mother to Child Transmission (PMTCT) programme since 1998. The programme is available at all government primary care clinics and hospitals. Under this programme, antenatal mothers are screened through free HIV screening and, if testing positive, they receive highly active antiretroviral therapy (HAART). Provisions also exist for immediate screening of women in labour with no record of antenatal care or with an unknown HIV status. These strategies have been supplemented with safer modes of delivery and replacement feeding until two years of age for infants born to mothers who are HIV positive. In addition, the HIV-exposed baby receives prophylaxis and is monitored from birth up to 18 months of age. In 2010, Malaysia started Option B+ for women who are pregnant and HIV positive, whereby they receive ART during pregnancy (regardless of their CD4 count) and treatment is continued for the life of the mother, while the infant receives treatment until age 4 to 6 weeks²⁰⁴. With these interventions, vertical transmission has been reduced to 1.3 per cent by 2014.

In terms of treatment, Malaysia first introduced HAART to people living with HIV in the 1990s. However, the costs were high and hence coverage was limited. In 2003, Malaysia became the first country to issue compulsory licence following the adoption of the Doha Declaration on TRIPS Agreement of Public Health by the 2001 Ministerial Conference of the World Trade Organization. Through efforts from the MOH and the Ministry of International Trade and Industry in

2004, Malaysia imported ARV drugs from India and reduced costs by 81 per cent. This availability of first-line ART increased treatment coverage from 1,500–4,000 patients²⁰⁵. Presently, Malaysia provides first-line treatment for all Malaysian citizens in government hospitals and clinics at no charge, while the second-line treatment regime is heavily subsidised. In addition, accessibility to ART has included patients in prisons and drug rehabilitation centres since 2006. These efforts have largely contributed to the reduction in HIV/AIDS related deaths.

Building on the progress made since 1986, Malaysia established a National AIDS Registry (NAR) in 2009 that was upgraded to be web-based in 2010. The NAR plays major roles in HIV/AIDS programme planning, advocating for prevention and care services and aiding in programme evaluation. This input is obtained from quantifying the magnitude of HIV infection, understanding current and potential disease spread and reporting the status of HIV/AIDS treatment and prophylactic treatment at district, state and national levels. The system has also eased retrieval of investigation information and avoided duplication of cases. Much effort has been made to maintain the confidentiality of the persons registered.

²⁰⁴ WHO 2012. *Use of antiretroviral drugs for treating pregnant women and preventing HIV infection in humans*.

²⁰⁵ UNICEF. 2008. *AIDS timeline: Global and Malaysia Fact Sheet*. Accessed at <http://www.unicef.org/malaysia/Factsheet-AIDS-Timeline-Malaysia-and-Global.pdf> on 25 May 2014.

Collaborations have been an important factor in the successful implementation of Malaysia's efforts to halt the spread of HIV/AIDS. These include interagency collaborations amongst such agencies as the Department of Islamic Development (JAKIM), the Ministry of Women, Family and Community Development (MWFC), the National Anti-Drugs Agency (NADA), the Cure and Care Rehabilitation Centre (CCRC) and the Prison Department of Malaysia. These collaborations were the foundation for efforts such as the HRP. Since 2006, the MOH has been building partnerships with JAKIM and state religious departments in providing support to the Malay Muslim population who have been hardest hit by the HIV epidemic. This partnership recognises that religious leaders and religious organisations have important roles in curbing the spread of HIV and alleviating the suffering caused by the disease. Activities include producing a training manual for Muslim religious leaders on HIV/AIDS, Shelter Care for Muslim Living with HIV, using mosques as sites for Methadone Maintenance Therapy programme, and awareness raising.

Another important collaboration resulting in the successful national response to HIV/AIDS has been the government NGO partnerships, such as the partnership with Malaysian AIDS Council (MAC). Among other strategies, MAC has involved celebrities in public education on HIV/AIDS, provided shelter homes for people living with HIV, peer support in hospitals, support for marginalised groups, and social reintegration of former prisoners. Another important partnership is the one that includes the MOH, the NADA, the Prison Department, and the Ministry of Education, as well as NGOs, and 365 general practitioners (at the latest count), to implement the HRP.

As one of the ASEAN Member States, Malaysia is also committed to the ASEAN Cities Getting to Zero Project (G2Z) programme. It was launched in 2013 and aims to achieve zero new HIV infections, zero AIDS-related deaths and zero harm in 13 participating cities. Despite being at the infancy stage, the G2Z programme has garnered an overwhelming response from various agencies, NGOs and individuals. Early indications of success have been seen in the increase in number of screenings amongst key populations, coverage of those seeking care, coverage for ARV, detection of high-risk mothers in PMTCT programme and provision of early care and treatment. There was also increased coverage of intravenous drug users receiving harm reduction services. The staff are empowered with good knowledge on HIV thus ensuring that their patients do not feel stigmatized or discriminated against. This project has now been expanded to other cities in Malaysia including Kota Kinabalu (Sabah), Kuching (Sarawak), Kuantan (Pahang) as well as Seremban, Nilai and Port Dickson (Negeri Sembilan). The MOH envisions the project's adoption in all Malaysian cities by 2020.

Remaining issues

There are several issues that remain in combating HIV/AIDS in Malaysia.

The balance between preventive and curative interventions:

The former is needed to curb any further spread of the disease, while the latter is needed to reduce deaths relating to the disease. With ART coverage at only 47.6 per cent, Malaysia will need to commit more funds in order to achieve universal treatment. As ART coverage is nationally funded, it depends on national funding priorities. The danger in shifting funds away from preventive interventions is that the disease will continue to exist and spread because the front end efforts are not sufficiently supported. Balancing between the two will be a challenge that needs to be addressed in order to prevent new cases from emerging and still achieve universal treatment coverage.

Sexual transmission of HIV has become the main risk factor (78 per cent) in the last five years:

Addressing this mode of transmission will require sexual health to be dealt with in a more direct manner. This will not only be necessary among key populations but also among the general public, particularly young people. Sexual activity is not uncommon among young people, but the use of any form of contraceptive, including condoms, is low and there have been increases in new HIV cases being reported in the age group of 20–39. Preventive efforts such as PROSTAR, Doktor Muda and public awareness campaigns in secondary schools and higher learning institutions will need to be scaled up. This risk factor poses a substantial challenge not only because it touches on taboo topics like sex, but also because it is influenced by perceptions of morality and social stigmas. In addition, the penal code enforces stigma because homosexual intercourse and intercourse between unmarried Muslims is criminalised.

Early screening: Screening is the first step to HIV prevention and a critical linkage in ARV treatment. Thus, educating the high-risk group about HIV, its mode of transmissions, preventive actions, early screening and treatment are all important in curbing the disease.

An enabling environment: Social stigmas can have a profound impact on whether people seek information or are willing to present themselves for screening tests, treatment or other forms of assistance needed to stop the spread of HIV/AIDS and deal with the effects of the disease. Stigmas have a profound impact on the behaviour toward persons living with HIV, be it from family members, partners, friends, colleagues, or healthworkers. Building an enabling environment that respects confidentiality, is nondiscriminatory and encourages community participation is increasingly necessary to sustain and build the resilience of the community against the spread of HIV/AIDS and its effects. The G2Z project is a good start that needs to be further supported.

Greater public awareness: Based on the IBBS, it is apparent that there is still much to do with key populations not only to reduce their own risky behaviours to prevent infection or spread to other people but also to instil the understanding of the disease and the importance of going for testing. However, these populations will remain hard-to-reach if the enabling environment is not strong. Social stigmas, discrimination by regulations and work are barriers that will need to be lowered through public awareness if Malaysia is to reach the core of the HIV/AIDS epidemic.

CONCLUSION

Malaysia has done well to halt and reverse the spread of HIV/AIDS in the nation. The number of deaths related to HIV/AIDS has also been kept low despite not achieving universal treatment coverage. In moving forward, Malaysia will need to take on the issues relating to balancing resources between preventive and curative interventions and relating to sexual transmission and the associated stigmas in order to further combat HIV/AIDS. These issues will be important for Malaysia to sustain her achievements and to build the resilience against HIV/AIDS in the future.

MALARIA

Malaysia is a low endemic country for malaria as it is only found in selected areas such as rural areas and forest fringes. These areas are receptive²⁰⁶ to the vector (Anopheles). Also, the vulnerability is mainly observed in primary industries such as agriculture, mining and logging. Nonetheless, malaria is an important vector borne disease in Malaysia because most of our neighbouring countries have moderate to high endemicity for malaria and the risk of reintroduction is present. Through years of effort, Malaysia has been successful in halting and reversing the incidence of human malaria ahead of the target year of 2015. In fact, Malaysia is among countries with the most marked declines in South-East Asia and Western Pacific regions²⁰⁷ and has done so ahead of the MDG target year. Nevertheless, the number of active foci (3,027) and people living within them (>1 million) remained high in 2014²⁰⁸ and continuous efforts will be needed to sustain these achievements.

Total malaria cases and incidence rate

Prior to 1960, Malaysia recorded approximately 300,000 cases of malaria a year. In 1967, Malaysia launched the Malaria Eradication Programme and total cases had been reduced to about 50,000 cases by 1980²⁰⁹. With the reorientation of the programme to the National Malaria Control Programme (NMCP) in 1982²¹⁰, total malaria cases continued to drop to 11,000 cases in 2002 (reflected in declining incidence rates declined from 1,400 per 100,000 population in 1970 to 45.2 in 2002). Total malaria cases have continued to fall to less than 4,000 in 2014 (an incidence rate of 13.03 per 100,000 population) (**Figure 6.3**). This marks a 76 per cent reduction in case incidence from 2000 to 2014.

²⁰⁶ Receptivity is a measure of the potential for an area or focus to allow transmission to occur and (risk of resurgence). Vulnerability is the probability of malaria reintroduction based on the proximity to other areas with malaria and the movement of people who are infected and vectors (importation risk).

²⁰⁷ Ministry of Health Malaysia and WHO and University of California, San Francisco (2015). *Eliminating Malaria: Case Study 8: Progress towards elimination in Malaysia*, Geneva: WHO.

²⁰⁸ WHO. *World Malaria Report 2014*, p. 62.

²⁰⁹ Malaysia. *Millennium Development Goals Report 2005*.

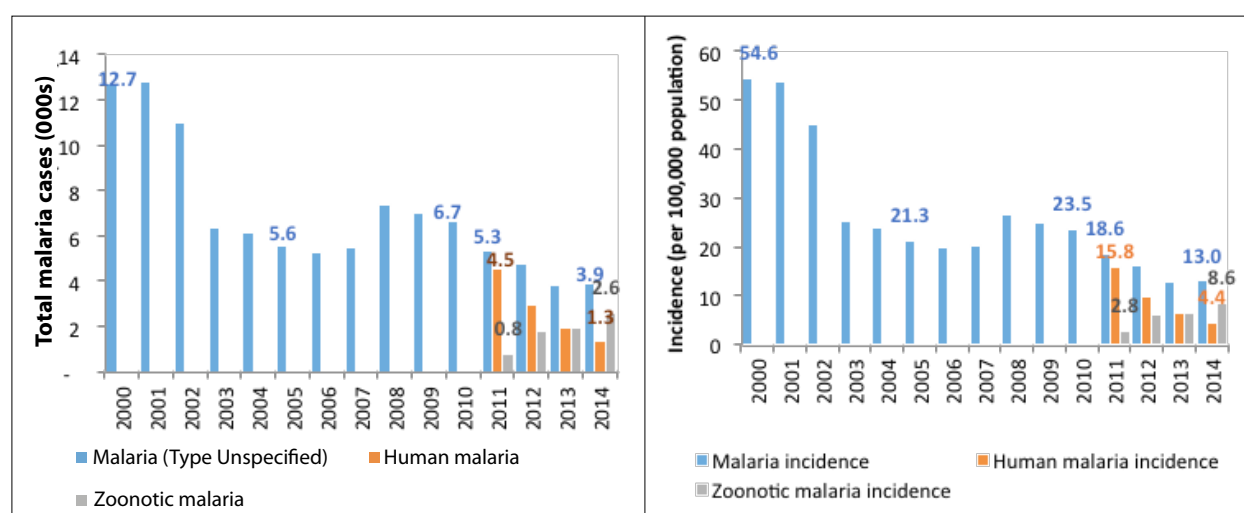
²¹⁰ Malaysia, Ministry of Health, WHO and University of California, San Francisco (2015). *Eliminating Malaria: Case Study 8: Progress towards elimination in Malaysia*, Geneva: WHO.

With these achievements, Malaysia has been categorised as being in the pre-elimination phase²¹¹, and the nation is now moving towards eliminating malaria by 2020. The goal is phased to eliminate malaria in Peninsular Malaysia by 2015 and in East Malaysia by 2020 with strategies as described in the National Elimination of Malaria Action Plan (2011-2020).

Malaysia has begun to differentiate between human malaria²¹² and zoonotic malaria since 2011 in line with WHO requirements for a malaria-free status. Human malaria incidence has decreased by 3,169 cases between 2011 and 2014 with incidence rates falling from 15.77

to 3.44, respectively, per 100,000 population. Most of the reductions were observed from locally transmitted human malaria, with indigenous cases down from 3,411 to 606 cases. Within the same period, imported cases have remained fairly constant due to the influx of foreign workers, especially in primary industries²¹³. The number of cases and the case incidence rate for zoonotic malaria has increased in the period of 2011–2013. This is mainly due to the adoption of polymerase chain reaction testing for species confirmation (**Figure 6.3**). Prior to this, most zoonotic cases would have been masked and placed in the human malaria category.

Figure 6.3:
Total malaria cases and incidence rate in Malaysia, 2000–2014



Note: Malaria cases are differentiated into human malaria and zoonotic malaria from 2011 onwards
Source: Malaysia, Ministry of Health, Disease Control Division, Malaria Sector, 2014

Mortality rates and case fatality rates

Mortality rates or deaths rates are important to assess the success of programme implementation and to identify possible failures of programmes in terms of prevention of malaria or access to effective treatment. In 2014, the

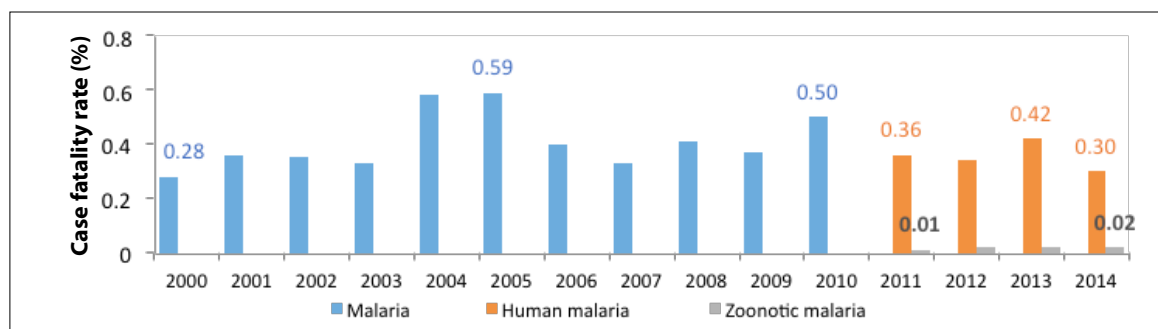
mortality rate of malaria was 0.03 per 100,000 population, a significant decline from 0.15 in 2000. Differentiating between human malaria and zoonotic malaria, mortality rates for the former declined from 0.05 in 2011 to 0.01 in 2014, respectively, per 100,000 population. As for the latter, mortality rates have been at 0.02 per 100,000 population since 2012.

²¹¹ WHO, World Malaria Report 2009. There are four phases in the path to malaria elimination: control, pre-elimination, elimination and prevention of reintroduction. The classification of countries by phases was done by WHO in 2008 and has been reported on since 2009.

²¹² Human malaria refers to transmission of the parasite between humans. There are four human malaria species viz. *Plasmodium falciparum*, *P. vivax*, *P. malariae* and *P. ovale*. Zoonotic malaria refers to the transmission of parasite *P. knowlesi* from animal (mainly monkey) to human. *P. knowlesi* cases were first reported in 2008. As of 2014, there is no human to human transmission of *P. knowlesi*.

²¹³ Malaysia Ministry of Health Disease Control Division, 2015.

Figure 6.4:
Case fatality rate of malaria in Malaysia, 2000–2014



Note: Malaria cases are differentiated into human malaria and zoonotic malaria from 2011 onwards.

Source: Malaysia, Ministry of Health, Disease Control Division, Malaria Sector, 2014

In situations where the fraction of all malaria deaths are small, like in Malaysia, case fatality rates in conjunction with case incidence is used to provide a better estimate of mortality²¹⁴. Case fatality refers to the total deaths divided by total known cases. Since 2000, case fatality rates have gradually increased from 0.28 per cent to 0.5 per cent in 2010. In 2011, the case fatality rate specifically for human malaria was 0.36 per cent. This fell to 0.30 per cent in 2014. While the percentages remain small, these trends suggest that accessing effective treatment may have been an issue at some point but has since stabilised. As for zoonotic malaria, the case fatality rate has been at 0.02 per cent since 2012.

Other patterns of Malaysia's malaria situation

By state

Despite the dramatic achievements made by Malaysia in reducing the incidence of malaria, the number of active foci remain high. Identifying these foci are important to properly direct interventions and disrupt the transmission of the disease. Historically,

the epidemiology of malaria has varied across the country, with the state of Sabah bearing the bulk of the disease burden. In 1991, 69 per cent of total cases were reported in Sabah, 5 per cent in Sarawak and 25 per cent for all Peninsular Malaysian states²¹⁵. Declines were observed in Peninsular Malaysia since 1991 and in Sabah since 1997, while sustained declines in Sarawak malaria cases were only observed after 2001²¹⁶. As of 2000, most cases were found in Sabah, Sarawak, and to a lesser extent, Pahang, Perak, Johor and Kelantan.

In states with higher malaria incidence amongst the indigenous population, control activities need to be carried out for at least one year in each locality that report malaria cases. In 2011, the states with the highest number of indigenous cases included Sabah (1,782 cases), Sarawak (1,131), Pahang (179) and Selangor (92). By 2014, the number of indigenous cases had dropped to less than 10 in all states except in Sabah (561), Sarawak (20) and Kelantan (11)²¹⁷. This illustrates the success of interventions in controlling indigenous cases.

²¹⁴ WHO. World Malaria Report 2014

²¹⁵ Malaysia Ministry of Health, WHO and University of California, San Francisco (2015). *Eliminating Malaria: Case Study 8: Progress towards elimination in Malaysia*, Geneva: WHO.

²¹⁶ Ibid.

²¹⁷ Malaysia Ministry of Health Disease Control Division, 2015

Upon further disaggregation, it is evident that most cases in Selangor are human malaria (90 per cent to 95 per cent). In contrast, the larger proportion of Sabah, Sarawak, Kelantan, Pahang and Perak cases are zoonotic malaria. Apart from Perak, this is both an effect of continuous declines in human malaria cases and actual increases in zoonotic malaria cases from 2011 to 2014²¹⁸. Nevertheless, states with the most human malaria cases are Sabah (620 cases), Selangor (307) and Sarawak (206).

By locality of infection

Malaysia is a nation that is vulnerable to malaria transmission from nearby endemic areas, both within and outside the country. In assessing the vulnerability towards the disease, it is important to differentiate whether the disease was contracted locally or imported. This is important because the former can indicate the success or failure of the vector control interventions within the nation, while the latter is dependent on the home countries of migrant workers or visitors. For countries that have eliminated or are close to eliminating the disease, the latter is associated with the reintroduction of the disease or other variants such as drug resistant malaria. It is therefore important for the receiving country to identify individuals who are infected with malaria. As “imported or locally acquired” is not decided by citizenship, it is possible for those who are not citizens to contract the disease in Malaysia.

In 2005, imported cases accounted for 10.5 per cent of all national cases with most cases coming from Indonesia, Papua New Guinea and sub-Saharan Africa. As of 2009, the majority of cases were still indigenous, that is locally acquired. Since 2011, the number of indigenous and

imported cases of human malaria has reduced over time. However, the reduction was greater for cases of indigenous human malaria than for imported cases and thus a disproportionate increase in the percentage share of imported human malaria out of total human malaria cases is observed, from 24.3 per cent to 54.7 per cent between 2011 and 2014²¹⁹. In contrast, most zoonotic malaria cases are locally acquired (94.0 per cent to 98.6 per cent from 2011 to 2014).

Moving forward

Factors behind malaria trends in Malaysia

Malaysia has battled malaria for the most part of its recent history. The nation’s success in malaria control has not been a straightforward journey. Rather, it is the outcome of timely re-orientation of programmes built on experiences gained over time.

In 1967, Malaysia launched the Malaria Eradication Programme, mainly in Peninsular Malaysia, as a participant to the global programme. By 1981, it was apparent that elimination was not possible although substantial number of cases fell in Peninsular Malaysia and Sarawak. Indeed, the global programme itself had been discontinued in 1969. This was largely due to the overreliance on indoor residual spraying (IRS) as the main control strategy, the lack of flexibility in programming for different countries and cultures, resistance to insecticide and chloroquine and decreases in funding. In 1982, this programme was re-oriented to become the NMCP²²⁰.

²¹⁸ Malaysia, Ministry of Health Disease Control Division, 2015

²¹⁹ *Ibid.*

²²⁰ Malaysia, Ministry of Health, WHO and University of California, San Francisco (2015). *Eliminating Malaria: Case Study 8: Progress towards elimination in Malaysia*, Geneva: WHO.

In the NMCP, Malaysia refocused on establishing a strong surveillance system, increasing the coverage of IRS and insecticide treated nets (ITN) nationwide and the early detection and response to cases between 1982 and 2004. The malaria control services in the country were also integrated into the Vector-Borne Disease Programme with Sabah and Sarawak being integrated by 1986. Additionally, a Primary Healthcare Approach to malaria control was adopted in 1990. This allowed diagnosis to be carried out at clinics and hospitals instead of solely by malaria control programme staff. In Sabah, where the most cases are reported, the establishment of subsector malaria offices in remote localities supported by a corps of primary healthcare volunteers resulted in dramatic declines in cases.

From 1995 onwards, Malaysia implemented a nationwide distribution of ITN. The online surveillance system (Vekpro online) and an online notification system (eNotifikasi) introduced in 2000 also led to more sophisticated tracking and analysis on the epidemiology of malaria at district, state and national levels. In 2003, Malaysia started the National Anti-malarial Drug Response Surveillance programme to monitor and prevent introduction of drug-resistant malaria from the nearby Mekong region. The National Public Health Laboratory also set up an entomology unit in 2012 to monitor the resistance of anopheles mosquitoes to insecticide.

Malaysia has moved towards eliminating malaria. Since 2005, the NMCP has targeted high risk groups for active case detection where mass blood surveys are carried out routinely. These groups include the military (those stationed in Sabah and Sarawak and who travel to high malaria endemic countries for missions); Orang Asli (indigenous people) of Peninsular Malaysia; mobile populations in Sarawak; remote, forest dwelling populations in Sabah; foreign travellers, migrant workers (the top 5 countries where migrant workers originate from are Philippines, Indonesia, Viet Nam, Bangladesh and Nepal); and students returning to school hostels from visits to their rural home villages. Districts have also been re-stratified since 2008 by transmission risk based on indigenous malaria case incidence. This would then translate to the requirement of vector control activity in each locality (foci). Surveillance capacities have also been improved with the re-development of the Vekpro online and eNotifikasi systems and the increase in entomological staff in Sabah and Sarawak district malaria control offices. Investigations into the origin, whether imported or local, are also currently conducted.

In addition, a quality assurance programme for microscopy has been implemented since 2007 in all states and Integrated Vector Management (IVM) is currently being introduced to collaborate with the private sector and community. In Sabah, informal collaborations with private sector plantations since the early 2000s have contributed to decreases in outbreaks by 2005. The ongoing focus of the MOH to strengthen the healthcare system and the success of the NMCP in building political, financial and human resource commitment²²¹ towards elimination further contributes to Malaysia's success in reaching and maintaining the pre-elimination phase of malaria and the progression towards elimination of malaria.

²²¹ WHO, 2015. *Eliminating malaria case study 8: Progress towards elimination in Malaysia*.

Remaining issues

There are several challenges for Malaysia in order to become a malaria free nation by 2020.

