
M.Sc Environmental Management
National University of Singapore
Report for the Academic Year 2008-2009

M.Sc. Environmental Management

1. Introduction

The Master of Science (Environmental Management), or MEM, Programme is a multi-disciplinary integrated programme that is hosted by the School of Design and Environment (SDE), National University of Singapore. It aims to provide graduate-level education in environmental management for senior and mid-level managers and professionals.

The MEM Programme is the only academic programme in NUS that is jointly mounted by seven faculties/schools in the University. The supporting faculties/schools are: Faculty of Arts & Social Sciences, School of Design and Environment (SDE), Faculty of Law, Faculty of Engineering, Faculty of Science, NUS Business School, and the Yong Loo Lin School of Medicine. SDE as host of the Programme administers the Programme and co-ordinates the curriculum. The Director of the Programme is from SDE. The other faculties contribute faculty members to teach, supervise dissertations and conduct seminars.

The Programme has a Memorandum of Understanding (MOU) with Yale University's School of Forestry and Environmental Studies, the oldest school on the environment in the US. The MOU provides for staff exchange, and each year, a faculty member from Yale teaches the core module Business and the Environment at NUS, while one or more professors from NUS teach at the Yale School. An MOU was signed with Duke University-Nicholas School of the Environment and Earth Sciences on 19th March 2009.

2. Advisory Committee Members

The programme has a distinguished panel of Advisors chaired by Professor Tommy Koh, Ambassador-at Large and Chairman of the Institute of Policy Studies, Singapore.

Members of the Advisory Committee

- | | |
|---|--|
| <ul style="list-style-type: none"> • Prof James Gustave Speth
Dean, School of Forestry and Environmental Studies
Yale University, USA | <ul style="list-style-type: none"> • Mr. Warren Fernandez, Deputy Editor and Foreign Editor, The Straits Times |
| <ul style="list-style-type: none"> • Prof Jack L Knetsch
Professor Emeritus, Economics and Resource Management | <ul style="list-style-type: none"> • Mr. Kwek Leng Joo, Managing Director, City Developments Limited |
| <ul style="list-style-type: none"> • Prof Nicholas A Robinson
Gilbert & Sarah Kerlin Distinguished Professor of Environmental Law, Pace University, USA
Chair, IUCN Academy of Environmental Law | <ul style="list-style-type: none"> • Mr. Ng Lang, Chief Executive Officer, National Parks Board • Mr. Andrew Tan, Chief Executive Officer, National Environment Agency |
| <ul style="list-style-type: none"> • Mr. Lee Tzu Yang
Chairman, Shell Companies in Singapore | <ul style="list-style-type: none"> • Mrs. Kirtida Mekani, Consultant • Dr Geh Min, Former President, Nature |

Society, Singapore	
<ul style="list-style-type: none">Mr. Edwin Khew Nominated Member of Parliament Chairman, Sustainable Energy Association of Singapore (SEAS)	<ul style="list-style-type: none">Professor Tan Wee Hin, Leo Department of Biological Science Faculty of Science National University of Singapore

We thank Mr Lee Yuen Hee, former CEO, National Environment Agency, and Ms Kay Kuok, Director, Kuok Singapore Ltd, for serving on the Advisory Board. We welcome new Board members Mr Warren Fernandez, Mr Kwek Leng Joo, Mr Ng Lang, Ms Andrew Tan, and Dr Geh Min.

3. Programme Management Committee

The programme is a collaboration of seven faculties in NUS, and each faculty / school is represented in the Programme Management Committee, as shown.

Chair:	Members:
Assoc Prof Lye Lin Heng Law Faculty	<ul style="list-style-type: none">Assoc Prof Bai Renbi Faculty of EngineeringProf Chou Loke Ming Faculty of ScienceAssoc Prof Audrey Chia NUS Business SchoolProf David Koh Yong Loo Lin School of MedicineAssoc Prof Victor Savage Faculty of Arts & Social SciencesAssociate Member - Assoc Prof Jesuthasen (Dodo) Thampapillai, Lee Kuan Yew School of Public Policy
Deputy Chair: Prof George Ofori School of Design and Environment	
Programme Director Dr Malone-Lee Lai Choo School of Design and Environment (Up to 1 Mar 09)	
Dr Ong Boon Lay School of Design and Environment (From 1 Mar 09)	

4. 2008-2009 Intake of Students

On the 1 August 2008, the Programme welcomed its 8th intake of students. The programme was honored to have three guests-of-honour this year. Deputy President and Provost, NUS, Professor Tan Eng Chye, Professor Tommy Koh, Chair, MEM Advisory Committee and Mr Kwek Leng Joo, Managing Director, City Developments Ltd. The speech of Provost Tan Eng Chye is at the end of this Report.



*Deputy President and Provost, NUS,
Prof Tan Eng Chye*



*Chair, MEM Advisory Committee, Prof
Tommy Koh*



*Managing Director, City
Developments Ltd, Mr Kwek Leng
Joo*

A Memorandum of Understanding was signed on this day between the School of Design and Environment and City Developments Ltd, providing a platform for the conduct of collaborative research.



*Dean, School of Design & Environment AND Managing Director, Mr Kwek Leng Joo
signing the MOU*

The new students admitted to the Programme in the Academic Year are:

Name of Student	Nationality	Background	Work Experience
Full-time students			
Ms. Chamila Darshani	Sri Lankan	Bachelor of Science of Engineering	Chemical Engineer
Weerathunghe Arach Chige			
Mr. Chua Hong Hui	Malaysian	Bachelor of Engineering (Mechanical & Production engineering)	System Engineer
Mr. Ishwari Prasad Poudel	Nepalese	Bachelor of Science in Forestry	District Forest Officer
Ms. Jaseema Jaffarullah	Indian	Bachelor of Architecture	-
Ms. Mokshana Nerandika Wijeyeratne	Sri Lankan	Bachelor of Science	-
Mr. Sowmya Duggappa Gowda	Indian	Bachelor of Engineering (Environmental Engineering)	Project Assistant, Ecological Sciences
Mr. Sathyanarayanan Srinivasan	Indian	Bachelor of Architecture	Architect

Report for the Academic Year 2008-2009

Ms. Beatrice Jeba Dare	Indian	Bachelor of Science (Microbiology)	Senior Materials Analyst
Ms. Carrie Wallace Candeto	American	Bachelor of Arts	-
Ms. Sonthalia Rakhee	Indian	Bachelor of Arts	-
Part-Time Students			
Mr. Ang Zhi Qin@Ang Chee Khng, Kevin	Singaporean	Bachelor of Science (Real Estate)	Senior Manager
Mr. Chan Cheong Shuen	Singaporean	Bachelor of Engineering (Environmental Engineering)	Environmental Engineer
Ms. Cheong Shew Chin	Singaporean	Bachelor of Science (Chemistry)	Application Service Manager
Ms. Cheong Wei Min, Denise	Singaporean	Bachelor of Laws	Lawyer
Mr. Ho Hai Wee	Singaporean	Bachelor of Environmental and Occupational Health and Safety	Senior EHS & Facility Engineer
Mr. Lim Bock Teck	Singaporean	Bachelors of Engineering	Purchasing Manager
Ms. Lim Hui Khian Karen	Singaporean	Bachelor of Social Sciences (Economics)	Manager
Ms. May Yadana Aung	Burmese	Bachelor of Social Science	Insurance
Mr. John Woolsey Mckernon III	American	Bachelor of Arts	Senior Vice President, Development
Mr. Tan Puay Cheow	Singaporean	Bachelor of Engineering (Civil Engineering)	Partnership Executive
Ms. Yong Kim Lian, Kelly	Singaporean	Bachelor of Business	Corporate Services Manager
Mr. Yu Zhen	Chinese	Bachelor of Applied Science (Applied Chemistry)	Management Executive
Mr. Kaustuv Ghosh	Indian	Bachelor of Commerce	Director
Mr. Lai Kok Wing	Singaporean	Bachelors of Business	Sales Executive
Mr. Lee Howe Ming	Singaporean	Bachelor of Architecture	Executive Architect
Mr. Mohamed Ali Hameed Dawood	Singaporean	Bachelor of Science and MSc (Zoology)	Animal Holding Supervisor (cancer research)
Ms. Siti Aidayanite Binte Ahmad	Singaporean	Bachelor of Social Sciences	Planner
Mr. Yau Wai Hoo	Singaporean	Bachelor of Science	Executive Director