Prevention of reintroduction of malaria cases is a remaining issue, even though imported cases will not affect Malaysia's certification of being malaria free in 2020. By proportion, imported cases now contribute more than half of the total number of cases. While this may reflect the success in controlling local transmission of malaria, it also highlights the need to more effectively detect imported cases in order to prevent reintroduction. Apart from reintroduction of the disease into malaria free areas, there will also need to be vigilant in preventing the introduction of artemisinin resistant malaria strains from the nearby Mekong region.

Vulnerability is likely to persist as Malaysia continues to attract significant populations of migrant workers, tourists and students from endemic countries in South-East Asia, the Middle East and Africa. Additionally, undocumented migrants may continue to pose a challenge, as these populations are hard to access and trace and the borders in certain areas are very porous. In addition, the existing surveillance amongst high risk populations needs to be strengthened despite the reduction in the number of cases.

Accessing mobile and remote populations in Sabah and Sarawak is also a remaining issue. While both states have experienced a large decline in malaria cases since the 1990s, Sabah and Sarawak still contribute significant numbers of human malaria cases nationally.

The control of parasite *P. vivax*, which is now the major species causing human malaria must be maintained. Because of its submicroscopic nature, the parasite is hard to detect using the rapid test kit and microscopic tests. Also the presence of the parasite in the liver (hypnozoites) could result in a relapse later on, up to 3 years from the time of infection.

The increase in *P. knowlesi* cases is also a remaining issue. While the mortality rate and case fatality of these cases is low, continuous surveillance and development of methods to disrupt its transmission is needed so that this will not become a future hazard.

Conclusion

Malaysia has done well to reduce the number of malaria cases nationally and at state level and is moving close to eliminating malaria by 2020. Case fatalities and mortality rates for malaria are also low. These achievements have been made and will continue to be pushed higher through a combination of interventions that have been well supported by the strong healthcare system in the country and continuous political and financial support.

TUBERCULOSIS

Tuberculosis (TB) remains as one of the world's deadliest diseases with 1.5 million lives lost globally to TB in 2013 alone. The disease is caused by the infection of the bacteria *Mycobacterium tuberculosis* and is spread through coughing or other activities likely to generate aerosol particles through the air. TB is currently the second leading cause of deaths from an infectious disease worldwide after HIV²²².

Table 6.3:
Comparison of number of cases and deaths, incidence and mortality rate of selected infectious diseases in Malaysia, 2013

	Number of cases	Incidence rate (per 100,000 population)	Number of deaths	Mortality rate (per 100,000 population)
Vector borne				
Dengue fever	42,572	143.27		
Malaria	3,850	12.96	14	0.05
Dengue haemorrhagic fever	774	2.60	92	0.31
Other infectious disease				
Hand, Foot and Mouth Disease	23,331	78.52	1	0.00
TB	23,262	78.28	1,597	5.37
Leptospirosis	4,457	15.00	71	0.24
HIV	3,393	11.42	171	0.58
Hepatitis C	2,011	6.77	36	0.12
AIDS	1,188	4.00	481	1.62

Source: Ministry of Health, Health Indicators 2014

In Malaysia, TB is a cause for concern with the re-emergence of the disease being observed since 1985²²³. In contrast to the global declines, the number of TB cases and associated deaths in Malaysia has continued to climb past the 1990 levels. While the nation is not considered a high burden country, it is important to recognise that TB is the current leading cause of mortality from infectious diseases in Malaysia and it outstrips most other infectious diseases in both number of cases and number of deaths every year (**Table 6.3**).

²²² WHO, Global Tuberculosis Report 2014.

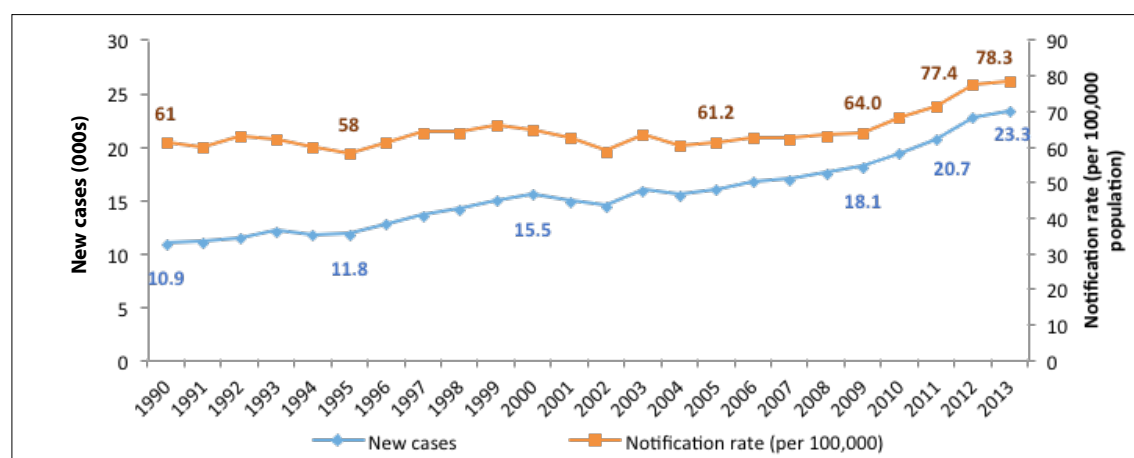
²²³ There were 14,000 cases of TB in Malaysia in 1980 and this fell to 10,569 cases in 1985. Since then cases have risen to 10,873 cases in 1990 to 11,778 cases in 1995 and 15,057 cases in 2000. Source: Malaysia, Ministry of Health, Disease Control Division.

Total TB cases (all forms)²²⁴, notification²²⁵ and case detection rate of TB

TB was a leading cause of deaths in Malaya²²⁶ in the 1940s and 1950s. In 1961, Malaysia launched the National TB Control Programme (NTP) to integrate, coordinate and monitor TB in the country. Much progress was made between 1970 and 1990 to control the disease. As of 1990, there were 10,873 cases of new TB cases reported (all forms) with notification rate of 61 per 100,000 population. From 1995 onwards, the number of new cases and notification rates have been increasing. As of 2013, the total TB cases were double the 1995 figures and 28 per cent higher than the 2009 figures (Figure 6.5). The notification rate for TB in 2013 was 78 per 100,000 population.

When interpreting the trends in the country, it is important to consider the case detection rate. This is because the increase in new TB cases may not be an increase in absolute cases but rather an improvement in case detection. Cases that remain undetected are undiagnosed, diagnosed but not reported or misdiagnosed. This gap can have a profound impact towards understanding the scale and spread of the disease.

Figure 6.5:
Number of reported TB cases (all forms) and notification rates per 100,000 population, 1990–2013



Source: Malaysia, Ministry of Health, Disease Control Division, TB/Leprosy Sector.

Since 2000, Malaysia has achieved a case detection rate of about 70 per cent, using the definition of positive smear cases. This began to increase around 2006 and has reached 95 per cent as of 2013. In 2012, Malaysia started the present case detection rates for all new and relapse cases. By ensuring high detection rates for both new and relapse cases, the information can be used to generate a better picture of the TB incidence in Malaysia.

²²⁴ Includes new and relapse TB cases.

²²⁵ Notification rate is a good proxy for incidence rate in situations where there is high performance surveillance (for example, there is little underreporting of diagnosed cases) and where the quality of and access to healthcare means that few cases are not diagnosed. With the increase in case detection, Malaysia now uses notification rate interchangeably with incidence rate. Source of description is WHO Global Tuberculosis Report 2014.

²²⁶ See <http://www.ncbi.nlm.nih.gov/pubmed/14670340> (original source: Iwayoo Tuberculosis in Malaysia, Tuberculosis (Edinb). 2004;84(1-2):4-7).

Malaysia has also been increasing the number of screenings done for vulnerable groups in recent years. These include prison inmates, drug rehabilitation centre inmates, people in “homes for the aged” and also amongst healthcare workers. These vulnerable groups tend to have higher notification rates than the general population. For example, the notification rate for prison inmates was 306 per 100,000 inmates compared to the general population's rate of 62 per 100,000 population in 2007. As of 2013, the notification rate for prison inmates was 408 per 100,000 inmates, while that of the general population was 78 per 100,000 population.

Cure rate and number of TB related deaths

Without treatment, TB mortality rates are high. However, with the development of effective treatments, most TB deaths are now preventable. The first effective drug treatment for TB was developed in the 1940s and the most effective first line anti-TB drug became available in the 1960s. Over the years, the recommended treatment by WHO has evolved into a six month regimen of four first line drugs and administered through the Directly Observed Treatment, Short-course (DOTS) strategy. Globally, DOTS has demonstrated an 86 per cent success rate as of 2012²²⁷.

Malaysia has been using the treatment recommended by WHO since 1999. The cure rate for TB was at 78 per cent in 2000 and this declined to 67 per cent by 2007. Cure rates have since recovered to 78 per cent in 2009 and this was maintained until 2013. While this is still below the World Health Assembly target of 85 per cent, Malaysia has done well to maintain relatively high cure rates for more than a decade. The rate of patients lost to follow-up of treatment under DOTS is also low at 1.12 per cent and it would be 4 to 5 per cent if all cases were included.

Reflecting the relatively good treatment outcomes, the absolute number of TB deaths is much smaller than the number of new TB cases notified. Nevertheless, the number of deaths has increased gradually from 948 deaths in 2000 to 1,597 deaths in 2013. Also, mortality rates for TB have consistently been highest compared to other infectious diseases in Malaysia. As of 2013, the mortality rate of TB in the country was 5.37 per 100,000 population.

²²⁷ WHO, *Global Tuberculosis Report 2014*.

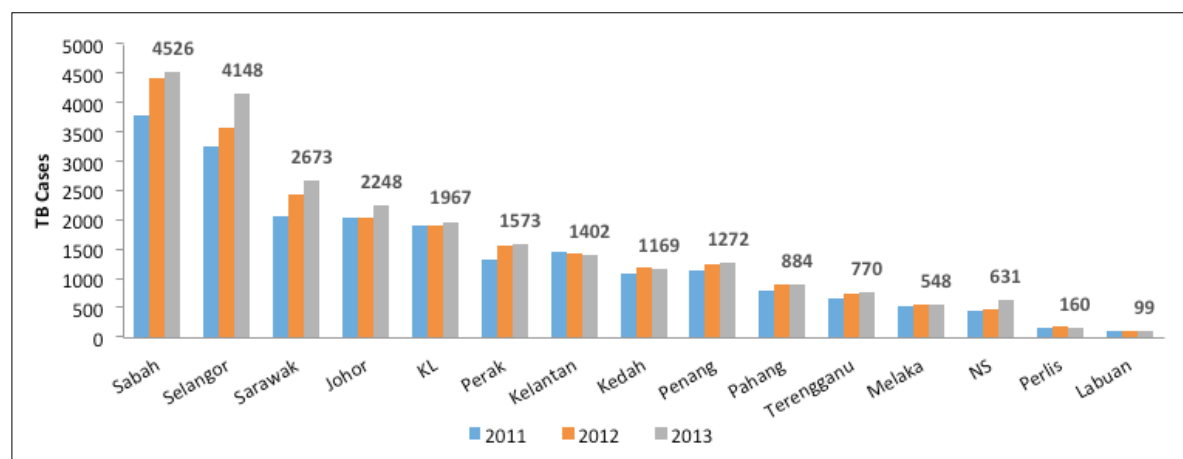
Other patterns in the Malaysian TB scenario

By state

The states of Sabah, Sarawak, Kelantan and FT Kuala Lumpur have had TB notification rates that are above the national rates over the entire period of 2000–2013. As of 2013, the notification rate for TB in Sabah was 137.0 per 100,000 population, while that of FT Kuala Lumpur, Sarawak and Kelantan were, respectively, 108.4, 103.7 and 84.2 per 100,000 population. For Sabah, these rates mark a significant decline compared to 1990 levels when it was 194.4 per 1000 population. In absolute numbers, the majority of new TB cases are reported in Sabah, Sarawak, Selangor and Johor, where 58 per cent of all new TB cases in Malaysia in 2013 were found. In addition, these states have reported substantial increases in TB cases in the last three years.

In terms of cure rates, Malaysia has achieved rates above 70 per cent for all states except in Selangor (70 per cent cure rate) and FT Kuala Lumpur (68 per cent) for 2013 cohort²²⁸. States with the highest cure rate included Sabah, Sarawak, Kelantan and P. Pinang with more than 83 per cent cure rates. As for patients lost to follow-up under DOTS, most states in Malaysia have achieved less than 1 per cent lost for cohort 2013 with the exception of five states where the percentage was slightly higher at 2 per cent to 3 per cent.

Figure 6.6:
Number of new TB cases (all forms) notified per state, 2011–2013



Source: Malaysia, Ministry of Health, Disease Control Division, TB/Leprosy Sector.

²²⁸ Malaysia, Ministry of Health, Disease Control Division, TB/Leprosy Sector, 2014 (upon request, data as of 3 July 2015)

By gender

Similar to the global trends, there is a tendency in Malaysia for TB cases to involve more males than females. In 2013, males constituted 15,587 cases or nearly 65 per cent of the 24,071 cases reported in Malaysia. This percentage was largely the same in all states. In terms of cure rates, females had higher cure rates than males. Based on the treatment outcomes from January to July of the 2013 cohort, females had a cure rate of 84.2 per cent compared to that of males at 75.8 per cent. Again, these patterns were largely the same at state level. In fact, the loss to follow-up to treatment under DOTS tended to be higher among males with 1.5 per cent of cases involving males being lost compared to 0.5 per cent of female cases being lost.

By citizenship

In general, there are more TB cases among Malaysians than non-citizens. As of 2013, Malaysians account for 85.8 per cent of all TB cases (74.9 per 100,000 population, having increased from 58 per 100,000 population in 2005). Indeed, the number of TB cases involving non-citizens amounts to only 3,424 cases out of 23,262 total TB cases in 2013 despite almost doubling since 2005 (1,766 cases)²²⁹.

TB-HIV co-infection

TB-HIV co-infection has emerged as a contemporary issue in the spread of TB worldwide. It is estimated that people living with HIV are 26 to 31 times more at risk of developing TB compared to those without HIV infection. Globally, it is estimated that about 13 per cent of people who developed TB in 2013 were HIV positive. In comparison, in Malaysia in 2013, only 1,283 cases (5.3 per cent) of total TB cases were reported to be co-infected with HIV.

Exploring the trends over time, it is apparent that there were almost no such co-infections during the early 1990s. The number of co-infection cases began to climb after 1994 to a peak in 2008 before declining gradually through to 2013. This period between 2004 and 2011, when about 8 per cent to 10 per cent of TB cases involved people who were HIV positive²³⁰, coincided with the increases in HIV notification from 2002 to 2007. By state, Selangor, Kelantan, Johor and FT Kuala Lumpur have the most TB-HIV cases reported. These four states account for 52 per cent of all TB-HIV cases in 2012²³¹.

Multidrug-resistant TB (MDR-TB)

Multidrug-resistant TB is defined as resistance to isoniazid and rifampicin, which are the two first-line anti-TB drugs. The current regimen to treat MDR-TB, as recommended by WHO, takes 20 months. It requires the use of more expensive and more toxic drugs and treatment success rates are much lower (48 per cent globally). Globally, there are 3.5 per cent of new cases and 20.5 per cent of previously treated cases with MDR-TB as of 2013. This percentage has been largely the same for recent years.

²²⁹ Malaysia, Ministry of Health, Disease Control Division, TB/Leprosy Sector, 2014.

²³⁰ Ibid.

²³¹ Malaysia, Ministry of Health. Annual Report 2012.

In Malaysia, the number of MDR-TB cases is relatively low compared to global levels. As of 2013, MDR-TB has been reported in about 0.5 per cent of all forms of notified TB cases and 0.9 per cent of samples that were sent for drug susceptibility testing (DST)²³². Albeit being small changes, there has been an increasing trend observed in the actual numbers of MDR-TB reported between 2004 and 2013. In 2004, MDR-TB cases represented 0.08 per cent of all notified TB cases and 0.3 per cent of samples sent for DST.

Moving forward

Factors behind TB trends in Malaysia

In the 1970s to 1990s, Malaysia made progress in controlling TB mainly through the improvements in nutrition and housing, better ventilation of homes and work sites and strengthened health systems. In addition, Malaysia launched the NTP in 1961 and with that, the isolation of highly infectious TB cases in sanatoria. Under the NTP, Malaysia also implemented BCG vaccination of all newborn babies in the 1960s²³³. In 1988, TB was gazetted as a notifiable disease. In 1995, the TB programme was integrated into the Malaysian Public Health System where the main control activities were expanded into the peripheral health clinics and districts hospitals.

A number of factors have contributed to the resurgence of the disease since 1995. One factor was the increase in HIV/AIDS infection in Malaysia that peaked in 2002. By 2002, there were more than 45,000 people living with HIV who were vulnerable to TB infection. With the increase in migrants, documented and undocumented, from endemic countries as well as urban migration, also contributed to TB's spread. These populations tend to stay in poorer living conditions where overcrowding and lack of ventilation are common thus allowing easier transmission of the disease.

Recognising the public health concerns of TB, Malaysia embarked on several measures to control the disease. In 1999, Malaysia implemented the DOTS treatment strategy to improve treatment adherence and to better monitor and evaluate treatment outcomes and cure rates. In 2002, the National Tuberculosis Information System was launched. The system would bring together information from the notification system of infectious diseases and the case-based TB surveillance system to standardised reporting and monitoring of the disease. Guidelines for managing and controlling TB including guidelines specifically for prisons and rehabilitation centres were also introduced in the early 2000s. Under the continuation of the NTP, Malaysia also implemented mandatory screening for foreign workers²³⁴.

²³² DST is used to determine, which TB drugs a person is sensitive to, and whether the person has drug-resistant TB.

²³³ Malaysia, Ministry of Health. Annual Report 2011.

²³⁴ This does not include migrants who enter the country illegally.

At present, Malaysia has been implementing the National Strategic Plan for TB Control (2011-2015) since 2011. Initiatives under this Plan include the upgrading in diagnostic tools in MOH facilities and treatment centres, enhancing TB screening activities in prisons, nursing homes and drug rehabilitation centres as well as high-risk groups, and ensuring that medication for TB is free to all Malaysian citizens, among others. In fact, the MOH has also increased screenings of health workers who are at risk of being exposed to TB. Additionally, the Plan has strategies to empower people with TB and the community to reduce the delay for diagnosis and the start of treatment; and to promote relevant research for TB.

Remaining issues

Bearing in mind the current trends and the existing efforts, there are several remaining issues that need to be highlighted.

The sustainability of the NTP and the continuation of meaningful and effective partnerships to deal with TB. Continuous commitments and coordinated effort nationwide are pertinent to control the disease in the future.

The management of TB amongst high-risk groups: Programmatic efforts need to be strengthened towards the management of TB among high risk groups to address the urban poor as well as refugees, stateless and undocumented persons who live and work in conditions that are vulnerable to TB disease transmission. Due to other stigmas attached to their status and fears of deportation, these groups may also not be able to access the information and services to prevent or treat TB.

Dealing with these groups, as well as strengthening awareness amongst the general Malaysian community, will be necessary to reduce an undiagnosed pool of TB that may lead to the spread of the disease. In fact, Malaysia has been making commendable efforts to increase case detection and this needs to be further supported. At the same time, efforts to reduce relapse cases, treatment failure cases and default cases will need to be continued and strengthened.

Community participation and high public awareness:

Both are crucial to reduce delays in diagnosis and treatment initiation as well as to support patients' adherence to treatment, in effect, to build resilience against the disease.

The gradual increase in multidrug resistant TB:

Presently there are few cases of MDR-TB in Malaysia and treatment adherence is also relatively high. However, sustaining these achievements is necessary to ensure that drug resistance does not increase. Also, continuous research as well as differentiating relapse cases with MDR-TB from new cases will be necessary to further the understanding of MDR-TB and its prevention.

Conclusion

Despite the increase in the number of cases, Malaysia has done well to increase case detection of TB, maintain relatively high treatment adherence and cure rates as well as low mortality rates, especially in recent years. Nevertheless, more effort and commitment is needed to combat the spread of TB and eliminating it by 2050.

ANNEX 6.1

TARGETS AND INDICATORS

Table 6.4:
MDG 6 Target and Indicators²³⁵

Target	Indicators		Notes
Target 6.a: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	6.1	HIV prevalence amongst population aged 15–24 years	The measure of prevalence among the general population that is disaggregated by age is best used in countries that have “generalised” HIV epidemic. Malaysia, however, clearly shows characteristics of “concentrated” HIV epidemic. A more appropriate indicator would be prevalence among key populations. Where available, these measures are presented (also in subsequent indicators). The alternative measure of HIV prevalence is the use of national estimates of the epidemic that requires specific HIV modelling tools with input data based on population-specific surveillance. Malaysia’s surveillance data on HIV/AIDS are compatible with modelling done via either Estimation and Projection Package (EPP) or Asian Epidemic Model (AEM). Data from HIV surveillance system such as notification rate, case detection and reported HIV/AIDS-related deaths are also presented.
	6.2	Condom use at last high-risk sex	This indicator is presented at disaggregated level by key populations. There is insufficient data to show trend over time. The first nationwide bio-behavioural study of key populations was conducted in 2012.
	6.3	Proportion of population aged 15–24 years with comprehensive correct knowledge of HIV/AIDS	This indicator is presented at disaggregated level by key populations.
	6.4	Ratio of school attendance of orphans to school attendance of non-orphans aged 10–14 years	Not relevant

²³⁵ Malaysia, MDGR 2010

Target		Indicators	Notes
Target 6.b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	6.5	Proportion of population with advanced HIV infection with access to antiretroviral drugs	Measures of proportion depend on the denominators that are produced from modelling estimates. The absolute number of people living with HIV who are on Antiretroviral Therapy is divided by the estimated number of people who are eligible. Previous estimates use CD4 counts of <200 cells/mm ³ , while from 2009 onwards, the revised WHO guideline of <300cells/mm ³ is used to estimate the number of eligible people for Antiretroviral Therapy.
Target 6.c: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	6.6	Incidence and death rates associated with malaria	Data available from the malaria surveillance database.
	6.7	Proportion of children under five sleeping under insecticide-treated bed nets	Not relevant.
	6.8	Proportion of children under five with fever who are treated with appropriate anti-malarial drugs	Not relevant.
	6.9	Incidence, prevalence and death rates associated with tuberculosis	Data available from tuberculosis surveillance database.
	6.10	Proportion of tuberculosis cases detected and cured under directly observed treatment, short-course	Data from surveillance database.

ANNEX 6.2

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MDG 7



**ENSURE
ENVIRONMENTAL
SUSTAINABILITY**

INTRODUCTION

The seventh Millennium Development Goal (MDG 7) has four targets and 10 indicators:

- Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources
- Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss
- Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation
- Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers.



MDG 7 is concerned with environmental sustainability or the conditions, which provide long-term services and support to a country's people and their economic activities. The natural environment is a resource with limits and thresholds. When those limits are breached or exceeded, environmental quality declines, resulting in degradation, depletion and pollution. Despite this truism, economic growth has often been given priority over the environment. In turn, this choice has undermined human welfare, health and quality of life of the people. True development needs to respect the delicate balance of the ecological and environmental limits while pursuing development goals; as otherwise the sustainability of human development could be seriously undermined, losing our resilience and exposing our vulnerability to natural calamities when they strike.

Malaysia's scorecard on MDG 7 is high in some areas while needing attention in others. Malaysia has legislated laws and formulated policies on natural resources and environmental quality, such as the National Policy on Biological Diversity and the National Policy on Climate Change. We have developed sustainable forestry practices and programmes, and identified priorities for protection and conservation of natural resources. More than 90 per cent of the people in Malaysia have access to sustainable water and sanitation facilities. A public housing programme was started long before 2000, but the demand has always exceeded the supply.

PRINCIPLES OF SUSTAINABLE DEVELOPMENT

Malaysia recognises its international commitment to sustainable development. As a signatory to several multilateral environmental agreements, Malaysia is committed to fulfilling its global commitments under the key conventions and protocols on biodiversity, climate change and environmental pollution as shown in **Table 7.1**.

Malaysia has also participated actively in the negotiation of two protocols: the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, and the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress.

Table 7.1:
Multilateral environmental agreements adopted by Malaysia

Title	Date of adoption of agreement	Date Malaysia ratified (r) or acceded (ac)
Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR Convention)	2 February 1971	10 December 1994 (ac)
Convention on International Trade in Endangered Species of Wild Fauna and Flora	3 March 1973	20 October 1977 (ac)
Vienna Convention for the Protection of the Ozone Layer	22 March 1985	29 August 1989 (ac)
Montreal Protocol on Substances that Deplete the Ozone Layer (1987)	16 September 1987	29 August 1989 (ac)
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	22 March 1989	8 October 1993 (ac)
Convention on Biological Diversity	5 June 1992	24 June 1994 (r)
United Nations Framework Convention on Climate Change (UNFCCC)	9 May 1992	13 July 1994 (r)
Kyoto Protocol to the UNFCCC	11 December 1997	4 September 2002 (r)
Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade	10 September 1998	4 September 2002 (ac)
Cartagena Protocol on Biosafety	29 January 2000	3 September 2003 (r)
ASEAN Agreement on Transboundary Haze Pollution	10 June 2002	3 December 2002 (r)
Stockholm Convention on Persistent Organic Pollutants	23 May 2001	24 May 2000 (ac)
ASEAN Agreement on the Conservation of Nature and Natural Resources	9 July 1985	
International Convention on Civil Liability for Oil Pollution Damage	29 November 1969	
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage	18 December 1971	
International Convention on Oil Pollution Preparedness, Response and Cooperation	30 November 1990	
United Nations Convention to Combat Desertification (UNCCD)		1997 (r)
United Nations Convention on the Law of the Sea (UNCLOS)		1996 (r)

Source: Malaysia: Attorney General's Chambers of Malaysia, 2011; Ministry of Foreign Affairs Malaysia, 2014; EPU-UNDP National Report for Rio+20: Malaysia's Progress on Sustainable Development

National initiatives

As a developing country with rich natural resources, Malaysia highlighted the importance of environmental sustainability in national development planning in the Third Malaysia Plan (1976–1980). This environmental priority has been maintained in subsequent national development plans. Specifically, in the 10th Malaysia Plan (2011–2015) it was stated that the government's agenda "will be one of protecting the environmental quality of life, caring for the planet, while harnessing economic value from the process. In achieving this, amongst others, the government will be guided by sustainable production practices to decouple economic growth from environmental degradation."

In the 11th Malaysia Plan (2016–2020), green growth has been identified as a key thrust to achieve sustainability and resilience. In the 11MP, the government shifted the paradigm of sustainability from a narrow focus on natural assets to include sustainable consumption and production processes in all sectors and households.

Green growth is defined as growth that is resource efficient, clean and resilient. It pledges that Malaysia's precious environment and natural endowment will be conserved and protected for the present and future generations.

The National Physical Plan 2010 is another key policy instrument in sustainable development as it locates all the major environmentally sensitive areas in Peninsular Malaysia, and aims to strengthen national planning by offering a spatial dimension to national development planning. State governments and local authorities have adopted this national plan. **Table 7.2** presents sectoral policy instruments that have elements of environmental sustainability integrated into planning.

Table 7.2:
Sector and environmental policy instruments

Policy instruments	Policy instruments
National Physical Plan 2010	National Policy on Climate Change 2009
National Urbanisation Policy 2006	National Policy on the Environment 2002
Malaysian Urban Indicator Network 2004	National Energy Policy 1979
Third National Agriculture Policy 1998–2010	National Green Technology Policy 2009
National Agrofood Policy 2011–2020	National Renewable Energy Policy and Action Plan 2010
National Policy on Biological Diversity 1998	Four-Fuel Diversification Policy, 1981
National Wetlands Policy 2004	National Petroleum Policy, 1975
Common Vision on Biodiversity 2009	National Depletion Policy, 1980
National Forestry Policy 1978 (revised 1992)	Five Fuel Policy 2001
Baseline Information on Environmental Health for Peninsular Malaysia 2007	National Bio-fuel Policy 2007
National Water Resources Policy (NWRP) 2012	

Source: Malaysia: *The Millennium Development Goals at 2010*, Malaysia's Fifth National Report to the Convention on Biological Diversity 2014; EPU-UNDP *Economics of Climate Change Malaysia Synthesis Report 2014*

Beyond national plans, other initiatives have been undertaken to change the behaviour and lifestyle of Malaysians. Several of the initiatives include: a Green Technology Financing Scheme to encourage entrepreneurs and organisations to produce or use green technology; MyHIJAU programme, which attempts to create a green market of green products and services via a directory and guide for producers and suppliers with consumers; the low carbon cities framework, which aims at reducing carbon emissions; organising an annual international conference and exhibition on eco products; providing a loan (Sustainable Mobility Fund) for manufacture of electric buses; and a government green procurement programme that uses its huge demand to stimulate production of green products and services.

Malaysia launched the National Corporate Greenhouse Gas (GHG) Reporting Programme, known as MYCarbon, in 2013 to allow the Ministry of Natural Resources and Environment to keep track of progress towards emissions reduction. Malaysia also established the Feed-in Tariff in 2011 to promote the production and use of renewable energy. Also, a National Conservation Trust Fund was announced in the 2013-2014 Budget speech to improve

financing for biodiversity conservation in Malaysia. Prior to the UN Framework on Climate Change (UNFCCC) Conference of Parties (COP) 21 in Paris, December 2015, Malaysia submitted its Intended Nationally Determined Contributions (INDC), where it intends to reduce its greenhouse gas (GHG) emissions intensity of GDP by 45 per cent by 2030 relative to the emissions intensity of GDP in 2005. This consists of 35 per cent on an unconditional basis and a further 10 per cent is conditional upon receipt of climate finance, technology transfer and capacity building from developed countries.

Composite measures of sustainability

As a measure of sustainability, the Living Planet Report 2012 reported that in 2008 Malaysia's ecological footprint – an indicator for consumption – was 3.9 global hectares per person²³⁶, the highest since it was first estimated in 1999. As the global average is only 2.7 global hectares per person, Malaysia's development achievements are mainly based on high consumption of resources, using 40 per cent more resources than the global average.

Table 7.3:
Ecological footprint of Malaysia and the world (global hectares per person)

Year	Malaysia	World/Global
1999	3.16	2.3
2001	3.0	2.2
2003	2.2	2.2
2005	2.4	2.7
2008	3.9	2.7

Note: The global available biocapacity was 2.1 global hectares per person.

Source: Malaysia's Fourth National Report to the Convention on Biological Diversity 2009, WWF Living Planet Report 2012 and 2014, WWF Living Planet Report 2006, WWF Living Planet Report 2004.

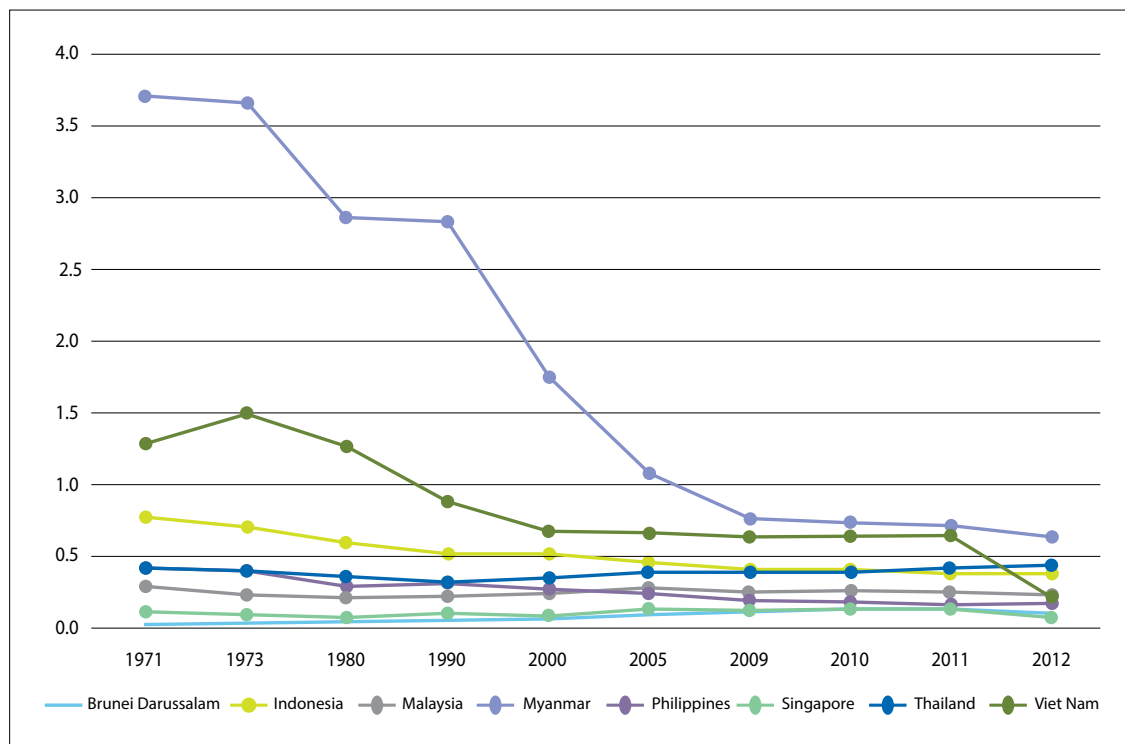
²³⁶ WWF International and Others (2008)

Sustainability indicators

One indicator of sustainability is to link outputs to inputs. Over time, sustainability is attained when more output is generated for the same level of input. In this regard, one measure of sustainability is the “energy use per unit GDP” indicator. It shows the amount of energy required to produce one unit of economic output and is also an indicator of economic efficiency. Associated with this, would be the concept of decoupling economic output from energy use. If instead of energy, GHG or carbon dioxide emissions were used, then this indicator would show emissions intensity of economic output, and hence, a link to “climate change”. Malaysia, in 2009, agreed to voluntarily reduce GHG emissions intensity of GDP by up to 40 per cent by 2020 compared to 2005 intensity level baseline that is subjected to provisions of the means of implementation by developed countries. In the 11MP, it was reported that Malaysia had already achieved 33 per cent reduction of this indicator as of 2014.

Figure 7.1 shows the energy intensity indicator for several ASEAN countries, including Malaysia, between 1971 and 2012. Within the MDG reference years, 2000 and 2012, a slight decoupling was seen in Malaysia as this indicator fell from 0.26 to 0.23, or 11.5 per cent decline, indicating some efficiency gains. Another factor contributing to efficiency gains is the rationalisation of fuel subsidy. Businesses and companies must shift to energy saving devices and adopt energy conservation practices in order to be more competitive.

Figure 7.1:
Energy intensity in selected ASEAN countries, energy use per unit GDP (Mtoe/Billion US\$), 1971–2012



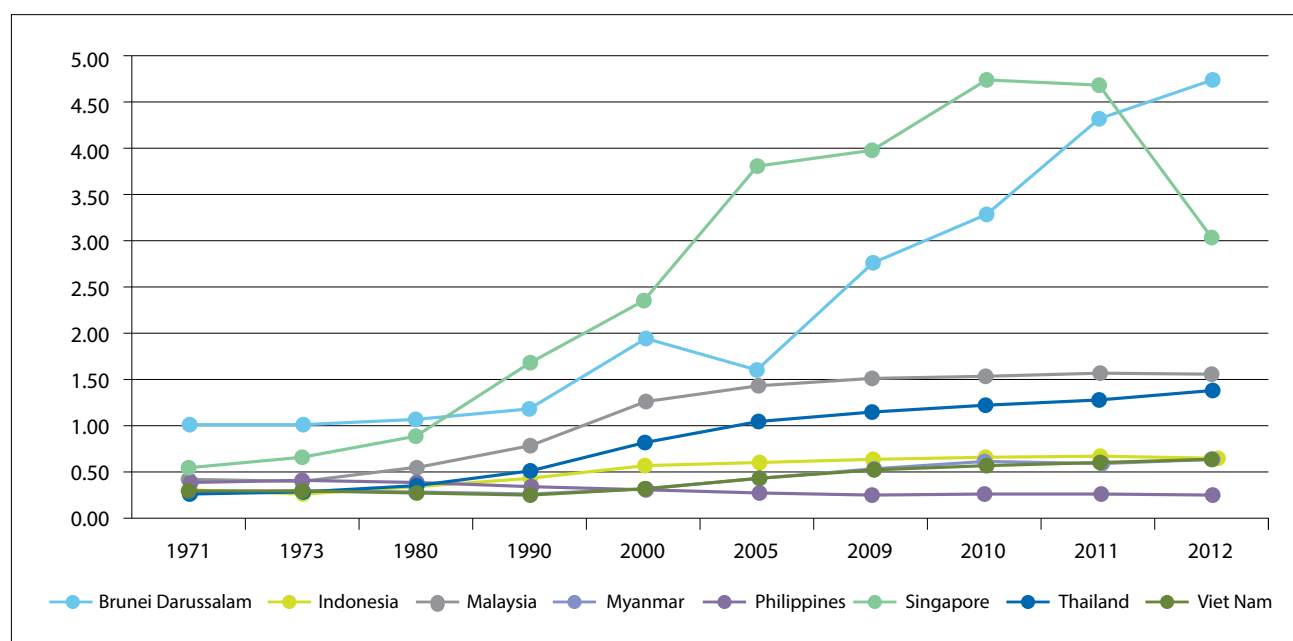
Mtoe, million tonnes of oil equivalent

Source: Malaysia. Ministry of Energy, Green Technology and Water. Energy Commission. National Energy Balance 2013

Some countries in the region have become more efficient, viz. Indonesia, Myanmar, Philippines and Viet Nam. Countries that had a higher per capita GDP such as Brunei Darussalam and Singapore became more inefficient; Thailand also joined this group (**Figure 7.2**). Malaysia ranked the third highest in per capita energy use amongst the selected ASEAN countries.

Although Malaysia has enacted policies, programmes and plans for sustainable development, the sustainability indicator – the energy-economy decoupling – shows that Malaysia is still an input-based economy. Similarly, the composite Living Planet Index indicators show Malaysia's footprint is higher than the global average. An outcome-based approach to policies and programmes with a sustainable development focus could be the game changer.

Figure 7.2:
Per capita energy use of selected ASEAN countries, (Mtoe per million population), 1971-2012



Mtoe, million tonnes of oil equivalent

Source: Malaysia. Ministry of Energy, Green Technology and Water. Energy Commission. National Energy Balance 2013

Carbon dioxide emissions, total, per capita and per US\$1 GDP

Energy use results in GHG emissions, which are normally standardised in terms of carbon dioxide equivalent (CO₂ eq). Based on the Second National Communication (NC2), Malaysia emitted 222.99 million tonnes (Mt) of CO₂ eq of GHG in 2000. With the removal of 249.78 Mt CO₂ eq of emissions by Malaysian carbon sinks (mainly permanent forest reserves), the net GHG emission amounted to -26.79 Mt CO₂ eq; hence making Malaysia a net sink (**Table 7.4**)²³⁷. However, Malaysia became a net emitter of CO₂ by 2005 with net emissions being 38.7 Mt CO₂ eq, largely resulting from significant increases in emissions from the energy sector. By 2007, net GHG emissions were 45.9 Mt CO₂ eq.

²³⁷ Ministry of Natural Resources (2010) Second National Communication to the UNFCCC (NC2)

Table 7.4:
GHG emission trends for 2000, 2005 and 2007

Sector/ Year	Emissions (Mt CO ₂ eq)			Proportion share of total emissions		
	2000 (Actual)	2005	2007	2000	2005	2007
Energy	147	204.3	217	66 %	73 %	74 %
Industrial processes	14.1	15.6	17.1	6 %	6 %	6 %
Agriculture	6	6.6	7.2	3 %	2 %	2 %
LULUCF	29.6	25.3	19.7	13 %	9 %	7 %
Waste	26.4	27.4	31.9	12 %	10 %	11 %
Total emissions	223.1	279.2	292.9	100 %	100 %	100 %
LULUCF (Sinks)	-249.8	-240.5	-247			
Net Total	-26.7	38.7	45.9			

Source: Second National Communication to the UNFCCC (NC2)

This energy sector contributed 66 per cent or 147 Mt CO₂ eq of GHG emissions in 2000, and 74 per cent (217 Mt CO₂ eq) in 2007 (**Table 7.4**). Within this sector, the power generation sector contributed 47 per cent to 2000 emissions followed by the transportation sector (29 per cent) and manufacturing industries (21 per cent), while the remainder of 3 per cent were from commercial, residential and agricultural sectors (**Figure 7.3**). From these trends²³⁸, the emissions (5.5 per cent p.a.) is growing faster than real GDP (3.5 per cent p.a.), reflecting the energy inefficiency of growth and the carbon inefficiency of the fuel used (e.g., the type of fuel inputs).

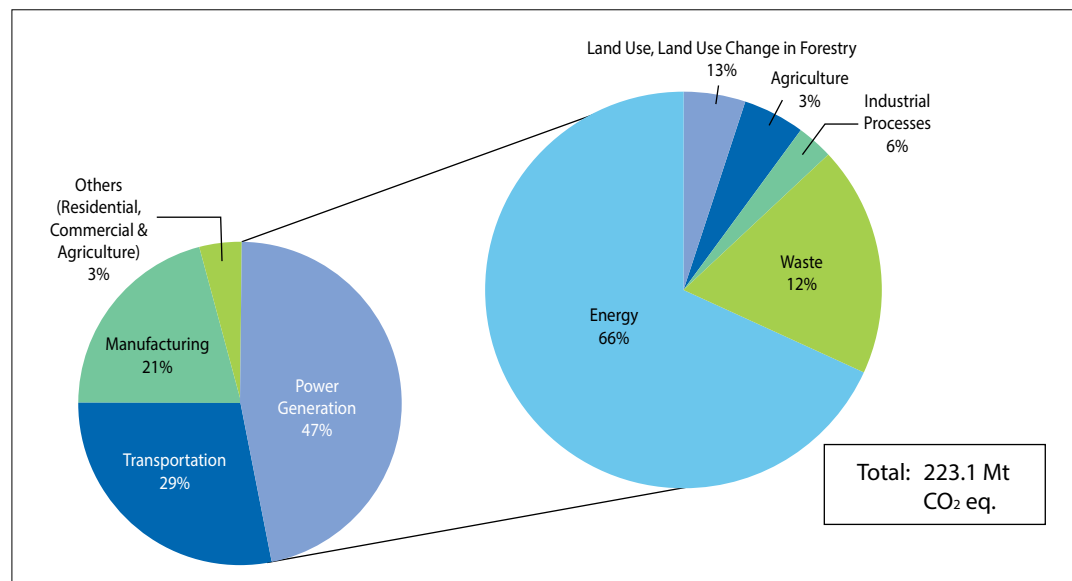
The Land Use, Land-Use Change and Forestry (LULUCF) sector contributed 13 per cent to the 2000 emissions and declined to 7 per cent in 2007. While the LULUCF's sink capacity was stable, the waste sector emissions (CO₂ eq) show an upward trend from 223.1 Mt CO₂ eq in 2000 to 292.9 in 2007. However, the percentage share of total emissions from the waste sector remained at around 10 per cent.

Hence, increasing its carbon/GHG emissions as well as reducing its sinks will result in Malaysia becoming a net emitter. Thus, the 2000 to 2007 change is a 27 per cent net increase in CO₂ eq emissions²³⁹.

²³⁸ A detailed analysis of the energy impacts on emissions is available in the "Economics of Climate Change: Synthesis Report" report (2013).

²³⁹ The revised 1996 IPCC guidelines for national greenhouse gas inventories was used in this estimation.

Figure 7.3:
The share of different sectors to the total GHG emissions (CO₂ eq), 2000



Source: Malaysia, Economic Planning Unit Malaysia and UNDP, *Economics of Climate Change Malaysia Synthesis Report*, 2013

Consumption of ozone-depleting substances

In addition to GHG, ozone-depleting substances (ODS) is a legacy problem in the sense that ODS were commonly used before their adverse impacts were discovered. ODS are chemicals that cause the destruction of the earth's ozone layer, which serves as a shield from harmful ultraviolet B radiation from the sun. Ozone layer depletion is a cause for concern because large amounts of ultraviolet B radiation is not only associated with skin cancer and cataracts in humans but also is important for preserving life on the planet. For example, extra ultraviolet B radiation inhibits the reproductive cycle of phytoplankton. This life form is the basis of the marine food chain, where at least half the organic matter in the biosphere is produced²⁴⁰.

The chemicals largely responsible for the destruction of the ozone layer include chlorofluorocarbons (CFCs) and halons. Since 1987, the Montreal Protocol has led countries including Malaysia towards

phasing out the production and consumption of these chemicals. The goals set forth were to phase out CFCs and halons by 2010, methyl bromide and methyl chloroform by 2015 and hydrochlorofluorocarbons (HCFCs) by 2030. As of 2014, there have been encouraging signs of a recovering ozone layer resulting from a concerted international effort²⁴¹.

Malaysia has cooperated and participated in the phasing out of ODS in accordance of the Montreal Protocol since 1989. The nation has successfully eliminated the usage of CFCs, halons, carbon tetrachloride and methyl chloroform since 2010 (**Table 7.5**), and has thus achieved the stated targets. Malaysia has substituted them with HCFCs. As for 2013, Malaysia consumed 445.8 ozone-depletion potential (ODP) tonnes of HCFC, which was below the obligated baseline level of 515.8 ODP tonnes. Malaysia will continue our efforts to ensure that the targets agreed under the Montreal Protocol to phase out the usage of HCFC will be met in 2030.

²⁴⁰ NASA, the Earth Observatory, viewed at http://earthobservatory.nasa.gov/Features/UVB/uvb_radiation2.php on 26 June 2015.

²⁴¹ UN News Centre, 10 September 2014, "Ozone layer recovering but remains threatened – UN reports", viewed at <http://www.un.org/apps/news/story.asp?NewsID=48680#.VYzLq1LLKQg> on 26 June 2015.

Table 7.5:
Consumption of ozone-depleting substances, 1990–2013

Substance		1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. CFC	MT	3634.2	3441.8	1651.3	668.3	564.2	234.2	173.7	105.2	0.0	0.0	0.0	0.0
	ODPT	3383.4	3426.6	1648.9	668.3	564.2	234.2	173.7	105.2	0.0	0.0	0.0	0.0
2. Halon	MT	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ODPT	809.5	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. CTC	MT	NA	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ODPT	NA	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. MBr Non (QPS)	MT	NA	56.7	60.6	18.1	18.8	17.5	13.6	5.7	8.8	5.9	4.0	6.8
	ODPT	NA	34.0	36.4	10.8	11.3	10.5	8.2	3.4	5.3	3.5	2.4	4.1
MBr (QPS)	MT	24.1	NA	101.0	252.3	284.4	300.2	222.4	63.1	219.7	148.2	122.0	157.8
	ODPT	14.5	NA	60.6	151.4	170.7	180.1	133.4	37.9	131.8	88.9	72.0	94.7
5. MTC	MT	NA	392.0	510.0	32.8	51.4	57.7	57.7	19.2	0.0	0.0	0.0	0.0
	ODPT	17.2	39.2	51.0	3.3	5.1	5.8	5.8	1.9	0.0	0.0	0.0	0.0
6. HCFC	MT	NA	NA	5498.0	5667.0	5826.0	6285.0	5829.0	7700.0	8170.0	7526.1	10569.7	6778.6
	ODPT	65.5	216.9	333.6	362.1	384.5	416.1	387.7	494.0	537.5	482.3	676.5	445.8

Notes: MT = metric tons; ODPT = ozone-depleting potential tonnes; CFC = chlorofluorocarbon; CTC = carbon tetrachloride; MBr = methyl bromide; QPS = quarantine and preshipment; MTC = methyl chloroform; HCFC = hydrochlorofluorocarbon.
Source: Malaysia, Ministry of Natural Resources and Environment, 2014

Reducing biodiversity loss

Biodiversity is an important resource for any country. It must be conserved and sustainably used so that it can benefit the people of the current and future generations. Malaysia is one of the world's megadiverse countries and the challenge lies in maintaining the fine balance between development and biodiversity. However, biodiversity loss in Malaysia is still driven by habitat degradation, land use change, destructive activities and market forces, pollution and sedimentation²⁴². These drivers in turn arise from population growth, economic growth and also exports based on natural resources. Other drivers include illegal activities like poaching, illegal wildlife trade and illegal timber extraction, and lack of enforcement due to limited resources. Without

sound regulation and monitoring of these drivers and systems that can trigger timely policy intervention, biodiversity will continue to be lost.