New students at the briefing by Programme Director

New Students on a fieldtrip to the Central Catchment Area

Students awarded Bursaries

The following students were awarded Bursaries from the Shell Companies of Singapore:

- Mr. Chua Hong Hui (from Malaysia)
- Ms. Jaseema Jaffarullah (from India)
- Ms. Mokshana Nerandika Wijeyeratne (from India)
- Mr. Sathyanarayanan Srinivasan (from India)

5. Teaching

Core and Elective Module

Students are required to read a total of seven core modules, which are taught by academic staff from the supporting schools. In addition, as the MEM is a multi-faculty program, students can choose to take Elective modules from other faculties within NUS. For AY 2008-2009, the following core and elective modules were read by our students:

Core Modules
<p>LX5103 Environmental Law - Law Faculty</p> <ul style="list-style-type: none"> ▪ Assoc Prof Lye Lin Heng (Course Coordinator)
<p>BL5102 Environmental Science - Faculty of Science</p> <ul style="list-style-type: none"> • Prof Chou Loke Ming
<p>ESE5901 Environmental Technology - Faculty of Engineering</p> <ul style="list-style-type: none"> • Assoc Prof Bai Renbi
<p>PP5269 Environmental Economics and Public Policy - Lee Kuan Yew School of Public Policy</p> <ul style="list-style-type: none"> • Assoc Prof Jesuthason Thampapillai
<p>DE5107 Environmental Planning - School of Design and Environment</p> <ul style="list-style-type: none"> • Dr Malone-Lee Lai Choo • Dr Ong Boon Lay
<p>DE5106 Environmental Management and Assessment - School of Design and Environment</p> <ul style="list-style-type: none"> • Ms Caroline Johnson
<p>BX5101 Business and the Environment Yale University School of Forestry and Environmental Studies & SDE</p> <ul style="list-style-type: none"> • Prof Marian Chertow (Yale) • Ms Caroline Johnson • Dr. Kua Harn Wei

Elective Modules
<p>Faculty of Engineering CE52505 Transportation Planning</p>
<p>School of Design and Environment UD5628 Sustainable Urban Design & Development BS5405 Advanced Acoustics and Noise Control</p>
<p>LKY School of Public Policy PP5227 Environmental Policy and Natural Resources Management</p>
<p>Faculty of Science BL5225 Marine Conservation</p>



Prof Marian Chertow teaching via video-conference

Adjunct and Part-time Lecturers

To ensure that the strong academic content of the Programme is complemented by the practice and professional aspects, the Programme engages experienced professionals in the field as adjunct or part-time faculty. Ms Caroline "Carrie" Johnson, principal of PAIA Environmental Consultants, was appointed as Adjunct Senior Lecturer to teach the Environmental Management

and Assessment module. In addition, Dr. Ho Hua Chew a well-known environment advocate conducted a workshop on Environmental Ethics for the students, as he had done in previous years. He also contributed to the Environmental Planning module by leading the students on the ecological study of the planning site.

Projects

For the students' group projects, the Program actively sought to engage students in 'real life' assignments so that students can contextualize the projects to the political, economic, social and cultural environments of the projects. This is illustrated as follows:

Environmental Management and Assessment

As part of the programme brief, students were required to undertake an Environmental Impact Study of Pulau Hantu. Under the guidance of lecturer Ms Carrie Johnson, students attempted to assess a wide range of environmental impacts on the marine environment and terrestrial biodiversity as well as other related issues.

Environmental Planning Project

In the environmental planning project for 08-09, students undertake an 'actual' master planning project on a site, provided by JTC. The study area is in Lorong Halus, a former landfill site in the north-eastern part of Singapore. It is located to east of the newer residential areas of Sengkang and Punggol, and north of the Tampines Expressway. The planning brief calls for a master plan for the development area that may include industries, recreational areas, and

even a residential neighbourhood with appropriate amenities, in an environmentally responsive planning layout and urban design elements.