A recent study²⁴³ showed that Malaysians are willing to pay for conservation. The case study showed “the linkages between rising household income to increased household willingness to pay for conservation, nongovernmental organization activity, and delayed government action”. The findings suggest that domestic funding in upper middle income tropical countries can play a larger role in closing the funding gap for tropical forest conservation, and paying for supplementary conservation actions linked to international payments for reduced greenhouse gas emissions from deforestation and forest degradation in tropical countries.

²⁴² Malaysia, Ministry of Natural Resources and Environment. 2014. *Fifth National Report to the Convention on Biological Diversity*.

²⁴³ Jeffrey R. Vincent et al. (2014). “Tropical countries may be willing to pay more to protect their forests”, *Proceedings of the National Academy of Sciences*, vol.111(28)

Policies

Malaysia has a long history of conserving biological diversity. For example, it gazetted the first protected area in 1903 and enacted the Wildlife Protection Act in 1972. In 1994, it ratified the Convention on Biological Diversity and subsequently the Cartagena Protocol on Biosafety in 2003. It has incorporated biodiversity dimensions into policies and plans at national and state levels. Specific plans and policies on biodiversity are shown in **Table 7.6**. Malaysia has also engaged in regional collaboration to conserve biodiversity beyond its borders. **Table 7.7** shows a selection of three such regions of critical importance.

Table 7.6:
Biodiversity and national policies and plans

Instrument	Details
Five-year Malaysia Plans	Incorporates environment and sustainability issues (since the Third Malaysia Plan).
National Policy on Biological Diversity (1998)	Aims to conserve biodiversity and ensure that it is used sustainably for the continued progress and socioeconomic development of the nation. It gives directions on managing and conserving biodiversity with 15 strategies and 87 action plans.
National Physical Plan (2005) and National Physical Plan 2 (2010)	The NPP (2005) states that "A Central Forest Spine shall be established to form the backbone of the Environmentally Sensitive Area (ESA) network" in Peninsular Malaysia (Policy 19). The main objective of the Central Forest Spine as stated in the NPP 2 (2010) Policy 23, is to restore connectivity through the implementation of linkages between the four major forest complexes.
Common Vision on Biodiversity (2009)	Focuses on the operational and implementation aspects of existing provisions and policies and aims to explain what biodiversity is, why it is important and the measures required to ensure a constant provision of ecosystem services essential for human livelihoods. It supports the transformation of environmental planning and management from a largely sector-based approach to an integrated one.

Source: Malaysia: The Millennium Development Goals at 2010

Table 7.7:
Biodiversity and regional initiatives

Regional initiative	Details
Heart of Borneo	A voluntary transboundary initiative that aims at conserving and managing the transboundary highlands of Borneo and parts of the adjacent foothills and lowlands, which straddle the borders of Brunei Darussalam, Indonesia and Malaysia. It covers approximately 200,000 sq. km of ecologically interconnected rainforest in the island of Borneo.
Sulu–Sulawesi Marine Ecoregion and Coral Triangle Initiative	The Coral Triangle Initiative covers nearly 5.9 million sq. km of ocean across all, or parts of, the seas of six countries – Indonesia, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and Timor-Leste. The initiative aims to protect diverse marine ecosystems, keep them vibrant and healthy and provide food and livelihood for future generations.
Man And Biosphere (MAB) sites	Crocker range in Sabah and Bako-Buntal Bay (for the East Asian-Australasian Flyway Partnership (EAAFP) site.

Source: Malaysia's Fourth Convention of Biological Diversity Report 2009

Governance

A key challenge for Malaysia is embedding sustainability objectives into sectoral, state and local practices. Malaysia has a federal system of governance with three levels of government, the federal, state and local authority. The rights and responsibilities of each are defined in the Malaysian Constitution (Ninth Schedule). The federal and the state governments determine to a large extent the local government's capacity to deliver services to the people.

Under the Constitution, national councils formulated policies on certain matters, such as land, finance and forestry even though states have the sovereign right over their natural resources, such as land, water and forest. These councils were consultative in nature but in certain matters such as land and finance, states in Peninsular Malaysia are obliged to implement decisions; Sabah and Sarawak have more autonomy as part of the agreement in forming Malaysia. The National Land Council formulated the policy on how much forest to conserve and how much to open up for economic activity and development. The National Forestry Policy provides the overall principles through setting various targets and the states comply. For Sabah and Sarawak, they have more autonomy over forestry and natural resources. As natural resource management falls under state jurisdiction, federal policies can find their way into the state when complementary state laws are enacted.

At federal level, the Ministry of Natural Resources and Environment is responsible for biodiversity management. The Department of Wildlife and National Parks, Department of Marine Park Malaysia, Forestry Department Peninsular Malaysia and Forest Research Institute Malaysia are within its purview. State forestry departments and protected area management authorities, such as the Forest Department of Sarawak, Sarawak Forestry Corporation, Sabah Forestry Department and Sabah Parks, are complementary state agencies. Sabah and Sarawak have each established a biodiversity centre, in part to promote research into applying potential uses of biodiversity in medicine and other fields. Additionally, the Sabah Biodiversity Centre is also involved in biodiversity management.

The National Biodiversity–Biotechnology Council was established in 2001 to coordinate the management of biodiversity between the federal and state governments. In 2009, it was restructured as the National Biodiversity Council. Additionally, the Federal Government has established the National Water Resources Council in 1998, chaired by the Deputy Prime Minister as a platform for coordination of functions involving water resources involving the parties concerned in the federal and state governments, particularly for matters related to river basin management.

Recent initiatives

Malaysia is finalising a national law on access to biological resources and benefit sharing, enabling the country to derive benefits from their utilisation. Malaysia is also developing an inventory of biological resources and associated “traditional knowledge”. This knowledge has a huge value, and needs to be preserved for future generations.

On marine resources, the Department of Marine Parks Malaysia has also taken initiatives to evaluate the marine resources within marine parks, carrying out Management Effectiveness Assessment on marine parks, monitoring reef health status based on Reef Check Methodology, improving advocacy at local levels by organising capacity-building programmes for local communities and amending Fisheries Act 1985 to cater for current issues and emerging issues.

To assess the status of biodiversity, there are important indicators at various scale levels: at species, family, flora/fauna, habitat, ecosystem or landscape levels. Indeed, Malaysia conducts a National Forestry Inventory every 10 years and wildlife inventories on a needs basis. The government also established a Biological Diversity Clearing House Mechanism to facilitate reporting and the transfer of biological diversity and conservation-related information both nationally and internationally.

However, there is an absence of systematic monitoring of biodiversity data, at both national and subnational levels. Consequently, an overall assessment of the biodiversity status in Malaysia is lacking, both quantitatively and qualitatively. To address this gap, the National Biodiversity Council in 2009 agreed on the establishment of a National Biodiversity Centre (NBC). The NBC is envisaged to bridge the gap between policy and science, and to monitor the biodiversity status in Malaysia. A core group has been established at the Ministry of Natural Resources and Environment to develop the overall legal and institutional framework for NBC.

Proportion of land area covered by forest

The proportion of forested land area in Malaysia was 54.3 per cent in 2010, based on the definition of forest of the Food and Agriculture Organization of the United Nations (FAO) (**Table 7.8**). Permanent reserved forest accounted for 79.0 per cent of total forested area in 2010 (**Table 7.9**). Such forest is classified as “production forest” and “protection forest”. Areas within the permanent reserved forest licensed for logging are located in the production forest, and the protection forest areas within the permanent reserved forest are managed for conservation values. The National Forestry Act 1984 (revised 1993) provides for functional classes of permanent reserved forest for soil protection, soil reclamation, flood control, water catchment, sanctuary for wildlife, virgin jungle, amenities, education, research and for federal purposes.

Table 7.8:
Total forested area, 1990–2012

Category	1990	2000	2005	2007	2010	2011	2012
Total land area of country ('000 hectares)	33,018	33,018	33,018	33,018	33,018	33,018	33,018
Total forested area ('000 hectares)	18,782	18,280	17,798	17,711	17,934	17,927	18,009
Proportion of land area covered by forest (%)	56.8	55.4	53.9	53.6	54.3	54.3	54.5

Source: Malaysia, Ministry of Natural Resources and Environment, 2015

Table 7.9:
Proportion of permanent forest reserves in Malaysian forested areas, 1990–2012

	1990	2000	2005	2007	2010	2011	2012
Total forested area ('000 hectares)	18,782	18,280	17,798	17,711	17,934	17,927	18,009
Total permanent reserved forest ('000 hectares)	12,416	14,433	14,306	14,301	14,526	14,519	14,503
Permanent reserved forest as percentage of total forested area (%)	66.1	79.0	80.4	80.7	81.0	81.0	80.5

Source: Malaysia, Ministry of Natural Resources and Environment, 2015

Since independence, Malaysia has replaced a substantial area of forest with agriculture. Vincent and Hadi²⁴⁴ (1991) discussed the hypothesis of plantation agriculture in stemming the tide of forest encroachment through land and plantation programmes. Their argument was that the two major commodity crops (rubber and oil palm) provided reasonable, stable and long-term returns to plantation agriculture. Lucrative returns due to high commodity prices would have led to opening up more forest areas, but due to shortage of rural labour, which was partly a result of rural to urban migration, illegal conversion of forest land proved more difficult than plantation agriculture. Coupled with the fact that Malaysia had also established institutions to conserve and protect natural areas, the basis for forest conservation was laid.

Another driver of forest conversion is the rapid urbanisation that has been pursued intensively by the nation in recognition of the roles that urban centres play in economic growth. Between 1991 and 2015, Malaysia's urbanisation rate has grown from 54.3 percent to 74 per cent. The lack of clear urban limits has led to urban sprawls that are encroaching into environmentally sensitive areas, major agricultural areas and areas that are unsuitable for development. In fact, rapid urbanisation also contributes to other issues such as degradation of environmental quality and a negative impact on overall health and well-being²⁴⁵. Balancing the land use between built and natural environments (including forests) will become increasingly important for Malaysia in order to sustain improved well-being in the future. On this note, there have been some efforts to improve land use planning and development through the National Urbanisation Policy and the National Physical Plans. However, there is a need to evaluate the impacts of these efforts.

²⁴⁴ Vincent and Hadi (1991) "Malaysia" in National Research Council (1993) *Sustainable Agriculture and the Environment in the Humid Tropics*, National Academy Press, Washington DC,

²⁴⁵ Malaysia, Ministry of Housing and Local Government, *National Urbanisation Policy* 2006.

Proportion of terrestrial and marine areas protected

Malaysia has a network of protected areas for both terrestrial and also marine areas with three systems that are regionally defined, Peninsular Malaysia, Sabah and Sarawak. As of 2013, Malaysia has gazetted 10.76 per cent terrestrial protected areas and 1.05 per cent marine protected areas²⁴⁶. This is still below the global Aichi targets of 17 per cent terrestrial and 10 per cent marine protected areas.

Terrestrial areas²⁴⁷

Based on the Interim Master List of Protected Areas by the Ministry of Natural Resources and Environment 10.76 per cent of total land area of the country was protected in December 2013²⁴⁸. For better protection and conservation, connectivity was proposed between protected areas of permanent reserved forest, national and state parks, wildlife sanctuaries, wildlife reserves, wildlife rehabilitation centres, marine parks and conservation areas.

The human capacity and resources needed to manage these protected areas are challenging. As a way forward, Malaysia undertook a project titled “Enhancing Effectiveness and Financial Sustainability of Protected Areas in Malaysia”, which focused on the form and method of financing protected area management. This project complemented the 2009 document on “Sustainable Financing and Management of Protected Areas in Malaysia”, which highlighted possible strategies and options on governance and financing.

Marine areas

In 2009, waters surrounding 66 islands in Malaysia were gazetted as marine parks. Of these, 42 were in Peninsular Malaysia and WP Labuan, a rise from 38 in 1994 and 40 in 1998. The number of marine parks in 2014 is shown in **Table 7.10**. As of December 2013, the percentage of marine protected areas in Malaysia is 1.05 per cent based on the Interim Master List of Protected Areas.

The current marine protected areas have not included the soon to be gazetted Tun Mustapha Park located off Kudat in the state of Sabah. Given the strict qualifying criteria used in the Interim Master List, mangrove forest reserves and fisheries management areas were also not included as protected areas because these areas are not legally gazetted or protected under federal or state legislations.

However, these two areas are important for the protection and conservation of fisheries. If the mangrove forest reserves, fisheries management areas and the Tun Mustapha Park were all included, then Malaysia would have marine protected areas of 11.3 per cent²⁴⁹. Nonetheless, caution should be exercised if protected areas are to include mangrove forest reserves and fisheries management areas because they are take zones and their integrity would depend strongly on how well these areas are managed. The main purpose of conservation of critical terrestrial, marine and coastal ecosystems is that they provide food (fish stock) and livelihood to people. Achieving Aichi targets becomes irrelevant if areas that are degraded or are no longer able to perform ecological functions are included. Indeed, the quality of protected areas, whether terrestrial or marine, is pertinent in determining its functionality. This information is still largely absent and is insufficient to inform land use planners on the quality of the existing protected areas network and areas, which should be included in the protected areas network.

²⁴⁶ Malaysia, Ministry of Natural Resources and Environment, *Interim Master List of Protected Areas – A tool for National Biodiversity Conservation, Management and Planning*, December 2013.

²⁴⁷ Malaysia MDGR 2010.

²⁴⁸ In the 2014 report to CBD, the total terrestrial protected area was estimated to be 10.76 percent.

²⁴⁹ Calculated by UNCT based on data from Ministry of Natural Resources and Environment, Department of Marine Parks Malaysia, 2015.

Table 7.10:
Number of gazetted islands and other islands as marine parks by state, 2014

State	Gazetted areas (marine parks)	Other islands within marine park water	Area (hectares)
Malaysia	66	32	545,918
<i>Peninsular Malaysia</i>	39	32	219,908
<i>Johor</i>	13	14	76,565
<i>Pahang</i>	9	5	67,661
<i>Terengganu</i>	13	13	56,869
<i>Kedah</i>	4	0	18,813
WP Labuan	3	0	15,815
Sabah	20	0	103,850
Sarawak	4	0	206,345

Source: Fifth National Report to the Convention on Biological Diversity 2014

On a related note, there is also little information or consideration of the representativeness of protected areas (terrestrial and marine). This aspect is also mentioned in the Aichi targets on protected areas (Target 11) but has yet to gain sufficient attention in Malaysia. A recent study by WWF and the Ministry of Natural Resources and Environment looked at representativeness in Peninsular Malaysia by analysing land use maps in 2006. The findings showed that representation of ecosystems in protected areas was very uneven²⁵⁰. For ecosystems above 300 metres sea level, more than 95 per cent of the original extent still remained and large proportions were in protected areas. This ranged from 30 per cent for hill dipterocarp to 52 per cent for upper montane ecosystems. In contrast, much of the lowland ecosystems below 300 metres sea level had lost much of their original extent and very small proportions were protected. These findings show the urgent need to assess the representativeness of the protected areas network and their forest types.

²⁵⁰ Referenced from the background paper of the Ministry of Natural Resources and Environment's Study on the Establishment of a National Biodiversity Centre in 2012.

Proportion of species threatened with extinction

As shown in **Table 7.11**, Malaysia has very rich biodiversity. However, the 2008 IUCN Red List puts Malaysia amongst the countries with the largest number of threatened species – 70 mammals and 42 birds – at sixth and 16th, respectively, amongst 20 countries. In 2014, these numbers increased slightly to 71 mammals and 48 birds. Taking into consideration mammals, birds, reptiles, amphibians, fishes, molluscs, other invertebrates and plant species examined in the Red List, there are 1,236 threatened

species in Malaysia as of December 2014. In terms of the proportion of species that are threatened against the endemics, the amphibians (23 out of 76) and freshwater crabs (28 out of 76) top the list.²⁵¹

The National Strategy for Plant Conservation was published in 2009. It highlighted the status, current gaps and what needs to be done for plant conservation.

Table 7.11:
Number of species, Malaysia, 2013

Categories	No. of Species		Categories	No. of Species
Mammals	307		Invertebrates	150,000
Birds	785		Vascular Plants	15,000
Reptiles	567		Fungi	4,000
Amphibians	242		Mosses	522
Marine fishes	1,619		Hard Coral	612
Freshwater fishes	449			

Source: Fifth National Report to the Convention on Biological Diversity 2014

There are three focal agencies for wildlife conservation in Malaysia, namely, the Department of Wildlife and National Parks (DWNP) for Peninsular Malaysia, Sabah Wildlife Department and Sabah Parks for Sabah and Sarawak Forestry for Sarawak. The focal agencies for wildlife gave priority to protected endangered animal species through both *ex-situ* and *in-situ* conservation including Sumatran rhinoceros; Malayan gaur; Malayan tiger; Asian elephant; Malayan tapir and *orang utan*. During the period of 2011 to 2014, several activities were undertaken by the key agencies and research institutions including: Monitoring Wildlife in Ecological Corridors of the Central Forest Spine, Elephant Disturbance Controlling Programme, Human-Wildlife

Conflict Management Programme, Wildlife Release and Monitoring Programme, Collections and Management of National Biodiversity Data Programme and National Tiger Conservation Action Plan. In addition, DWNP established the Wildlife Genetic Resources Bank in 2008 as a depository of biological material, including sperm, embryo, tissues and blood of local wildlife species. In 2010, DWNP conducted breeding programmes for 12 species to preserve the genetic resources at its conservation centre. In Malaysia's Fifth National Report to the Convention on Biological Diversity (2014), there were conservation plans for six iconic animals: tigers, elephants, pygmy elephants, *orang utan*, proboscis monkeys and marine turtles.

²⁵¹ Data for this analysis came from the IUCN Red List for 2010, 2013, 2014 (specifically for Malaysia).

Parliament passed a Wildlife Conservation Act on 2 August 2010 to repeal the Protection of Wildlife Act 1972. The new Act aims to strengthen the enforcement provisions and increase the penalties on offences related to wildlife species classified as protected and totally protected, and to curb poaching, smuggling and ill treatment of wildlife kept in captivity in Peninsular Malaysia and the Federal Territory of Labuan. It also complements the International Trade in Endangered Species Act 2008 to deal with the import, export and re-export of species listed in

the Convention on International Trade in Endangered Species of Wild Fauna and Flora throughout Malaysia. Since the enforcement of the Wildlife Conservation Act (2010), total wildlife crime cases fell sharply from 3,487 cases in 2010 to 475 cases in 2011. The declines were mainly in the reduction in license-related crimes. However, wildlife crimes have begun to increase again between 2012 and 2014, with total crimes in 2014 totalling at 1,157 cases. In particular, nonlicense-related crimes have climbed back to the level recorded in 2010²⁵².

Proportion of fish stocks within safe biological limits

Malaysia does not have recent scientific information on the status of its fisheries resource; the latest scientific assessment was made in the 1990s. Several scientific papers have since indicated that a more conservative approach to fisheries management is needed.

Looking at the fishery catch trends over time, it is clear that the statistics vary greatly from year to year but the total catch seems to have stabilised at an average of about 1.39 million tonnes. There are, however, several trends that would spark concern. First, there has been a big increase in the trash fish, which is an indicator that small fishes are being caught (with smaller mesh sizes), of over 300 per cent on both the Peninsular Malaysian east and west coast fish catches between 1970 and 2009. On the west coast, the share of trash fish has gone from 14 per cent to 25 per cent in that period²⁵³.

Second, there has been a decrease in catch per unit effort (CPUE) for most fishermen, indicating that fish are harder to catch, even with better boats, engines and sometimes even technology. Output per fisherman declined from 15.68 tonnes in 2000 to 11.09 tonnes in 2009. Analysis of small trawl catches shows that they have not landed table fish for several years. On the west coast of Peninsular Malaysia, the CPUE rate between 2008 and 2009 is 10 times higher, with more effort and higher cost required to catch fish²⁵⁴.

- West coast of Peninsular Malaysia had a 96 per cent decline in CPUE from 27,379 tonnes (1971) to 3,036 tonnes (1997);
- East coast of Peninsular Malaysia had an 89 per cent decline in CPUE from 259,922 tonnes (1967) to 11,474 tonnes (1998); and
- Sarawak had an 87 per cent decline in CPUE from 247,598 tonnes (1972) to 55,833 tonnes (1998).

²⁵² *Ibid.*

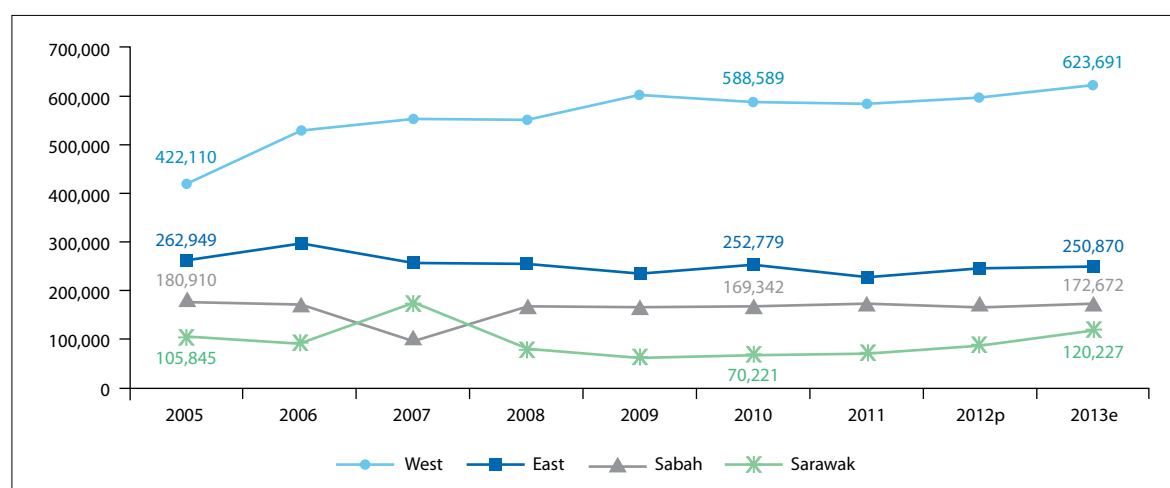
²⁵³ WWF Malaysia (2012). *The Case for Ecosystem Based Fisheries Management* (unpublished, 8 May). *The proportion of trash fish is next best indicator as its definition keeps changing. The mean trophic level is a better indicator but there are no measures for Malaysia* (MOA comment).

²⁵⁴ *Ibid.*

These indicators suggest serious problems within the catch fisheries sector. The saving grace is that aquaculture fisheries have already entered the market in a big way and satisfied some of the demand. Nonetheless, it is important to carry out an assessment of the fisheries stock, including population dynamics and the exploitation level of species, in order to make sure that the marine biodiversity is properly conserved for Malaysia's long-term benefit.

Scientific surveys that provide information on the standing biomass of fish resources are needed. These surveys by themselves will not solve the fisheries' management issues, but they provide information, which are important inputs towards sustainable exploitation of fish resources. Presently, the only regularly published data are fish landings, which is an inadequate indicator for fish stocks (**Figure 7.4**).

Figure 7.4:
Marine fish landings, inshore and deep sea, 2005–2013 (tonnes)



Source: Malaysia, Ministry of Agriculture, Agrofood Statistics, various years.

Proportion of total water resources used

This indicator is intended to provide the extent of the use and sustainability of water resources in the country. This indicator is analysed by the quantity of raw water sources, production, demand and supply.

Malaysia, being in the tropics, is well endowed with rainfall. It is estimated that the annual rainfall as reported in the National Water Resources Study (2012) is 971 billion cubic metres (bcm). Of this amount, 51 per cent (494 bcm) is translated as surface runoff, 43 per cent (413 bcm) is evaporation/transpiration and 6 per cent (63 bcm) infiltrates as groundwater recharge. Availability for water resources is estimated at 15 per cent of surface run-off for the respective river basins²⁵⁵.

²⁵⁵ Malaysia, Ministry of Natural Resources and Environment, Department of Drainage and Irrigation. (2012). National Water Resources Study.

Although Malaysia is blessed with an abundance of rainfall, the spatial and temporal elements of these rainfall patterns vary. States in the east coast of Peninsular Malaysia get more rainfall than states in the west coast, while the state of Sarawak has the highest average annual rainfall of about 3,800 mm/year. On the temporal scale most of the rainfall for these states occur between November and February, that is, during the North-East Monsoon. As such, there could be times of flood or drought for different parts of the country.

Between 2005 and 2013, demand for water resources increased for both domestic and nondomestic consumption, as shown in **Table 7.12**. According to the National Water Resources Study (2012), the bulk of water resources are demanded by the agricultural sectors:

51 per cent by paddy irrigation, 7 per cent by irrigation of other crops, 8 per cent by fisheries and 1 per cent by livestock. Domestic and industry consumption accounts for about 33 per cent of all water demands.

At present, rivers provide 97 per cent of water supply to domestic and industrial needs. In 2013, there were 13,753 million litres of water extracted directly from rivers per day (**Table 7.13**). This is almost double the amount extracted for water supply in 2003. In 2013, Selangor had the highest percentage of water extracted directly from rivers (32.2 per cent of the total), Johor and Perak had the biggest share of storage-dam-based water resources (18.3 per cent) and Kelantan had the largest source of groundwater resources (72.4 per cent).

Table 7.12:
Domestic and nondomestic water consumption, selected years (million litres per thousand population)

Water consumption	2005	2009	2013
Domestic	0.191	0.197	0.203
Non-domestic	0.091	0.108	0.127

Source: calculated by UNCT based on Malaysia, Department of Statistics, *Compendium of Environmental Statistics 2014*.

Table 7.13:
Supply of raw water from various sources, selected years (million litres per day)

Water Sources	2003	2005	2007	2009	2010	2011	2012	2013
From rivers	6,953	10,159	12,007	12,398	12,516	12,746	13,165	13,753
From storage dams	4,219	2,971	1,532	2,088	2,451	2,540	2,623	2,866
From groundwater	161	178	185	185	204	223	228	243

Source: Malaysia, Department of Statistics, *Compendium of Environmental Statistics 2014*.

Factors that increase pressure on water resources in Malaysia

As the population and economy continue to grow, demands and pressure on water resources are likely to increase. Additionally, the pressure on water resources will grow due to increase in population, urbanisation and demand from all sectors of economy. The high level of nonrevenue water (NRW) and persistent pollution will reduce water usability²⁵⁶. Compounded with effects that may be aggravated by climate change, the per capita availability of water is likely to decrease in the future.

Pollution and water usability: Securing the integrity of our water resources now is important to ensure that there is sufficient clean water in the future. Pollution still remains a key threat to our water resources, especially our rivers, which are the main supply of water in Malaysia. Major pollutants have been attributed to inadequate treatment of sewage and effluent from agrobased and manufacturing industries, livestock farming and domestic sewage as well as improper earthworks and land clearing activities. While the proportion of clean rivers has remained largely the same, the proportion of polluted rivers has declined from 15.2 to 5.3 percent in the period of 2005 to 2013. In 2013, 58 per cent of rivers monitored were asserted to be clean, while 36.6 per cent were slightly polluted and 5.3 per cent were polluted.²⁵⁷ As of June 2014, there are only 51 per cent or 245 rivers that are asserted to be clean²⁵⁸. Moving forward, there is a need to monitor both river or underground water quality and access to water as they will help in designing a water resources programme with adequate resources. As water is a basic need, the government has developed the National Water Resources Policy (2012), which outlines strategies and a strategic action plan for ensuring the security and sustainability of the nation's water resources.

Per capita water consumption: Malaysia's current per capita water consumption rate at 215 litres/capita/day (lcd) is considered average as compared to many developed countries such as Japan (314 lcd), the USA (333 lcd), Australia (205 lcd) and Canada (329 lcd) but is relatively much higher than per capita consumption of water in Singapore, which is 151 lcd and that of the United Kingdom, which is about 150 lcd. There is also a disparity between rural consumption at 170 lcd and urban at 230 lcd.

Nonrevenue water: Similarly, there is about 40 per cent NRW that is lost each year. As shown in **Table 7.14**, there has been little improvement between 2010 and 2013 to reduce NRW. It implies that there should be attention paid to NRW as there could be considerable savings in water treatment and distribution resources from addressing such losses.

²⁵⁶ Malaysia, Ministry of Natural Resources and Environment, Department of Drainage and Irrigation. 2012. *National Water Resources Study*.

²⁵⁷ Malaysia, Department of Environment, *Environmental Quality Report 2013*.

²⁵⁸ Malaysia, Department of Environment, 2014

Table 7.14:
Percentage of nonrevenue water by state, 2010–2013

State	2010 (%)	2011 (%)	2012 (%)	2013 (%)	% change NRW from 2010 to 2013*
Johor	29.9	29.2	27.8	26.4	-3.5
Kedah	44.9	47.8	50.6	50.9	6.0
Kelantan	52.4	55.7	53.9	53.1	0.7
WP Labuan	24.9	22.0	20.4	25.9	1.0
Melaka	26.0	25.1	23.8	22.1	-3.9
N. Sembilan	43.4	44.6	40.4	36.3	-7.1
Pulau Pinang	18.2	18.4	17.6	18.2	0.0
Pahang	55.3	56.2	54.2	52.7	-2.6
Perak	29.4	30.4	30.1	30.4	1.0
Perlis	51.3	59.8	66.4	62.4	11.1
Sabah	57.4	50.9	49.9	53.2	-4.2
Sarawak	29.0	30.5	29.4	31.3	2.3
Selangor	32.4	32.3	33.1	34.5	2.1
Terengganu	39.4	37	36.8	33.8	-5.6
MALAYSIA	36.4	36.7	36.4	36.6	0.2

Note: *Negative values represent declines in NRW and hence improvements to water management.
Source: Malaysia. National Water Services Commission, 2010–2013.

All states but one exceed 20 per cent NRW consistently between years 2010 and 2013; Penang being the only exception (less than 18 per cent). States with the highest per cent NRW in descending order are Perlis (62.4 per cent), Sabah (53.2 per cent), Kelantan (53.1 per cent), Pahang (52.7 per cent) and Kedah (50.9 per cent).

Over a period of four years, Johor, Melaka, Negeri Sembilan, Terengganu and to a lesser extent, Sabah and Pahang have seen declines in the percentage of NRW with Negeri Sembilan leading at 7.1 per cent. In contrast, Perlis had the highest increase with 11.1 per cent increase followed by Kedah with 6.0 per cent. For the other states, the percentage change was below 3 per cent. Given the high percentages of NRW, these changes showed that there is considerable underinvestment in improving efficiency in water supply.

Government responses emphasize both supply-side and demand-side management approaches. On the supply side, they look to exploring alternative water sources, such as groundwater, as well as constructing new dams and water treatment plants. The government will also implement programmes to reduce NRW and develop inter-river basin water transfers (to address uneven distribution). Integrated water resources management and integrated river basin management approaches are other important aspects.

On the demand side, the government emphasizes reducing the demand for potable water. For nonpotable uses, measures include promoting “six litre flush toilets” and harvesting rainwater for gardening, through the Green Township Programme and the Green Building Certification Programme. The government is also considering suitable economic instruments to induce behavioural changes to encourage sustainable water use within Malaysian households.

For the water services industry, the government has launched a Benchmarking and Tariff Setting Mechanism Study. It aims to find a balance between users’ affordability and industry’s sustainability, taking into account water operators’ capital and operating expenditures including full cost recovery.

Long term, the National Water Resources Policy outlines measures to ensure efficient and effective management of this increasingly scarce resource, including streamlining policies and legislation to allow for equitable distribution. The Policy marks an important milestone because it will establish a process for ensuring the security of water supply in an era of rapid economic development, growing cities and population growth, all of which have important implications on how Malaysia manages its water resources.

HALVING THE PROPORTION OF PEOPLE WITHOUT SUSTAINABLE ACCESS TO SAFE DRINKING WATER AND BASIC SANITATION

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Proportion of population using an improved drinking water source

Malaysia has a good system of water and sanitation that includes the rural areas. In 2009, 92.9 per cent of households in Malaysia had access to treated water supply. As of 2014, the treated water supply coverage had increased to 95.1 per cent²⁵⁹. Only Kelantan, Sabah and Sarawak had water supply coverage of less than 90 per cent (**Table 7.15**).

²⁵⁹ Malaysia, Department of Statistics, Household Income Survey 2009-2014.

Urban water supply coverage increased from 96.5 per cent in 2007 to 98.8 per cent in 2014. Coverage in 2014 exceeded 98 per cent in all states except Kelantan, Sabah and Terengganu, where Kelantan was lower at 70.8 per cent because of a different measurement standard and its reliance on groundwater as a water source (**Table 7.16**).

In 2014, water supply coverage to rural areas was 82.9 per cent. All states had coverage exceeding 80 per cent with the exception of Sabah, Sarawak and Kelantan, which had less than 65 per cent coverage (**Table 7.17**).

Table 7.15:
Sources of water supply (%) by state, 2009 & 2014

State	2009				2014			
	Piped water inside house	Public water standpipe	Total piped	Others	Piped water inside house	Public water standpipe	Total piped	Others
Malaysia	92.1	0.8	92.9	7.1	94.6	0.5	95.1	4.9
Johor	98.6	1.2	99.8	0.2	99.6	0.1	99.7	0.3
Kedah	96.8	0.8	97.6	2.4	98.6	0.1	98.7	1.3
Kelantan	53.8	1.2	55.0	45.0	62.7	-	62.7	37.3
Melaka	99.6	0.2	99.8	0.2	99.9	0.1	100.0	-
N. Sembilan	99.2	0.4	99.6	0.4	99.8	0.1	99.9	0.1
Pahang	94.8	0.5	95.3	4.7	97.7	1.0	98.6	1.3
Perak	98.4	0.4	98.8	1.2	99.3	0.2	99.5	0.5
Perlis	96.9	1.6	98.5	1.5	99.6	0.1	99.7	0.3
P. Pinang	99.3	0.4	99.7	0.3	99.8	0.1	99.9	0.1
Sabah	71.3	2.2	73.5	26.5	78.0	3.6	81.6	18.4
Sarawak	77.5	1.6	79.1	20.9	82.8	1.4	84.2	15.8
Selangor	99.6	0.4	100.0	-	100.0	-	100.0	-
Terengganu	92.3	0.2	92.5	7.5	95.0	1.4	96.4	3.6
WP Kuala Lumpur	99.5	0.5	100.0	-	100.0	-	100.0	-
WP Labuan	98.1	1.0	99.1	0.9	98.3	0.3	98.6	1.4
Putrajaya	100.0	-	100.0	-	100.0	-	100.0	-

Source: Household Income and Basic Amenities Survey, 2009; Household Income and Basic Amenities Survey, 2014.

Table 7.16:
Sources of water supply (%) by urban/rural location, 2009 & 2014

Location	2009				2014			
	Piped water inside house	Public water standpipe	Total piped	Others	Piped water inside house	Public water standpipe	Total piped	Others
Urban	97.7	0.7	98.4	1.6	98.4	0.4	98.8	1.2
Rural	79.8	1.0	80.8	19.2	81.9	1.0	82.9	17.1

Source: Household Income and Basic Amenities Survey, 2009; Household Income and Basic Amenities Survey, 2014.

The government plans to increase coverage of treated water supply to 97 per cent of the population by 2015, from 91.6 per cent in 2009. Rural areas in states with lower water supply coverage such as Kelantan, Sabah and Sarawak will require special attention. Villages of indigenous groups, small estates and rural schools in remote and difficult-to-access areas also require special attention. Water provision programmes for categories, such as groundwater abstraction, rainwater harvesting and gravity-fed water supply systems, are being intensified.

Table 7.17:
Rural water supply coverage (%), 2009–2014

State	2009				2014			
	Piped water inside house	Public water standpipe	Total piped	Others	Piped water inside house	Public water standpipe	Total piped	Others
Malaysia	79.8	1.0	80.8	19.2	81.9	1.0	82.9	17.1
Johor	98.3	0.9	99.2	0.8	98.8	-	98.8	1.2
Kedah	95.5	1.0	96.5	3.5	97.6	0.1	97.8	2.3
Kelantan	47.0	1.2	48.2	51.8	55.4	-	55.4	44.6
Melaka	99.1	0.9	100.0	-	99.4	0.6	100.0	-
N. Sembilan	98.9	0.3	99.2	0.8	99.6	0.2	99.8	0.2
Pahang	91.8	0.5	92.3	7.7	96.6	1.0	97.6	2.4
Perak	97.2	0.2	97.4	2.6	97.8	0.1	97.9	2.1
Perlis	95.1	2.5	97.6	2.4	99.1	0.4	99.5	0.5
P. Pinang	97.9	0.7	98.6	1.4	99.7	-	99.7	0.3
Sabah	45.2	1.9	47.1	52.9	52.4	4.1	56.5	43.4
Sarawak	55.9	2.0	57.9	42.1	61.6	1.8	63.4	36.6
Selangor	99.0	0.6	99.6	0.4	99.9	-	99.9	0.1
Terengganu	87.0	0.3	87.3	12.7	93.2	0.7	93.9	6.1
WP Kuala Lumpur	-	-	-	-	NA	NA	-	NA
WP Labuan	98.0	2.0	100.0	-	97.7	2.3	100.0	-

Source: Household Income and Basic Amenities Survey, 2009; Household Income and Basic Amenities Survey, 2014.

Proportion of population using an improved sanitation facility

In 2007, 97 per cent of the population had access to flush or pour flush toilet, an indicator of improved sanitary facility. This has further increased to 99.5 per cent in 2014 (**Table 7.18**). These achievements are mirrored at the state level with the exception of Sabah, where just under 95 per cent of the population had improved sanitation facilities in 2014. Sanitary latrine coverage in general for the rural population increased from 80.6 per cent in 1990, to 96.5 in 2000 and to 98.6 in 2014 (**Table 7.19**).

Table 7.18:
Proportion of population using improved sanitation facility (%), 2009 & 2014

State	2009				2014			
	Flush	Pour flush	Total Improved	Other	Flush	Pour flush	Total Improved	Other
Malaysia	75.9	22.5	98.4	1.6	85.1	14.4	99.5	0.5
Johor	83.1	16.7	99.8	0.2	93.3	6.7	100.0	-
Kedah	54.1	45.5	99.6	0.4	65.1	34.8	100.0	0.1
Kelantan	32.2	67.0	99.2	0.8	48.3	51.6	100.0	0.1
Melaka	84.4	15.5	99.9	0.1	96.1	3.9	100.0	-
N. Sembilan	82.3	17.6	99.9	0.1	93.7	6.2	99.9	0.1
Pahang	83.1	16.0	99.1	0.9	87.2	12.7	99.9	0.1
Perak	76.5	23.3	99.8	0.2	87.3	12.6	99.9	0.1
Perlis	51.6	48.3	99.9	0.1	60.3	39.6	99.9	0.1
P. Pinang	79.8	20.2	100	-	94.3	5.7	100.0	-
Sabah	54.2	31.5	85.7	14.3	70.2	24.6	94.8	5.2
Sarawak	63.2	34.4	97.6	2.4	73.5	25.8	99.4	0.6
Selangor	95.6	4.3	99.9	0.1	97.6	2.2	99.8	0.2
Terengganu	51.9	47.7	99.6	0.4	63.1	36.8	99.9	0.1
WP Kuala Lumpur	99.1	0.9	100	-	99.8	0.2	100.0	-
WP Labuan	84.4	12.1	96.5	3.5	84.5	13.3	97.8	2.2
Putrajaya	100.0	-	100	-	100.0	-	100.0	-

Source: Household Income and Basic Amenities Survey, 2009; Household Income and Basic Amenities Survey, 2014.

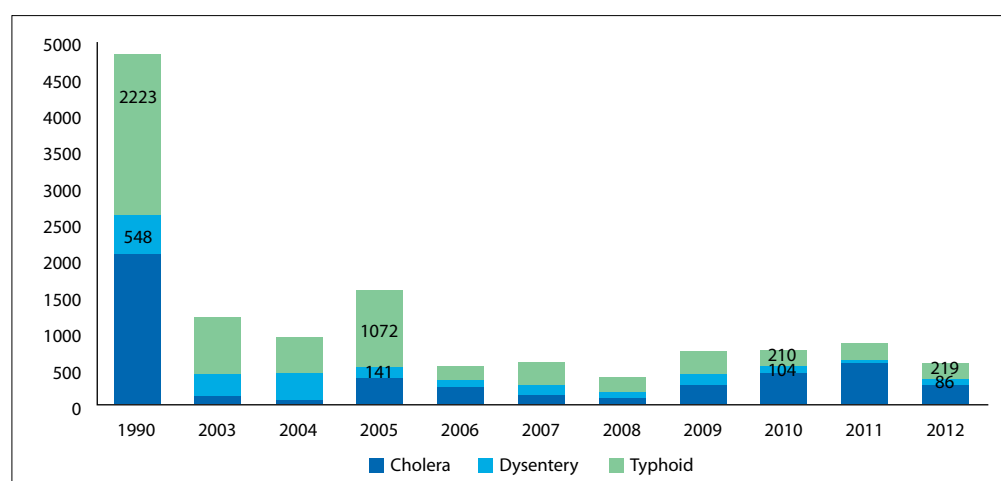
Table 7.19:
Sanitation facilities by urban/rural location (%), 2009 & 2014

State	2009								2014							
	Flush		Pour flush		Total Improved		Other		Flush		Pour flush		Total Improved		Other	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Malaysia	88.6	48.3	10.7	48.2	99.3	96.5	0.7	3.5	92.8	59.5	6.9	39.0	99.7	98.5	0.3	1.5
Johor	88.9	67.2	10.9	32.5	99.8	99.7	0.2	0.3	97.1	81.2	2.9	18.8	100.0	100.0	-	-
Kedah	76.5	37.3	23.5	62.1	100	99.4	-	0.6	80.1	32.0	19.9	68.0	100.0	100.0	-	-
Kelantan	46.4	24.6	53.2	74.4	99.6	99	0.4	1.0	61.8	36.2	38.2	63.8	100.0	100.0	-	-
Melaka	87.6	71.9	12.2	28.0	99.8	99.9	0.2	0.1	96.5	91.8	3.5	8.2	100.0	100.0	-	-
N. Sembilan	93.6	65.0	6.4	34.7	100	99.7	-	0.3	98.6	81.9	1.3	18.0	99.9	99.9	0.1	0.1
Pahang	92.8	73.6	7.2	24.7	100	98.3	-	1.7	95.1	76.5	4.9	23.2	100.0	99.7	-	0.3
Perak	87.4	56.9	12.3	42.8	99.7	99.7	0.3	0.3	93.7	67.1	6.3	32.7	100.0	99.8	-	0.2
Perlis	74.1	37.3	25.9	62.5	100	99.8	-	0.2	66.5	51.4	33.4	48.6	99.9	100.0	0.1	-
P. Pinang	86.5	47.3	13.5	52.6	100	99.9	-	0.1	95.3	77.5	4.7	22.5	100.0	100.0	-	-
Sabah	73.8	28.6	18.2	49.0	92	77.6	8.0	22.4	81.5	52.2	15.7	38.8	97.2	91.0	2.8	9.0
Sarawak	86.3	38.9	12.7	57.2	99	96.1	1.0	3.9	90.3	50.9	9.5	48.0	99.8	98.9	0.2	1.1
Selangor	97.1	80.5	2.8	19.1	99.9	99.6	0.1	0.4	98.8	80.4	1.1	18.1	99.9	98.5	0.1	1.5
Terengganu	67.9	33.7	31.9	65.6	99.8	99.3	0.2	0.7	69.5	51.8	30.4	47.9	99.9	99.7	0.1	0.3
WP Kuala Lumpur	99.1	-	0.9	-	100	-	-	-	99.8	NA	0.2	NA	100.0	-	-	NA
WP Labuan	87.7	74.9	11.0	15.3	98.7	90.2	1.3	9.8	85.3	78.2	12.9	16.1	98.2	94.3	1.8	5.7
Putrajaya	100.0	NA	-	NA	100.0	NA	-	NA	100.0	NA	-	NA	100.0	NA	-	NA

Source: Household Income and Basic Amenities Survey, 2009; Household Income and Basic Amenities Survey, 2014.

A good water supply system also helps prevent waterborne diseases. As noted earlier, Malaysia has a good coverage for rural water and sanitation. Communicable diseases, especially those normally associated with polluted water, fell sharply (**Figure 7.5**). From 1990 to 2012, cases of cholera fell by 86.4 per cent from 2,071 to 282, of dysentery by 84.3 per cent from 548 to 86, and of typhoid by 90.1 per cent from 2,223 to 219. However, in recent years, communicable diseases have made a comeback. From 2008 to 2012, cases of cholera increased by 203.2 per cent from 93 to 282, of dysentery fell by 6.5 per cent from 92 to 86, and of typhoid rose by 9.0 per cent from 201 to 219.

Figure 7.5:
Number of cases of notifiable communicable diseases, 1990–2012



Source: Health Indicators 2003-2012; Malaysia: The Millennium Development Goals at 2010

IMPROVING THE LIVES OF AT LEAST 100 MILLION SLUM DWELLERS

As the indicator “living in slums” is inappropriate for Malaysia, it has been modified to “living in squatter settlements”. The provision of piped water and electricity is a feature in squatter settlements in Malaysia.

Proportion of urban population living in squatter settlements

Status and trends

From 2004 to 2012, the number of squatter households declined by 33 per cent from 108,704 to 73,084 (**Table**

7.20). Selangor showed the sharpest proportional decline (88 per cent) followed by Melaka and Kuala Lumpur (87 per cent and 81 per cent). In contrast, Johor and Negeri Sembilan showed the sharpest increase (of 261 per cent and 19 per cent). Between 2009 and 2012, the number of squatter households decreased by 26 per cent to 73,084 households. Declines were observed across most states, with sharpest declines observed in Perlis, Melaka and Kuala Lumpur. By proportion, the most squatter households are found in Sabah (38,008 households), Sarawak (8,436) and Johor (5,566) as of 2012.

Table 7.20:
Number of households living in squatter settlements by state, selected years

Year	2004	2005	2006	2008	2009	2010	2012
Malaysia	108,704	98,446	91,895	86,885	99,022	88,443	73,084
Johor	1,541	5,293	11,411	12,565	12,123	10,982	5,566
Kedah	3,382	3,528	3,443	3,629	3,633	3,608	3,015
Kelantan	1,392	1,258	1,699	1,638	1,654	1,439	1,439
Melaka	67	62	52	41	32	29	9
N. Sembilan	291	121	346	297	284	346	346
Pahang	647	2,928	918	1,052	1,141	1,133	1,133
Perak	2,397	2,266	2,266	2,243	2,221	8,496	2,595
Perlis	7,950	7,766	14,282	14,203	13,109	4,382	1,872
P. Pinang	3,331	4,010	5,835	6,435	4,486	2,207	3,347
Sabah	38,868	38,868	25,525	23,692	37,965	37,965	38,008
Sarawak	8,919	9,641	9,618	9,204	8,563	8,817	8,436
Selangor	20,353	5,913	2,811	1,197	3,964	3,926	2,542
Terengganu	2,780	777	846	699	702	682	690
WP Kuala Lumpur	16,786	14,947	11,676	9,119	8,176	3,461	3,116
WP Labuan	NA	1,068	1,167	871	969	970	970

NA, not available.

Source: 1. Malaysia, Millennium Development Goals Report 2010
2. Malaysia, Ministry of Housing and Local Government, MHLG Statistics, 2010-2012

Intervention in public housing

The provision of affordable public housing remains a priority of the government. During the 10MP, 102,000 units were completed for poor, low and middle income households. The public housing units, subsidized by 35 to 75 per cent of the total cost, was provided to qualified individuals and families with household income levels of less than RM2,500 per month, under two schemes, the *Program Bantuan Rumah* and *Program Perumahan Rakyat*. The 11MP is even more ambitious: 606,000 houses to be built for the low and middle income households, while 47,000 houses would be constructed or repaired for the poor. The type of housing under these programmes would be adequate and with quality and affordable.

MOVING FORWARD

Malaysia has yet to fully achieve MDG 7 although much progress has been made through the nation's development efforts. There are several issues that require particular attention.

Remaining issues

Sustainable development: Malaysia needs to work harder. Analyses show that more effort is needed in decoupling of energy from output. Recent initiatives have been put in place to address this problem: a focus on green growth for resilience and sustainability, rationalising fuel subsidy, low carbon cities, and several initiatives to change behaviour and lifestyle towards more sustainable consumption and production. The massive floods at the end of 2014 also show our vulnerability and the need for improvement in disaster preparedness and emergency response.

Strengthen the monitoring and evaluation of policies, plans and programmes: Despite a comprehensive set of laws and policies on environmental quality and protection of national parks, what is less clear is whether these instruments have reduced biodiversity loss. The fisheries sector needs better scientific data on fisheries stock, catch rates and other relevant indicators. In the IUCN Red List, it appears that the species that are most vulnerable come from the freshwater ecosystems, especially from the number and proportion of endemic species that are threatened. In that regard, habitat degradation and fragmentation and unsustainable harvesting of biological resources need to be slowed down, if not stopped. Resource sustainability strategies also need to be integrated into sectoral strategies. Another commonly stated need is to stem the tide of invasive species.

Improve wildlife conservation: A network of corridors needs to be developed and strengthened. The Heart of Borneo project, which will be led by Malaysia, will focus on conserving the rich biodiversity of the region. Indeed, the protected areas network in the country needs to be further strengthened. This includes further understanding of the quality and representativeness of the protected areas network. Additionally, increasing enforcement against wildlife offences is still a remaining issue with the bulk of the responsibility remaining within a limited pool of enforcers.

Renewed emphasis on measuring the state and condition of biodiversity and natural assets: An earlier environmental/economic analysis of the Malaysian economy²⁶⁰ shows that the country has achieved weak sustainability, meaning that environmental assets have been converted to new forms of economic growth. Strong sustainability – whereby the quality of environmental assets is also maintained in the process – needs a slightly different policy and programming emphasis. It would appear that the institutions that are responsible for the protection and conservation of the nation's natural assets and for mitigating and responding to emergencies should be given more and better resources to achieve their objectives.

Safe drinking water and sanitation: Malaysia's considerable investments in this sector is commendable, especially in the area of rural water supply and sanitation, which has contributed to generally good health outcomes. It is still important to invest in controlling the pollution from agriculture-based sources. Demand-side strategies should be implemented to moderate the high consumption of water.

Housing programmes: The Public Housing Programme has shown success in reducing the number of squatter households. An outstanding issue is the poor maintenance and upkeep of public housing. It must be acknowledged that significant improvements have been made to address housing needs of the poor and middle class in the 10MP and 11MP. However, unfettered market forces in the land and housing markets have resulted in high and rising prices of housing, which is derailing the house ownership policy amongst the lower rungs of society. Policies that restrain market forces could help to bring relief to the strong demand for house ownership. Indeed, Malaysia has embarked on cooling the property market since 2014 with more stringent conditions for housing loans, introducing the Real Estate Property Gains Tax, forbidding the Developers Interest Bearing Scheme and increasing the floor price for foreign buyers to RM 1 million. Monitoring the impacts of these interventions and the trends in property markets will be important to ensure affordable housing for the people.

²⁶⁰ Vincent, Mohammed Ali and Associates (1997) "Environment and Development in a Resource-Rich Economy – Malaysia under the New Economic Policy", Cambridge: Massachusetts: Harvard Institute for International Development.

CONCLUSION

Malaysia has made significant efforts to achieve the goals of MDG 7. However, unfinished business remains. On integrating the principles of sustainability into policies and programmes, Malaysia has done well to include them in the national development plans, sectoral policies and even established governing institutions to perform needed functions. The country has also successfully phased out certain ozone-depleting substances and made numerous efforts to stem the loss of biodiversity. On providing clean water and improved sanitation, Malaysia has also proven successful in reaching even rural communities, which has also been reflected in good health outcomes. Similarly, the nation has also reduced the number of households living in squatter conditions.

While these achievements have not been easy, there is still much to do under this MDG, especially in the spirit of ensuring environmental sustainability. The target calls for reversing the loss of environmental resources and biodiversity. A comprehensive assessment of the status of the environment and resources needs to be done. Malaysia needs to find innovative ways of protecting and conserving its natural resources so that future generations can continue to enjoy their benefits.

In moving forward, there needs to be much greater cooperation and collaboration among ministries, agencies, NGOs, and communities to achieve the desired goal of sustainability in production and consumption.

ANNEX 7.1

TARGET AND INDICATORS

Table 7.21:
MDG 7 Target and Indicators²⁶¹

Target	Indicators		Notes
Target 7a: : Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources			Malaysia has adapted this indicator to review and analyse efforts to integrate the principles of sustainable development into country policies and programmes at federal, sectoral, state and local levels.
	7.1	Proportion of land area covered by forest	The amount of forest area in the total land area. This indicator measures the relative extent of forests in a country given the important roles forests play in biodiversity conservation, climate change and provision of livelihoods. Changes in forest area may also reflect the demand for other land use and unsustainable practices in forestry or agriculture sectors. Forest areas are defined as land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 per cent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
	7.2	CO ₂ emissions, total, per capita and per \$1 GDP (PPP)	This indicator measures the efforts to reduce carbon dioxide emissions, which accounts for the largest share of greenhouse gases associated with global warming. Estimates of total carbon dioxide emissions, including anthropogenic emissions from all national activities less removal by sinks. Typical sectors for which carbon dioxide emissions are estimated include energy, industrial processes, agriculture and waste as well as land use, land-use change and forestry. This is presented as total emissions, total emissions divided by the population of the country and emissions per unit value of gross domestic product. Malaysia includes all greenhouse gas emissions expressed as carbon dioxide equivalent.
	7.3	Consumption of ozone-depleting substances	This refers to the sum of the consumption of the ozone-depleting potential, which is the weighted metric tons of all ozone-depleting substances controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer. This indicator measures the progress made to phase out the use of ozone-depleting substances.
Target 7b: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	7.4	Proportion of fish stocks within safe biological limits	This indicator is defined as the proportion of fish stocks or species that are exploited within the level of maximum sustainable biological productivity. The indicator is a means of monitoring the changes in exploitation and management of global fishery resources as a direct measure of sustainability.
	7.5	Proportion of total water resources used	The total volume of groundwater and surface water withdrawn from their sources for human use (in the agricultural, domestic/municipal and industrial sectors), expressed as a percentage of the total water resources. This indicator shows the extent of which water resources are already used to meet the country's water demand and therefore the sustainability of water use. Physical water scarcity exists if more than 75 per cent of a country's river flows are withdrawn, while figures above 60 per cent are considered to be approaching scarcity. There is little or no physical water scarcity if less than 25 per cent of river flow is withdrawn. As an adjustment, this indicator is analysed based on the quantity of raw water sources, production, demand and supply.

²⁶¹ United Nations, *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*, version updated on 19 November 2012, available at <http://mdgs.un.org/unsd/mi/wiki/MainPage.ashx>, accessed on 18 May 2015.

Target	Indicators		Notes
	7.6	Proportion of terrestrial and marine areas protected	<p>The proportion of a country's total terrestrial and marine area that is designated as a protected area, expressed as a percentage. Protected areas are important for reducing the loss of biodiversity as well as places sustaining high social and economic value.</p> <p>Malaysia underwent an extensive exercise since 2009 to prepare a Protected Areas Master List. The definitions used in this list are used for main reporting of this indicator.</p>
	7.7	Proportion of species threatened with extinction	<p>The proportion of threatened species expected to go extinct in the near future without additional conservation action. It is an index based on the number of species in each category of extinction risk on the International Union for Conservation of Nature (IUCN) Red List. This indicator can be used to assess overall changes in extinction risk of sets of species as a result of threatening processes and the extent of which these processes are mitigated. Threatening processes include habitat destruction and degradation, over exploitation, invasive alien species, pollution, human disturbances and climate change.</p>
Target 7c: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	7.8	Proportion of population using an improved drinking water source	<p>This indicator is a proxy for measuring access to safe drinking water. It refers to the share of the population that uses any type of improved drinking water supplies, which in turn contributes to lowering the incidence of many diseases in developing countries.</p> <p>Malaysia uses "treated" water supply coverage for this indicator.</p>
	7.9	Proportion of population using an improved sanitation facility	<p>The percentage of the population that has access to facilities that hygienically separate human excreta from human, animal and insect contact. This indicator is associated with reduced diarrhoea-related morbidity among young children and other diseases, which could affect the health of individuals and communities.</p> <p>Malaysia uses the coverage of flush or pour flush toilets for this indicator.</p>
Target 7d: Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	7.10	Proportion of urban population living in slums	<p>The proportion of urban population living in slums is the proportion of the urban population that live in households lacking one or more of the following basic services: improved water, improved sanitation, durable housing, sufficient living area or security of tenure. This indicator measures the adequacy of basic human needs for shelter. Lack of housing, crowding, lack of improved water and sanitation are manifestations of poverty and is also associated with health risks. These conditions are often detrimental to social and economic development.</p> <p>Malaysia uses the number of households living in squatter conditions for this indicator.</p>

ANNEX 7.2

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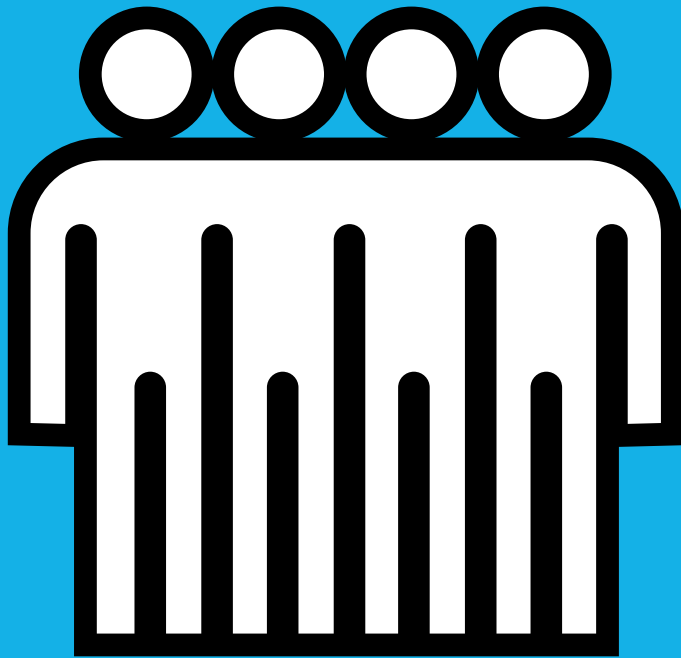
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MDG 8



**DEVELOP A GLOBAL
PARTNERSHIP FOR
DEVELOPMENT**

INTRODUCTION

The eighth Millennium Development Goal (MDG 8) has seven targets:

- Develop further an open, rule-based, predictable, non-discriminatory trading and financial system
- Address the special needs of the least developed countries
- Address the special needs of landlocked developing countries and small island developing states
- Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term
- In cooperation with developing countries, develop and implement strategies for decent and productive work for youth
- In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
- In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.



MDG 8 is about global partnerships for development. Since independence in 1957, Malaysia has been fortunate to receive assistance from international partners. As a significant example of its development leap, Malaysia has gone from being an aid recipient to providing development assistance of its own. In 1980, Malaysia initiated the Malaysian Technical Assistance Programme, which was the precursor of the Malaysian Technical Cooperation Programme (MTCP). In 1992, the

Malaysian South-South Corporation Berhad (MASSCORP) was launched and started sharing Malaysia's development experience with less developed countries. Moving forward, Malaysia needs to strengthen its global partnership programme in order to contribute to its own development goals through learning from and contributing to the development process with other nations, the involvement of the NGO community and the private sector.

DEVELOPING THE TRADING AND FINANCIAL SYSTEM

Malaysia is the 19th largest trading nation in the world. By 2014, the value of import and export trade had reached RM1.45 billion, that is 35 per cent higher than its GDP. Historically, Malaysia has been a commodity exporter, of tin, for example, as well as rubber, timber, oil and gas and oil palm but since the mid-1990s, manufactured exports have overtaken commodities. Malaysia has implemented transparent and rule-based systems that helped facilitate trade. It is in Malaysia's interest that the global trading environment remains free and fair. In this regard, Malaysia is committed and is heavily involved in promoting and realising the ASEAN Economic Community by 2015. Malaysia voluntarily liberalised its services sector, including its 27 subsectors, in 2009, but this has proven to be difficult as it requires a whole-of-government approach across several institutions.

Malaysia has also signed several bilateral trade agreements, which benefit the signatories directly. In total, 56 trade agreements with South countries had already been signed as of 2010, and MATRADE, Malaysia's trade promotion agency, had offices in 45 countries as of September 2015.

However, Malaysia is more tentative about certain regional trade agreements, such as the Trans Pacific Partnership Agreement (TPPA). This initiative is seen by some quarters as being disadvantageous to the less developed countries. In this respect, there is solid opposition to its implementation. Malaysia is concerned that all trade initiatives must be based on a level playing field without putting certain countries at a disadvantage because they may be unaware of consequences for certain trade practices and are thus less capable of defending their rights.

Preferential trading arrangements

Malaysia subscribes to free trade and is a founding member of the World Trade Organisation (WTO). Through active participations in WTO negotiations, Malaysia continues to ensure that trade regulations and trade measures are fair and provide the flexibility for her to pursue her development policy. One of the major benefits of WTO membership is the nondiscriminatory treatment of Malaysian products in the markets of WTO member countries. On the regional side, especially multilateral with and through ASEAN, several have been concluded, including ASEAN-China, ASEAN-Japan and others are under negotiation, such as ASEAN-EU, and the Regional Comprehensive Economic Partnership with ASEAN, China, Japan, Republic of Korea, India, Australia, and New Zealand.

Even in the preferential trade arrangement with D-8 countries, which is under consideration, the key objectives are to gradually reduce tariffs and other barriers to trade on specific goods in order to promote intratrade amongst D-8 members. A preferential trading agreement (PTA) is also being considered by Malaysia, which seeks to promote free trade amongst Organisation of Islamic Cooperation (OIC) Member States. The OIC states have already ratified the Protocol on the Preferential Tariff Scheme (PRETAS), and the TPS-OIC Rules of Origin (TPS-OIC RoO) have been ratified by at least 10 OIC Member States.

Promoting trade and investment through the Malaysian South-South Corporation Berhad

In 1992, the Prime Minister of Malaysia inspired the formation of the Malaysian South-South Corporation Berhad or MASSCORP as the investment arm of a business association, Malaysia South-South Association (MASSA). MASSCORP was formed to promote bilateral trade and investment ties between companies in South-South developing countries through private sector cooperation, fostering economic and business linkages, undertaking trade and investment projects and developing investment linkages with South-South countries.

MASSCORP has built sustainable business linkages through bankable investments and projects jointly with partners in developing countries. In the process, they have contributed towards poverty reduction, income generation and economic development. New markets were created for Malaysian products and services while the host countries gained from the transfer of technological knowhow, management skills, entrepreneurial knowledge as well as human capital development.

MASSCORP and MASSA, over the years, had organized numerous fact finding and business missions in many South countries, including Viet Nam, the Lao People's Democratic Republic, Myanmar, South Africa, Namibia, Zambia, Uganda, Senegal, Morocco, Bangladesh, India, Chile, Argentina and Palau. From these missions, investments were made that reflected Malaysia's expertise. The best example is found in Viet Nam.

Together with the Danang provincial government, MASSCORP developed a 70 ha. industrial park in 1993. It is fully leased out to 45 investors comprising manufacturers, a bank, telecommunications, logistics and electronics companies, with a total invested capital exceeding US\$ 80 million. These investors created more than 12,000 jobs locally. In 2009, MASSCORP developed Fortune Park, the first gated and guarded residential development in Danang City comprising link houses, link semidetached villas, and villas. MASSCORP, in partnership with other Malaysian companies, also developed a 100,000 m³ per day water treatment plant in Ho Chi Minh City that is capable of supplying water to 500,000 households.

In addition, MASSCORP established new business relations with other countries through four Asian-African Business Forum sessions under the aegis of the UNDP-Special Unit for Technical Cooperation amongst Developing Countries. In the first forum in Kuala Lumpur, 110 entrepreneurs from 23 African countries

were matched with a similar number of entrepreneurs from six Asian countries, and generated US\$ 20 million in investments. In the second and third forums, a similar number of companies attended and the business deals increased in value. Certainly, this activity led to breaking down barriers of doing business and South-South investment that would not have happened otherwise.

MASSCORP also facilitated missions that allowed other countries to learn from some Asian countries that have successfully taken advantage of global opportunities through the application of ICT and other knowledge based strategies and through increased cooperation between public and private sector partners. The missions, which comprise World Bank African Region staff, also considered how these strategies and methods could be applied in African countries to stimulate growth and to build South-South relationships based on investment, technology transfer and trade.

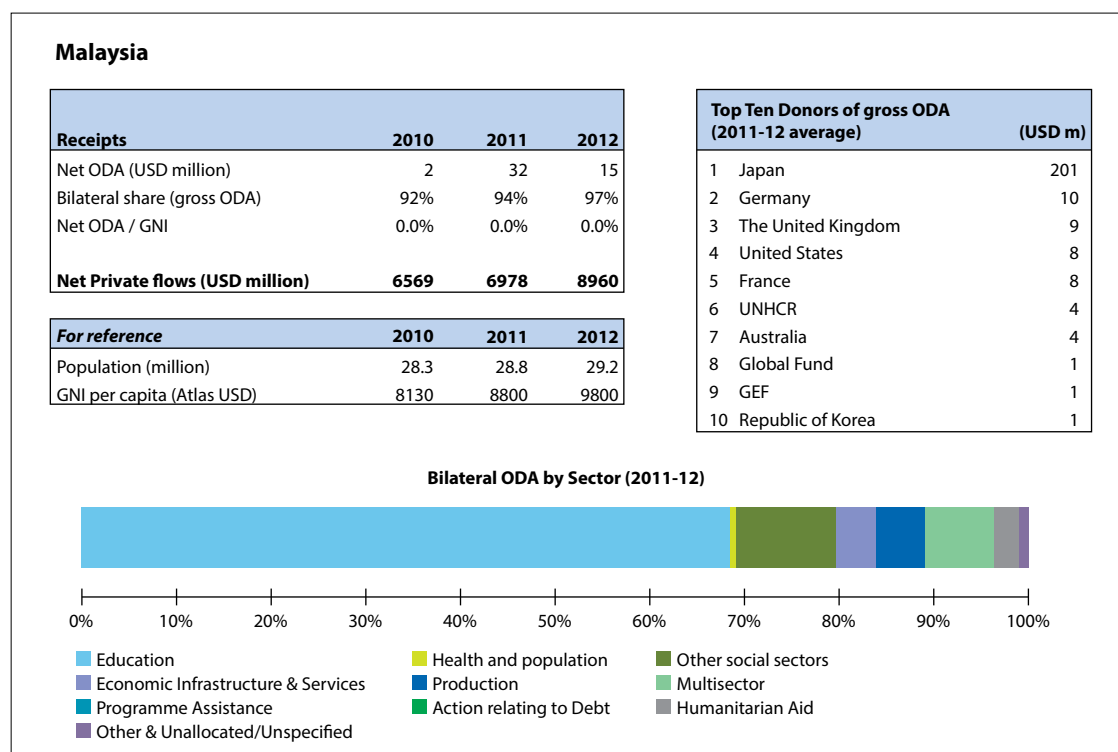
OFFICIAL DEVELOPMENT ASSISTANCE RECEIVED BY MALAYSIA

Recent data on official development assistance (ODA) received by Malaysia²⁶² for 2011 and 2012 show that Japan is the single largest aid contributor at over US\$ 200 million, with Germany next at US\$ 10 million. Other top 10 donors to Malaysia include Australia, France, the Republic of Korea, the United Kingdom, the USA, Global Fund, GEF and UNHCR. In sectoral terms, almost 70 per cent of all ODA went into the education sector. Almost all of the ODA to Malaysia is in bilateral terms with multilateral assistance forming a minor proportion.

In relative terms, ODA as a proportion of GNI has declined from about 0.15 per cent in 2006 to about 0.01 per cent since 2010. In per capita terms, it has declined from about US\$ 9 in 2006 to less than US\$ 1 in 2010. Hence, Malaysia is indeed “graduating” from ODA.

²⁶² See OECD. <http://www.oecd.org/dac/stats/documentupload/MYS.JPG>

Figure 8.1:
Net official development assistance to Malaysia by sector, 2010–2012



Source: OECD- DAC, World Bank, 2013.

Malaysia's contribution to the Malaysian Technical Cooperation Programme and South-South Cooperation

A former Prime Minister inspired a South-South Cooperation vision in 1991, which rallied the public and private sectors to take up the challenge to develop business and development cooperation programmes with South countries.

In several areas of South-South Cooperation (SSC), Malaysia has a comparative advantage. The UNDP assessment of the SSC for Malaysia noted that it's "most valued asset was its success story. As a recipient of development assistance that has successfully navigated the development journey and is approaching high-income

status, Malaysia is in a unique position to share critical development expertise with the development community at large. Second, its model of development within an Islamic culture offers a very comfortable environment to many other countries as a destination for learning or for leisure. Third, many countries consider Malaysia's promotion of multiculturalism as a model worthy of emulation."

There are two main components of SSC initiatives: one, those that fall under the ambit of the MTCP; and two, other SSC initiatives.

Malaysian Technical Cooperation Programme

Since 1980, Malaysia has shared its development planning experience with less developed countries through the MTCP, an approach, which has been regarded as successful in many quarters. Malaysia believes that economic growth is the key to resolving many of the socioeconomic problems of developing countries, especially the less developed ones. Thus, the approach is to first build the institutions, policies and programmes that deliver the results. The MTCP was developed to assist in human capacity development.

MTCP has grown in depth over the past 35 years, as well as in coverage. Starting with the five ASEAN countries, the MTCP has reached out to more than 140 countries from Africa to the Pacific Island countries. As of December 2014, more than 29,000 participants from developing countries have undergone training under the Programme. The participants who attended MTCP courses have increased from 577 in the Fourth Malaysia Plan period to 1,520 participants in 2014 (see **Table 8.1**). Of these, 60 per cent were from Asia, 25 per cent from Africa, 6 per cent from Eastern Europe and the Commonwealth of Independent States, 3 per cent from Latin America and the Caribbean and 6 per cent from Oceania. Up until 2014, Malaysia has spent RM680 million in this programme.

Table 8.1:
Total number of participants who attended courses under the MTCP

Year	Number
1981 – 1985 (4MP)	577
1986 – 1990 (5MP)	1,131
1991 – 1995 (6MP)	1,926
1996 – 2000 (7MP)	2,724
2001 – 2005 (8MP)	7,030
2006	2,300
2007	2,471
2008	2,394
2009	1,915
2010	1,998
2011	890
2012	1,200
2013	1,111
2014	1,520
Total	29,187

Source: Fact Sheet MTCP

Transformation programmes

Since 2009, Malaysia has embarked on an Economic Transformation Programme (ETP) and the Government Transformation Programme (GTP) that focuses on effective implementation. The basic concept is to deliver big and fast results (using the Big Fast Results or BFR methodology), that entail a significant change to the delivery system. This approach does not seek to replace the government but to identify the barriers and gaps to service delivery and then to fix the problems by changing the way “business” is done. It first defines the strategic direction, taking those ideas to a brainstorming process to develop a step by step solution, validating that process, defining Key Performance Indicators, communicating the plan, and making a commitment to deliver the results, including their publication.

Upon request, Malaysia has shared this methodology with three countries, Tanzania, South Africa and India. In Tanzania’s case, their Big Results Now programme²⁶³, based on Malaysia’s BFR methodology, has delivered remarkable results²⁶⁴: 1.5 million people have access to electricity; 2.83 million have access to rural water supply; the Dar es Salaam port is operating on 24 hours instead of 8 hours; and 10,000 farmers in 185,000 hectares, of land have access to irrigation. The national debt of Tanzania has reduced in absolute terms from US\$ 5.4 billion to US\$ 3.9 billion. Following from this success, the full implementation of this programme has attracted funding from the USA, the United Kingdom and Swedish governments. In the case of India and South Africa, they are discussing follow-up phases of implementation.

Bilateral initiatives

A significant amount of the inward development assistance that Malaysia received and continues to receive has been on a bilateral basis, and that is from countries that are economically and technologically more advanced, through agencies such as JICA, DANIDA and CIDA. JICA spent US\$ 201 million in Malaysia in 2011-2012. The DANIDA/DANCED²⁶⁵ programmes, spanning 16 years and ending in 2010, cost RM375 million and focussed mainly on the environmental sector. The JICA programmes²⁶⁶ are also in many aspects of Malaysia’s development, with focus on infrastructure projects, science and environmental sectors, human resource and social sectors, and include stationing Japanese Overseas Cooperation Volunteers and Senior Volunteers in Malaysia.

In terms of outward development assistance, Malaysia has despatched experts when requested to help countries in need. More examples of this are found in the next section.

Recognising the friendly relations with the Sultanate of Oman, the government of Malaysia represented by the Ministry of Women, Family and Community Development signed a Memorandum of Understanding (MoU) in the field of women, family and social development. Both countries agreed to exchange information and share experiences on the policies, programmes and activities on the above mentioned target groups²⁶⁷.

²⁶³ Reference is made in the President’s talk at Chatham House in March 2014 and write up on Africa Platform on South-South Cooperation case study in July 2013. See http://www.chathamhouse.org/sites/files/chathamhouse/home/chatham/public_html/sites/default/files/20140331TanzaniaKikwete.pdf and <http://www.africa-platform.org/resources/tanzanias-big-results-now-initiative>

²⁶⁴ Details provided by Mr Nishan Veerakumar of PEMANDU, 11 February 2015.

²⁶⁵ DANIDA (2012), *The Cooperation*.

²⁶⁶ JICA (2015). *Brief – Japan’s Official Development Assistance to Malaysia*, January.

²⁶⁷ MWFC (2014) *Malaysia Progress Report on the Implementation of the Beijing Declaration and Platform for Action and the Outcomes of the 23rd Special Session of the General Assembly (2000)*.

Regional initiatives

The regional programmes have been avenues for Malaysia to participate in SSC. The priority is ASEAN, where Malaysia was a founder member in 1967, and where there are several programmes on-going, viz. AEC (ASEAN Economic Community 2015), ASEAN Industrial Projects and ASEAN Industrial Joint-venture programmes, ASEAN Free Trade Programme. There are also subregional initiatives with Malaysia's neighbours, such as the Triangle projects including Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), Indonesia-Malaysia-Singapore Growth Triangle (IMS-GT), and Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA). Much of Malaysia's regional focus since 2003 has been in the ASEAN region, rather than international. Here, several variations, such as ASEAN-China, are still being worked out.

Malaysia published *The Compilation of ASEAN Best Practices in Eliminating Violence against Women and Children* in December 2013. The book highlights each ASEAN country's best practices on measures to prevent violence against women and children. The book also serves to pave the way for possible collaboration amongst ASEAN member states to provide better protection for women and children with regard to the issue of violence against these two vulnerable groups in society.

Multilateral initiatives

Multilateral initiatives in Malaysia include: OIC, Non-Aligned Movement, Group of 77, D8 and Commonwealth. Other partners at the international level include agencies of the UN system, where there has been much engagement. Seventeen UN system agencies are working with the Malaysian Government to deliver development results (ADR 2008-

2014) via a strategic partnership to enhance Malaysia's development programme by integrating sustainability, reducing risks and building resilience. In trying to help Malaysia achieve its development goals, several UN agencies have also engaged with the Malaysian government on global partnership programmes. A selection of the more notable programmes includes:

UNDP

- From 2010 to 2013, a collaboration programme between UNDP and the Malaysian Anti-Corruption Academy (MACA) focused on capacity-building of anticorruption agencies, notably in developing a structured training of trainers programme and pilot modules for selected OIC member countries on topics such as corruption prevention, detection, investigation, prosecution, as well as regional case-studies and high level policy dialogues based on international standards and the UN Convention against Corruption. The initiative involved agencies from 17 OIC countries. These training modules continue to be deployed in the international courses conducted by MACA. A High Level Roundtable Dialogue on Anti-Corruption focusing on strategic collaborations and partnerships in the Asia and Arab region was also organised involving Chief Commissioners and Heads of Organisations from 15 OIC countries. Based on a regional meeting hosted by the Government of Malaysia, UNDP and United Nations Office on Drugs and Crime, the *Kuala Lumpur Statement on Anti-Corruption Strategies* adopted by the regional workshop participants was formally presented to the Fifth Session of the Conference of the State Parties to the United Nations Convention against Corruption held in Panama in November 2013 and was duly included under paragraph 11 of Resolution 5/4 titled *Follow Up to the Marrakech Declaration on the Prevention of Anti-Corruption*.

- From 2010 to 2015, UNDP collaborated with the Malaysian Peacekeeping Training Centre (MPC) and Ministry of Defence to develop dedicated modules and conduct training of trainers and international training courses on emerging development challenges facing UN peacekeeping missions. The modules continue to be utilised in the training programmes of MPC, including modules on gender and conflict, civil and military coordination, cultural diversity and protection of civilians. Participants include military, civil society organisations and academics from over 20 countries from Asia and Africa.

UNFPA

- Malaysia shared key issues related to reproductive health and emerging issues and concerns on national population through training and capacity-building.

UNICEF

- Given the increased wealth and generosity of Malaysians, UNICEF developed a fundraising programme in 2008 that now has over 75,000 active individual donors, as well as support from a number of high profile companies, organisations, associations and schools committed to helping children inside and outside the country. This funding model has been cited by UNICEF's Executive Board as one "that all transitioning middle income countries should aspire to and emulate". UNICEF also engages with the private sector through substantive corporate social responsibility initiatives aimed at delivering programme results for children in Malaysia.

UNESCO

- The Malaysia-UNESCO Cooperation Programme was launched in 2009 by the Prime Minister of Malaysia who also announced the establishment of Malaysian Cooperative Trust Fund at the 35th General Conference of UNESCO. Malaysia pledged RM16.5 million as the launching grant and RM3.3 million annually. The trust fund was established in 2013 and had approved 17 projects worth US\$ 5 million²⁶⁸. The Malaysian-initiated fund was used to enhance SSC for capacity-building in education and science and to support developing nations in reaching the MDGs by 2015. Under this initiative Malaysia will provide a teachers training facility for preservice, inservice, school administration and management as well as organising capacity-building courses for participants from least developed countries, small island states and Africa.
- Malaysia hosts the International Science, Technology and Innovation Centre for South-South Cooperation (ISTIC) in support of UNESCO's science programmes and promoting SSC. Established in 2008, the Centre focuses on capacity-building and providing a platform for policy advice, exchange of experiences and best practices in science, technology and innovation. About 1,585 personnel from 82 developing countries have directly benefited from the 33 capacity-building programmes initiated by ISTIC since 2008²⁶⁹.
- In November 2011, Malaysia won a seat on the World Heritage Committee (WHC) and in 2012 was selected as the Vice Chair for the Bureau of the WHC.

²⁶⁸ UNESCO. 2011. Media Services. Signing of the Memorandum of Understanding under the "Malaysia UNESCO Cooperation Programme. un,

²⁶⁹ Malaysia. National Statements at the 37th Session of the UNESCO General Conference in 7 November 2013, UNESCO, Paris. http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/GBS/37GC/pdf/Speech_Malaysia_ENG.pdf

WHO

- Malaysia has made substantial technical contributions at both regional and global levels. During the period 2009–2013, approximately 645 Malaysian participants and technical advisers contributed to 356 regional, biregional and global technical WHO meetings, including 31 technical meetings hosted in Malaysia. In addition, Malaysian experts are often engaged to support capacity-building in other countries, in fields such as quality improvement, dengue control and laboratory strengthening, International Health Regulations points of entry, HIV drug resistance surveillance, field epidemiology training, and mental health.
- WHO's global work, including work within countries, is supported by a network of expert institutions, such as research institutes or parts of universities or academies, which are designated by the WHO Director-General as WHO Collaborating Centres. Five such centres are currently designated in Malaysia: the WHO Collaborating Centre for Arbovirus Reference & Research (Dengue/Severe Dengue); the WHO Collaborating Centre for Ecology, Taxonomy and Control of Vectors of Malaria, Filariasis and Dengue; the WHO Collaborating Centre for Health Systems Research and Quality Improvement; the WHO Collaborating Centre for Regulatory Control of Pharmaceuticals and the WHO Collaborating Centre for Drug Information.
- Malaysia made substantial financial and administrative contributions when it hosted the 61st session of the WHO Regional Committee for the Western Pacific in 2010, and the third Ministerial Regional Forum on Environment and Health in Southeast and East Asian Countries in 2013. Malaysia also hosts the WHO Global Service Centre, located in Cyberjaya, Kuala Lumpur.
- In 2015, Malaysia contributed two well-trained epidemiologists, deployed as part of the WHO Western Pacific Region's Ebola Response Team to Sierra Leone. Bilaterally, Malaysia also responded to the Ebola outbreak by donating 20.9 million pairs of medical gloves to the affected West African countries. In addition, the MOH entered into a partnership with the Malaysia Medical Relief Society (MERCY Malaysia²⁷⁰) to provide medical assistance to affected countries via a disbursement of RM3 million.

²⁷⁰ MERCY Malaysia is a non-profit medical relief organisation providing medical and humanitarian assistance in natural disasters and conflict situations irrespective of race, religion, culture and boundary.

In addition, UNDP²⁷¹ assisted in the review of the SSC programme for Malaysia in 2010. The review examined the rationale, historical context, the contemporary context for SSC, the institutional arrangements, and the consideration for a renewed SSC policy for Malaysia. We will take up some of the recommendations in the final section of this report.

SPECIAL NEEDS OF LEAST DEVELOPED COUNTRIES

Macroeconomic development planning is something on which Malaysia prides itself and thus is willing to share with other countries what it has learnt over decades. One of the most important aspects is to help least developed countries understand the process and strategy for economic growth.

Malaysia has despatched experts to help with countries in Central Asia (Kazakhstan, Uzbekistan) and also Africa (Botswana and Tanzania). Such experts have been sent to help in assessing the needs and also setting up institutions that are similar to Malaysian ones (for example, Investment Promotion Agencies and macrodevelopment planning). More recently, there is keen interest in using the PEMANDU lab technologies and that is being shared with specific countries, for example, South Africa.

One of the Malaysian institutions, the Malaysian Institute of Accountants (MIA), has helped Cambodia and Indonesia develop their national accounting standards that are modelled after Malaysia's. The large number of Malaysian accountants in the region and a familiarity with accounting standard means that they can produce a similar set of accounts in countries that also use these standards. These standards are alternatives to those established by international bodies.

From the education and humanitarian aspect, a trust fund was established in 1989 with support of the government of Malaysia and the Malaysian Social Research Institute (MSRI) became one of its trustees²⁷². MSRI's continuing efforts of humanitarian support, especially for the Palestinian refugees in Lebanon, as well as for other support programme such as vocational training and medical aid. In Lebanon, MSRI collaborated with the partner, Beit Atfal as-Samoud (National Institution of Social Care and Vocational Training) to provide schooling and vocational training for refugee children in the refugee camps in Lebanon. In Palestine, MSRI partnered with the Culture and Free Thought Association based in Gaza Strip to channel aid to sponsored children in Palestine.

²⁷¹ John Ohiorehuan (2010). *Strengthening Malaysia's Contribution to South-South Cooperation: Some Suggested Strategic Directions*, revised report 30 June 2010 *unpublished)

²⁷² See <http://www.msri.org.my/v5/about-us/history-of-msri/>

DEVELOPING COUNTRIES' DEBT PROBLEMS AND DEBT SUSTAINABILITY

Malaysia shares with other countries its development planning programme, which is the basis for medium to long term macroeconomic planning, and which mobilises economic resources and deploys them to the development requirements and priorities. This is done through briefings given to official delegations by government agencies and despatch of experts to countries that request for assistance. In this regard, the concept compliments the trade and investment initiatives by breaking down institutional barriers that inhibit trade, economic growth and investment. Malaysia's own debt record in the 1990s and 2000s was within the constitutional limit of 55 per cent of GDP and enjoyed high sovereign ratings due to a high domestic savings rate.

In 1999, Malaysia stopped borrowing from multilateral development banks, such as the World Bank and Asian Development Bank (ADB). Malaysia's subscriptions add on to the resources of the ADB, which provide financial and technical assistance to developing member countries. In an effort to assist the poorest countries Malaysia became an International Development Association (IDA) donor for the first time in April 2014 and pledged US\$ 27 million to the 17th IDA replenishment. Malaysia co-hosted a high level forum with the Inter American Development Bank in December 2013 to facilitate the accumulation and the synthesis of ideas to better serve its members.

ACCESS TO AFFORDABLE, ESSENTIAL DRUGS

In order to improve health outcomes of the nation's people, Malaysia established the Malaysian National Medicines Policy (MNMP), also known as Dasar Ubat Nasional (DUNas) in 2000 with the objectives of promoting equitable access to and rational use of safe, effective and affordable essential drugs of good quality. The components under DUNas include, amongst others, Drug Availability and Drug Affordability. Under the Drug Availability component, a National Essential Drugs List (NEDL) was developed. A list comprising medicines that are required to treat a majority of the conditions found prevalent in the country in a cost-effective and efficient manner was developed. As for the

Drug Affordability component, this policy ensures continuous access and financial sustainability of essential medicines at prices affordable to all. Towards this purpose, the MOH has established a medicine price database through price monitoring activities and is in the midst of developing a rational pricing structure with assistance from WHO consultants and engagement of relevant stakeholders in the pharmaceutical industry, medical and healthcare professionals, other relevant government agencies and consumer groups. Presently, the MOH remains the main provider and financier of healthcare in Malaysia whereby health services, including medicines, in the public sector are provided free or at a minimal charge.

The ETP has identified an opportunity whereby many drug patents are expiring, and aims to encourage local production of generic versions of these drugs for local consumption as well as for exports. Since January 2012, all generic medicines are required to undergo bioequivalence studies to ensure their quality and interchangeability with the innovator/patented drug. The studies aim to inspire public confidence in generic medicines and, thus, lead to their increased acceptability and use.

The National Pharmaceutical Control Bureau (NPCB), which is the National Drug Regulatory Agency (NDRA) of Malaysia has been designated as a WHO Collaborating Centre for the Regulatory Control of Pharmaceuticals since 10 May 1996. One of NPCB terms of reference as a WHO Collaborating Centre is to provide training in this area for other NDRA's, both in this region as well as globally. Since 1996, NPCB has fulfilled its role by conducting training sessions and meetings as well as providing attachment training for WHO fellows and regulators from NDRA's from all the world. This may indirectly contribute to the availability and accessibility of safe, effective and quality generics in these countries.

BENEFITS OF NEW TECHNOLOGIES

Malaysia's role in dealing with cybersecurity

The **International Multilateral Partnership Against Cyber Threats** (IMPACT) is the first United Nations-backed cybersecurity alliance. Unveiled in Austin, Texas at the closing ceremony of the World Congress on Information Technology (WCIT 2006). The Malaysian initiative seeks to bring together governments and the international private sector to deal with increasing threats in cyberspace. During the 2011 World Summit on the Information Society Forum, an MoU was signed between the International Telecommunication Union and the United Nations Office on Drugs and Crime, which will see IMPACT supporting both organisations in their collaboration to assist UN Member States to mitigate risks posed by cybercrime.

In 2009, Malaysia launched the Global Headquarters of IMPACT in Cyberjaya with a RM 43 million startup grant from the Malaysian government. Malaysia has also formally recognised IMPACT as an international organisation and has accorded it with associated benefits and privileges. Presently, there are 152 member countries in IMPACT. There have been 11 national Child Online Protection strategy implementations, 13 Computer Incident Response Team (CIRT) implementations, 50 Computer Incident Response Team assessments, 90 countries in regional cyber drills, 80 partner countries trained, 400 scholarships deployed and more than 1900 cybersecurity professionals trained.

In addition, Malaysia's Child Online Protection efforts received international recognition. The CyberSAFE website of CyberSecurity Malaysia received the Saramad Golden Award, the highest award at the 6th International Digital Media Fair and Festival 2012 (IDMF2012) in Tehran, Iran; for being the best Child Online Protection portal out of 148 digital media.

In 2012, collaborative efforts with Africa were expanded by having a working affiliation with the AfricaCERT via the OIC-CERT platform. Coupled with the good relationship with Oman, which is the Cyber Security Regional Centre for the Arab nations, this will further boost Malaysia's professional connection with other players in the international arena²⁷³. CyberSecurity has also been organizing regional cyber drills with Organization of the Islamic Cooperation - Computer Emergency Response Team and the Asia Pacific Computer Emergency Response Team.

Internally, Malaysia has looked into cyber safety for children. DiGi CyberSAFE in Schools Programme has been educating students and teachers in schools nationwide since November 2011. CyberSecurity Malaysia and its strategic partners for the CyberSAFE in Schools Programme in 2013, namely DiGi Telecommunications Sdn. Bhd., and the Ministry of Education launched and distributed the booklet containing the result from National Survey – Safety Net: Growing Awareness amongst Malaysian School Children on Staying Safe Online.

Championing the opportunities of the digital world

To highlight the opportunities as well as risks of the digital world, the Ministry of Women, Family and Community Development, the Malaysia Communication and Multimedia Commission and UNICEF organised a regional child online protection conference in March 2015. The principal objective was to discuss how the internet and related online activities can best be used as a vital information source for children while also ensuring children are protected from online risks. The Conference reiterated that access to knowledge, participation, leisure and play are fundamental rights of all children and that the internet and other electronic media offer opportunities for these rights to be fulfilled, as they provide children and young people with unprecedented levels of access to information.

OTHER INITIATIVES

Private sector involvement has evolved and transformed from purely philanthropic contributions to those providing strategic, sustainable and holistic support to industry and the broader community. Global partnerships lean towards a multi-sector support framework for greater and longer impact. Partnerships come in many forms. In Malaysia, UNICEF works with the Companies Commission of Malaysia to deliver training on how the Child Rights and Business Principles are relevant to business and sustainable development; with the Malaysian based multinational Sime Darby around their Child Protection Policy covering property and plantations; with the ICT and telecommunications giant Microsoft and Telenor/Digi on bridging digital opportunities for marginalised communities and providing/promoting safe use of the internet for children.

Some of Malaysia's private firms have also implemented CSR programmes in countries in which they work, for example, GLCs in Sri Lanka. This is also the case for Malaysia's oil giant Petronas, which is active in Africa, especially in countries where it has a business presence. Some of the CSR programmes are cross implemented with other MTCP programmes.

MERCY Malaysia is active in areas of humanitarian aid and emergencies. Apart from servicing needs within Malaysia, MERCY Malaysia sent crisis response missions to Afghanistan (2001-2002), Iraq (2003), Palestine (2003-2009), Iran (2004), and Sudan under Darfur Humanitarian Aid (2004, 2008-2009). Medical relief aid was provided for Afghanistan (2003) and Lebanon (2006). Malaysia's mission to Iran in 2003 related to the earthquake there, and we sent flood missions to Sudan in 2007 and Yemen in 2008. Similar assistance has also been rendered in South Asia as well as in South-East Asia.

²⁷³ Malaysia, Ministry of Science, Technology and Innovation. CyberSecurity Annual Report 2012.

MOVING FORWARD

Global partnership is a two-way street. Malaysia benefited before and is now recognizing a responsibility to help others. More than that, Malaysia will also continue to gain from these partnerships but there is a need to do this in a more effective manner so as to maximise impact.

The SSC study reported that *“South-South cooperation activities in Malaysia are carried out by a large number of public and private sector entities, most of whom do not necessarily consider that they are doing SSC. Individual agencies focus on their specific mandates. This implies that they tend to see their key concerns narrowly in terms of their own budget, workload and staff numbers. There also does not seem to be a central agency coordinating all the activities in an economic policy or foreign policy framework.”*

“There are several issues to consider in framing a SSC strategy. One of the most important considerations is how to determine focus areas for technical cooperation. A second consideration is the choice of priority partner countries. A third critical consideration is ensuring coherence and coordination of all the different players in order to avoid inefficiencies. A fourth critical question is where to place a country's SSC Unit institutionally to ensure that it has a profile commensurate with its political importance.”

Moving forward, funding for furthering global partnerships will become more difficult to secure as priorities in other areas are also competing for funds. Hence, it will be vital to ensure that sustainability, relevance and efficiency issues are addressed. This will need a strategic framework.

CONCLUSION

Malaysia has demonstrated that strong collaborations in the public and private sectors can foster better development outcomes such as that achieved by the MTCP in the public sector as well as the MASSCORP model in the private sector. In the future, there is room to further explore and enhance public-private partnerships to mutually achieve our long term development goals.

ANNEX 8.1

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THE POST-2015 DEVELOPMENT AGENDA

“... to attain our aspiration of an advanced nation that is inclusive and sustainable by 2020, the support of every Malaysian is crucial. It is my belief that the true greatness of our nation comes from the enduring spirit of Malaysians, our shared values and ideals, and the great talent of our people...” *Foreword by YAB Prime Minister, 11th Malaysia Plan*

INTRODUCTION

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Malaysia has done well in human development since its formation in 1963. Despite being a relatively young nation, Malaysia has been a forerunner in achieving good human development outcomes through systematic, dedicated and sustained efforts of numerous stakeholders over time. Within the context of the Millennium Development Goals (MDGs) framework, absolute poverty and hunger have been largely eliminated in Malaysia; universal primary education has been achieved for both boys and girls; child mortality is very low and is comparable to levels in high income nations; maternal deaths have fallen by more than half, while safe deliveries and antenatal care coverage are high; infectious diseases like HIV/AIDS and malaria have been halted and reversed; sustainability of the environment has been incorporated into key plans and policies; there is near universal coverage of clean water supply and basic sanitation and squatter households have been reduced; and Malaysia has gradually become an important and active contributor to global development as the nation graduates from being a recipient country to sharing its development experience with other countries. These achievements have been documented in the preceding chapters of this report.

It is noteworthy that these human development achievements were attained whilst sustaining healthy economic growth and social peace and stability as a multicultural society. Achieving and sustaining these results is no easy feat and remains to be a fine balancing act. Moreover, Malaysia, during the MDG period, was already pursuing a MDG Plus (MDG+) development agenda. As demonstrated in the MDG 2010 Report, Malaysia has been focused on achieving equitable development outcomes at disaggregated levels, by locality, strata, age groups, and vulnerable groups. Malaysia also prioritised other development issues in the spirit of the MDGs, for example, child poverty, inequality and vulnerability reduction (MDG 1), enrolment and completion rates at secondary school (under MDG 2), and enhancing the position of women in decision-making positions in the public and private sectors, as well as tackling gender-based violence (MDG 3). These examples demonstrate that the country continues to take a forward-looking approach in its development. Even so, there are challenges to sustaining what has been achieved, completing the unfinished business and pushing back against the barriers of development.

As the end of the MDG timeframe approaches, it is timely to reflect on the MDG experience and contemplate the issues that will remain relevant in the post-2015 era. The challenges and development needs of Malaysia will continue to change as the nation moves closer to becoming a fully developed nation. Indeed, having addressed the basic aspects of development, Malaysia will need to ensure that its achievements and future human development are sustainable and resilient to shocks and disasters. Equally important is that human and social development should be pursued in an inclusive and equitable manner. The challenge is therefore to ensure that current policies and programmes are realigned to be sustainable, resilient and inclusive and to build a foundation for a quality of life experience.

Given this context, this is a forward looking chapter that will provide input to the global reflection on the MDG experience from the Malaysian perspective and an opportunity for Malaysians to look at their future development. The chapter is arranged to touch briefly on the unfinished business of the MDGs and explore emerging issues, before highlighting key development challenges that Malaysia still must overcome to ensure sustainable, resilient and inclusive development outcomes beyond 2015.

THE UNFINISHED BUSINESS

There are issues that remain, largely in the context of an MDG+ scenario, and there are also efforts in the pipeline towards furthering past achievements. These remaining issues have been discussed in respective chapters that precede this chapter and are summarised in **Annex P.1**. This subsection therefore is not intended to repeat the discussion on remaining issues. Rather, it will highlight larger development aspects that require additional effort as Malaysia continues on its development journey.

Environment

Malaysia's achievements in social and economic development have been built on natural and environmental resources, not only as inputs for economic production but also as provisioning environmental services for the country's people. The environment has an additional role in disaster risk prevention and management. Yet, the environment and its relationship with increasing and rapid urbanisation is much less understood in comparison to the economic and social spheres of development. Without a serious look at the environment, and at climate change issues, the pursuit of sustainable and resilient development is all the more difficult and may even be out of reach.

Data and information on natural resources, especially on environmental quality, need to be vastly improved. To achieve sustainable development, good quality data and information on natural resources – the quantity and quality of Malaysia’s natural resources, their utilisation rate and outcomes of the conservation efforts – need to be understood. Without additional details, sustainable use of resources will be difficult to achieve.

Another key barrier to environmental sustainability relates to resource management. Perverse incentives, such as those that reward exploitation and penalise conservation efforts, need to be removed; so too for the undervaluation and underpricing of our natural resources.

More evidence-based decision-making is needed, such as the use of cost and benefit analyses that take into account the economic benefits of the environment in full consideration of desired outcomes. A common vision of biodiversity management, including conservation, and the alignment of institutional responsibilities is imperative to achieve our desired goals.

Gender empowerment

Another development focus that requires attention is gender empowerment. In education and health, Malaysia has done well to ensure gender parity. However, stereotyped gender roles persist with implications for other development achievements. Gender empowerment in so far as it improves the overall welfare of men and women should be pursued. For example, the burden of care and lack of supporting infrastructure for women and men alike have inhibited the labour force participation of women. This, in turn, has trapped some families within the low income status, and exposed their vulnerability to falling through the safety net. In so far as gender wage discrimination, the government needs to focus attention on policies that try to remove all unfair practices, especially in the private sector, in order that the principle of equal pay for equal work can apply in spirit and practise in Malaysia.

Inclusiveness

Malaysia’s development philosophy according to the 11MP is to leave no one behind. The approach, which started in 1971 (the Mid-Term Review of the 2MP) was to generate jobs and keep employment high, and to provide basic education in order to create a skilled workforce for the needs of the economy. The experience of creating a single national public education system has been very challenging but a national public education system has emerged providing universal education for all Malaysians.

A similar approach was taken in healthcare, where a national public healthcare system was developed comprising clinics in rural and urban areas with referrals to state and national facilities. Concomitantly, a rural sanitation and water supply programme, first launched in the 1960s, has reduced water-related infectious diseases and improved healthcare. The successes of Malaysia’s development are evident even at the subnational level.

The “no one left behind” approach required huge levels of effort, investment and resources. A focussed and targeted approach is necessary. In the 10MP (2011-2015), the outcome-based approach was announced, which aimed to deliver the desired outcomes with the least cost. This approach emphasises the effectiveness of achieving the intended development outcomes.

On the international front, there are new challenges, as well as new opportunities, as globalisation continues apace and the impact of international migration changes the dynamics of local regions and nation states.

On the domestic front, various problems have emerged such as the increasing cost of living, persistent inequality of incomes and wealth distribution, and low savings rate and high household indebtedness, particularly amongst the lower income groups. Additionally, climate change will likely impact on many regions that were formerly free of natural disasters and affect more vulnerable populations as exposure levels rise with rapid urbanisation. Global and economic uncertainties will pose new challenges, and stronger social protection programmes are needed to catch those who are unable to make it through the system or suffer from unintended outcomes.

The inter-connectedness of the various problems requires a multi-dimensional approach. The 11MP's multidimensional poverty index is an attempt to try to quantify and measure the various dimensions and quality of development so that appropriate action can be taken.

The government has started to take new initiatives, unconventional by Malaysian standards, to tackle these new challenges by harnessing the strength of community organisations to reach vulnerable populations. For instance, the government sponsored dropout programme at MySkills Foundation has shown unexpected results where almost 80 per cent of the targeted group have found jobs, and another eight per cent are pursuing further education. This second chance programme is an extremely good complement to the current educational system. While this is a specific example, it signals a need for a strategic relook at the social protection system: one that is flexible and can respond to needs that may emerge from unintended circumstances or situations. The 11MP has noted that a review of the social protection programmes will be undertaken.

Quality of development

The world today is vastly different from the time when the first national policies were developed. Then, the needs of the population were more in terms of jobs and the need for infrastructure that supported schools and health centres. Having satisfied the people's basic needs, other needs and requirements have emerged, such as decent jobs and higher incomes, a high quality of life enriched by arts or sports, good and safe living environments, and the opportunity to develop culturally, intellectually and scientifically and to live a more fulfilling life.

This multidimensionality of development was stated in a slightly different way in Malaysia's Vision 2020. It is essentially a paradigm shift in terms of development for the people, which can be summarised succinctly as "quality" over "quantity". Pursuing quality development is essentially the thrust of the government's plans as enunciated in the more recent 11MP, New Economic Model (NEM), Economic Transformation Programme (ETP) and Government Transformation Programme (GTP). On the economic front, the green growth strategy (11MP) is a move away from resource intensive growth toward sustainable consumption and production, which emphasises improving the quality of economic growth through responsible consumption, waste minimisation and efficient production. The Malaysia Education Blueprint 2013-2025 posits that the next challenge is improving the quality of education and developing its human capital whilst transforming the educational institutions into efficient and effective operations. Similarly, the Strategic Paper of the 11MP on Labour Market skills for an Advanced Nation will prioritise upgrading skills, raising productivity and managing the foreign worker population. On these fronts, the challenge is to effectively implement plans and strategies to attain the desired quality in development.

Although the 10MP and 11MP contain the strategy for a shift in the quality of economic growth, fine-tuning of plans and programmes are necessary. It is important to recognise that not all aspects of development have been fully considered under the “quality” lens. Identifying these gaps and subsequently addressing them will be important to improve the quality of development all-round. One area where a transformation is important but little progress made is the quality of living conditions in public housing. Local governments are directly responsible, but they have insufficient resources and capacity to deliver the outcomes and meet the expectations of the people. More capacity (skills, and people) and finance are necessary to deliver better outcomes in this area. A transformation plan that involves the local communities in these areas needs to be on the agenda.

MOVING FORWARD

There are several key development areas that need to be addressed in moving forward.

Crosscutting nature of development: The interlinkages and crosscutting nature of development are becoming increasingly important. For example, what we have seen in Malaysia’s experience is that health and education contribute to employment and better incomes, which in turn, directly contribute to poverty eradication. As described in MDG 4, interventions to prevent infants and children under five from dying can range from improved parental knowledge of the causes, to better quality and safety considerations in childcare centres, to prevention and early interventions to stop child abuse in homes and institutions, to dealing with domestic violence and gender-based violence, to increasing road safety in general. Medical interventions alone would not be sufficient to deal with this aspect of child health. Similarly, teenage pregnancies are not only a social issue. They are very much a gender empowerment issue, an education issue, a health issue and an economic issue as described in the MDG 5 chapter. Indeed, this interplay between sociocultural determinants and health is very much applicable to overall maternal and child health and reproductive health, and requires the engagement of the full public health spectrum to manage.

Other examples include the interlinkages between gender parity in education and occupations and the educational outcomes of boys and the implications on possible shortages of skilled labour in the future (MDG 3 chapter), the relationship between female labour force participation and improved facilities and services (MDG 3 chapter). In MDG 7, the relationship between environmental resources and economic growth is so vital that the basis of future development could be affected, especially under conditions of uncertainty, whether manmade, as in global competition, or natural, as in disasters arising from climatic changes.

Hence, addressing development issues in an integrated manner is the next major challenge for Malaysia's development as government ministries and agencies often times operate in "silo" based on their legal or defined jurisdictions. The 11MP aims to rationalise public sector institutions for greater productivity and performance and will have to approach integrated development in a holistic manner.

Demands for public participation and social trust: The demand for public participation in all levels of society is growing and the availability, or lack of, mechanisms to positively harness this contribution can greatly influence the inclination for and fostering sustainable, resilient and inclusive development. It is also an important aspect of inclusiveness in that people both benefit from development as well as have the right to have a voice in deciding the forms and nature of development to pursue.

On this note, public engagement is another area that could contribute to filling the gap between expectations and actual development. In the post-2015 public consultations undertaken in Malaysia, this gap and many others were clearly expressed in the discussions at the local levels. Timely, consistent and engaging communication between institutions and stakeholders are needed in order for meaningful participation to occur. Effective engagement and communication are important for enhancing public perceptions about the transparency, accountability and openness of institutions. This social trust will be critical when Malaysia is faced with making tough decisions to ensure sustainable futures.

Effective implementation: While effective engagement and communication play a role in building social trust, implementation on the ground level speaks the loudest. Ensuring that plans, policies and programmes achieve their intended outcomes will need sustained and focussed effort, requiring increased local capacities of people and institutions.

Indeed, this could well be the Achilles heel of development. In the area of conservation, the local capacities and resources for the protection of mega biodiversity are well below the required level. In moving forward, strengthening local implementation capacities would give a better chance for achieving the desired outcomes. In addition to the important issue of biodiversity conservation, providing resources to local authorities for the transformation of the urban low cost areas would contribute towards building a fully developed society from the ground up.

In fact, such approaches have already begun. Malaysia has developed strong local capacities in its maternal and child health and malaria control efforts, which have achieved levels approaching those of developed countries (see chapters on MDGs 4, 5, and 6). The LA21 agenda is an example of local participation, but it is far from the mainstream of local development. In moving forward, taking that leap to invest in and enhance local capacities will require improvements that will bring better quality to Malaysia's development outcomes. Empowering local capacities is the final leap towards becoming a developed nation.

Realising local empowerment requires a change in the system of governance. It will require a recognition that NGOs and community-based organisations can make a contribution to local development; and that empowering them is essential to realise this potential. In working together, the core principles of accountability, transparency and co-ownership of outcomes must be fully practised. In this regard, the government needs to take the initiative to make this transformative change.

Resilience and sustainability: Malaysia has been very successful in delivering the physical aspects of development, but in the future, the challenge is to ensure sustainable development and the nation's resilience. For almost all the MDG goals, Malaysia made significant gains because of its policies, such as in job creation, building schools in and delivering health services to rural areas, establishing a robust system for production and trade, and connecting the country, especially Peninsular Malaysia, with roads and other transport modes. The outcomes as measured by the MDG indicators show progress even in subnational and subregional levels.

As Malaysia moves to complete the "last mile" of development, new challenges are emerging: globalisation and economic competition, declining and scarce natural resources, new technologies that are changing the business and societal landscape, climate change, mass movements of people, unsustainable lifestyles, and urbanisation. To empower and provide opportunities for the people to meet these challenges, the imperative is to invest even more in them, increase their capacity to be creative and innovative in deriving solutions, their ability to handle crises and disasters, whether natural or man-made, and to be able to rise to the demands of a globalised world and economy.

As eloquently discussed in the 11MP, the next frontier is anchoring growth on the people.

Global partnerships: Malaysia has taken important steps to share its development experience through its well-known Malaysian Technical Cooperation Programme. This programme has enabled other countries to think about their own plans using Malaysia's experience as an example. Malaysia has shown that it is a global partner for development; two examples being its support of UNICEF's global mandate through innovative financing in Malaysia and the recognition of WHO Collaborating Centres. This foreign policy element is very much in line with the inclusive nature of the sustainable development goals, by providing opportunities for those in need. As the global arena continues to change both in the dynamics and the needs, Malaysia will need to enhance its model for global partnership in order to continue being an effective partner in global development.

What's more, in furthering the inclusive approach to development, there is the challenge of including the subpopulations of refugees, undocumented and stateless persons in the country's development journey. In terms of human rights, they should be included. They are also a potential human resource for the nation.

Yet at the same time, the country is faced with the dilemma that including these subpopulations currently in the country in development programmes and initiatives will risk opening the flood gates for more to come. This raises the concerns on the sufficiency and security of resources which are needed to sustain the development achievements attained. This balancing act without compromising the human rights of these vulnerable populations poses a pressing challenge especially for a nation that already hosts a substantial population of documented migrants. As Malaysia stands at the "crossroads" of regional migration and crossborder movement, its leadership on this is critical.

Needless to say, these challenges are not unique, and some of them have been recognised in the 11MP. The 11MP document has outlined a strategy and the priorities for development of the country and people. They point to elements of common challenge that need to be addressed at the national level and a concomitant need for a stronger global partnership for development.

Monitoring and evaluation: There is currently no institution that is assigned to do the monitoring and evaluation of the MDGs. This review effort has instead used an ad-hoc approach. In the post-2015 period, a coordinated institutional effort shall be put in place to facilitate this process, as the SDGs have more goals, targets and indicators.

THE SUSTAINABLE DEVELOPMENT GOALS

The proposed Sustainable Development Goals (SDGs) are about sustainability, resilience and inclusiveness. They are consistent with the strategic thrust of the 11MP on sustainability and inclusiveness, with a strong people focus. As Malaysia moves beyond the MDG era and into the post-2015 period, she will continue to forge her own development pathway.

At the same time, there is much to be gained from working within the SDG framework, as there was within the MDG goals and targets. Together, the 11MP and the SDGs provide a way forward. Their shared vision is that

people must be educated, able to think scientifically, have decent jobs, live healthy lives, and be resilient against conditions that may destroy them. A strong economy is necessary as the means for the anticipated development. In that respect, conserving and protecting the natural and environmental resources along with sustainable consumption and production are key elements. There is a strong emphasis on science and technology as the basis for greater knowledge and innovation that is needed for the new economy. **Table P.1** shows the links between the proposed SDGs, and government policies, especially the 11MP.

Table P. 1:
Linking proposed SDGs and Malaysian policies

Proposed Sustainable Development Goals		Malaysian policies	Comments
1	End poverty in all its forms everywhere	A multidimensional poverty index to better profile households so that the poor and vulnerable are identified. The focus is the B40 group. Transform the B40 group to be a middle income society (11MP).	Vulnerable groups need to be kept in focus. Suggest a vulnerable group (half median income) be included as a subset of B40.
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Amongst rural and remote communities, GTP 2.0 has food supplement programme targeted for poor malnourished children (MOH). The development emphasis is done by targeting support to underserved communities, improving service delivery and increasing health awareness. Malaysia has announced a rice self-sufficiency target of 100% by 2020. The 11MP is adopting a sustainable production and consumption concept, which aims at creating green markets through Government Green Procurement, and green certification.	Food security is also important. Individuals and households must be able to acquire food of sufficient quantity and quality (including safety), culturally acceptable, obtained in a manner that upholds human dignity and produced in an environmentally sustainable manner. Noncommunicable diseases such as obesity and diabetes are also important aspects to consider apart from dealing with undernutrition.
3	Ensure healthy lives and promote well-being for all at all ages	General health status is close to developed country level (MOH). A well-being approach appears in six focus areas of the 11MP: healthcare, housing, living environment, road safety, social cohesion and sports.	The gains made in MDGs 4, 5 and 6 must be protected and sustained. A higher health literacy is needed for people to be responsible for their own health. The sociocultural aspects of health also need further consideration.
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Malaysia Education Blueprint (MOE) has laid out plans and strategy for transformation of the education system and deliver student outcomes. The 11MP will strive for quality of education for better student outcomes and promote lifelong learning.	Explore avenues for greater community-based participation in education; focus on quality of education and outcomes; improve access for the hard-to-reach and in remote areas.
5	Achieve gender equality and empower all women and girls	The 11MP will focus on strengthening the family institution and raising the female labour force participation rate as well as to support women entrepreneurs through various programmes. Women in leadership positions are a target indicator that is being monitored.	Greater participation of women in designing development programmes; raise awareness on gender empowerment and equality, gender-based violence, support for teenage pregnancies, access to justice and break the glass ceiling on discrimination in work
6	Ensure availability and sustainable management of water and sanitation for all	The 11MP will focus on expanding coverage for sanitation and improve connectivity to the treated water system, increase efficiency and strengthen the regulatory framework.	Greater use of economic instruments to achieve sustainability goals in these sectors
7	Ensure access to affordable, reliable, sustainable and modern energy for all	Energy policy shall focus on sustainable energy to support economic growth and reducing fuel subsidy. Greater use of renewables and demand side management will also be practised (11MP).	Focus on decoupling energy use from economic growth as a medium-term goal; absolute reduction of GHG emissions on a continuing basis as long-term goal.
8	Promote inclusive and sustainable economic growth, full and productive employment and decent work for all	NEM and ETP are expected to deliver sustainable economic growth and talent development and recruitment will support forecasted growth. Macro-economic strategy focussed on productivity driven, innovative and technology approach (11MP).	Decent work and work-life balance require policy support for a more efficient labour market; more collaborative work culture and partnerships.
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	11MP lays out the strategies, policies, plans and programmes. Better coordination at all levels of government will increase effectiveness of benefits in infrastructure development.	Foster greater innovation and creativity development as well as sustainable construction & climate proofing infrastructure developments.

Proposed Sustainable Development Goals		Malaysian policies	Comments
10	Reduce inequality within and amongst countries	11MP reported significant success in reducing Gini coefficient; further reduction in Gini to 2020 and beyond is expected. Its foreign assistance programme has improved the human capacity of less developed countries.	Focus on vulnerable groups within Malaysia; launch revitalised South-South Cooperation programme.
11	Make cities and human settlements inclusive, safe, resilient and sustainable	NEM and GTP are helping to put together action plans to ensure that investment flows to cities with programmes will make them vibrant so that they attract talent. GTP programmes will help them be safe and secure. The 11MP will focus attention on four cities. One of the key strategies is also to reduce the environmental impact of transport, which will have profound impacts on cities.	Improve the efficiency of cities (e.g., low carbon, efficient waste management, mobility and transport) recognising interplay between living areas (environment), social well-being and economic needs. Further engage with communities to take responsibility for improving their living environment.
12	Ensure sustainable consumption and production patterns (SCP)	An SCP strategy is being planned (11MP). Energy demand management is also a key policy, which will be aided by a management master plan that will expand coverage for buildings, industries and households. There will be strategies to encourage low carbon mobility via adoption of energy efficient vehicles and public transportation.	Strengthen the links between environment and development; and the means of implementation.
13	Take urgent action to combat climate change and its impacts*	Achieved 33 per cent of emissions intensity reduction and on course to achieve 40 per cent. Disaster risk reduction & adaptation strategies the 11MP focus – in order to strengthen resilience against disasters. A low carbon strategy also in the 11MP.	Adaptation and mitigation programmes to complement a low carbon strategy as well as build resilience to disasters and climate related risks.
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Principles of conservation and legal instruments are in place for sustainable development. A green growth strategy is the game changer under the 11MP. An expansion of the marine protected areas is expected with gazette of the Tun Mustapha Park in Sabah. Malaysia is also a key nation in the CTI and SSME initiatives.	Build strong terrestrial-marine links to conservation and development; use the precautionary principle in development.
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss	Policies, plans and also legal instruments are in place. The 11MP aims to increase the resilience of local people against climate change and natural disasters. A key element in this is ensuring natural resources security. Its strategies include conservation of terrestrial and marine areas, and managing natural resources while enhancing the livelihoods of indigenous and rural communities by involving them in biodiversity conservation and introducing them to alternative economic opportunities.	There is a need to ensure much stronger linkages across sectors in the planning and monitoring of development. For example, in the planning of development initiatives, Health Impact Assessments should be undertaken, for all projects, with much more rigour, and results considered seriously before final decisions are made on significant development projects.
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	11MP advocated for an inclusive approach to development with people's welfare as its focus, and will take into account their diversity but desire for development and unity. Malaysia's approach is in transforming the public service via productivity improvements and will do this at all levels, including at the local authority level.	Focus on building governance and improving institutional accountability without losing sight of the inclusiveness approach.
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Malaysia has a progressive policy on global partnership and has made contributions via MTCP. <i>It can punch above its weight if its policies are more effectively realigned to suit its foreign affairs policy.</i>	Revitalise and reinvest more in establishing a coherent South-South capacity-building programme.

Despite the complementarity, Malaysia will use the SDG approach in so far as it fits its own development model. Each country has their own capacity and resources but also their limitations and challenges. Although meeting the SDG indicators and targets is important, Malaysia will need to seriously consider the cost-effectiveness and priorities of development activities within her own context. For example, is it more important to have zero poverty rates when rates are already very low than investing in unfinished development matters, such as the environment, gender, or improving public housing conditions?

Balancing these priorities will be challenging. Staying true to the principles of sustainability, resilience and inclusiveness is more important than chasing down all the indicators. Framing the indicators right and measuring what is useful for the country to progress on human development will be the challenge that Malaysia will need to work hard on in the post-2015 era.

CONCLUSION

This chapter has helped to address the issues that concern Malaysians and the government on what is important to them in the future with regards to the post-2015 environment and global human development agenda. They represent a bottom-up and top-down approach to the space for public policy. It can be said that the Malaysian government in the 11MP has anticipated much of the SDGs or at least has formulated its policies that coincide with the SDG framework, although there are still a few gaps and areas of concern for which much more focus needs to be given. In that respect, the Malaysian development agenda is somewhat aligned with the post-2015 human development agenda. The strategic directions that the 11MP has sketched for Malaysia and the detailed targets and indicators of the SDGs are complementary and the latter would provide the means for measuring future Malaysia's development.

ANNEX P.1

Table P. 2:
Summary of remaining issues from respective MDG chapters

MDG	Remaining issues from MDG	Themes
MDG 1	Pockets of poverty	Inclusiveness
	Inequalities	Inclusiveness, Resilience
	Vulnerabilities to poverty (retirees, youth, women; savings and assets, household debts)	Sustainability, Resilience
	Vulnerabilities to climate and natural disasters	Resilience
	Relative poverty	Inclusiveness
MDG 2	Educational quality, Higher Order Thinking Skills	Resilience, Sustainability
	Pockets of unreached children	Inclusiveness
	Dropouts	Inclusiveness, Sustainability
MDG 3	Cultural and social perceptions of gender roles	Sustainability
	Female representation in areas of study and employment	Inclusiveness, Sustainability
	Eliminate gender wage discrimination in work and jobs	Inclusiveness
	Underperformance of boys in higher education level - link to future shortage of skilled labour in certain areas	Sustainability
	Not fully optimised human resources (Female LFPR) - care services, sharing the burden of care, transportation needs, wage disparities	Inclusiveness, Resilience
	Insufficient representation in politics and decision-making roles	Inclusiveness
	Underage marriages	Inclusiveness
	Gender-based violence	Inclusiveness
	Access to justice	Inclusiveness
MDG 4	Deaths from neonatal and perinatal period	Sustainability
	Deaths from external causes (injuries, accidents, etc.)	
	Uncertain cause of deaths (the quality of death certification)	
	Pockets of vulnerable groups without equitable access to healthcare (e.g., urban poor, remote populations, refugees, migrants and undocumented persons) - link to social stigmas, work demands, infrastructure limitations and to government policies	Inclusiveness

MDG	Remaining issues from MDG	Themes
MDG 5	Access to sexual reproductive health services and information	Inclusiveness
	High risk mothers, mothers with social barriers	
	Teenage pregnancies to be managed via all spectrum of public health, i.e. at all levels – 1°, 2°, 3°	Resilience
	Suboptimal competencies of health staff	Sustainability
	Another unfinished agenda will be to collect more data on unmet family planning needs and publish them	
MDG 6	Competing priorities for resources (preventive or curative interventions); more resources are needed to get full coverage of available interventions (e.g., ARV coverage)	Sustainability
	Public knowledge, awareness, perceptions and participation	Inclusiveness, Sustainability
	Engagement with and management of high-risk groups	Inclusiveness, Sustainability
MDG 7	Biodiversity loss (wildlife crime, depletion of resources, quality and representativeness of protected area system)	Sustainability, Resilience
	High consumption levels and resource intensive development	Sustainability
	Security of water	Resilience
	Federal-state issues and capacity at local levels (affects implementation, data and information sharing)	Sustainability, Resilience, Inclusiveness
	Data gaps and measures (fragmented, no full picture of environmental situation in Malaysia)	Sustainability
Issues not directly covered by MDGs but are emerging issues for Malaysia	Noncommunicable diseases	Sustainability
	Disaster risk prevention and management	Resilience, Sustainability, Inclusiveness
	Undocumented persons, and other vulnerable segments of society such as LGBT, persons in detention centres and prisons	Inclusiveness
	Second chance education and lifelong learning	Resilience
	Building a strong scientific society	Resilience, Sustainability
	Governance issues	Sustainability, Inclusiveness