Memorandum of Understanding with Duke University, Nicholas School

Since 2004, students from Duke University's Nicholas School of the Environment and Earth Sciences (NSEES) have been visiting the MEM Programme as part of the Urban Tropical Ecology Programme. Led by Professors Daniel Rittschof and Michael Orbach, they undertook joint seminars with students on the MEM Programme and also participated in the Environmental Planning class of the Programme.

In March 09, the School of Design and Environment signed an MOU with Duke University. This provides a platform for collaborative research as well as staff and student exchange.



One of the Environmental Master Plan prepared by the MEM students

6. Dissertations and Study Reports

Students offered a wide range of topics for their dissertations and study reports. With the multi-faculty collaboration in the MEM Programme, supervision was arranged by faculty members from many faculties/departments across the University:

Name of Student	Dissertation / Study Report Titles	Supervisor(s)
Ms. Chamila Darshani Weerathunghe Arach Chige	Abatement Measures for Vehicular Air Pollution in Colombo - Sri Lanka	Assoc Prof Rajasekhar Bala Division of Environmental Science and Engineering, Faculty of Engineering
Mr. Chua Hong Hui	Environmental Impact Assessment of fossil fuel fired power generation plant in Malaysia	Ms. Caroline Jane Johnson Dean's Office, School of Design

		and Environment
Mr. Ishwari Prasad Poudel	Impact of Community Forestry on Biodiversity Conservation in Nepal	Prof Chou Loke Ming Department of Biological Science, Faculty of Science
Ms. Jaseema Jaffarullah	Sustainable Riverfront Development in Chennai, India	Dr Ong Boon Lay Department of Architecture School of Design & Environment
Ms. Mokshana Nerandika Wijeyeratne	Environmentally Sound Management of Municipal Solid Waste: A Cleaner and Greener Plan for the City of Kandy, Sri Lanka	Prof Prof Koh Kheng Lian Faculty of Law
Mr. Sathyanarayanan Srinivasan	Eco City Chennai - Sustainable Urban development as an effective tool to solve India's Urbanisation woes.	Dr Malone-Lee Lai Choo Department of Real Estate School of Design & Environment
Ms. Sowmya Duggappa Gowda	Carbon budgeting for cities in developing countries: A case study of Bangalore, India	Assoc Prof Gupta Shreekant Lee Kuan Yew School of Public Policy
Ms. Chio Kaiyun	Application of Environmental Indicator (s) in Singapore	Assoc Prof Victor Savage Department of Geography Faculty of Arts & Social Sciences
Mr. Gan Chin Yean	Green Business Strategies in the Precision Engineering Industry in Singapore	Assoc Prof Audrey Chia NUS Business School
Ms. Maria Martha Cecilia G Fernandez	Accelerating climate change mitigation efforts through CDM projects and technology transfer as a means to achieving sustainable development in the ASEAN region	Ms. Caroline Jane Johnson Dean's Office School of Design & Environment
Ms. Wong Hua Lin, Corine	Review of Singapore's Green Transport Solutions	Assoc Prof Lye Lin Heng Faculty of Law

7. Collaboration with Industry

Shell Companies in Singapore

The Shell Companies in Singapore continue to provide strong support for the MEM Programme. As in previous years, the organization provided a grant for prizes, research, publications and bursaries. It sponsored the Shell Gold Medal and Prize which is awarded to the top graduating student and the Best Dissertation Prize given to the graduate with the highest mark for the final dissertation.

Through the years, Shell's bursaries have supported many students financially. In addition, Shell also provides internships to students at its refinery facilities at Pulau Bukom.

Other Private Companies and NGOs

Many other private companies also participated in the MEM Programme last year by offering seminars, guest lectures, opening their companies/factories for site visits and case studies, as well as providing internships to students. These companies include Phoenix Solar Pte Ltd, ARUP, Singapore Zoological Gardens, ORIGIN Exterminators Pte Ltd and HP Singapore.

Student Internships

Each year, governmental agencies such as the National Parks Board, National Environment Agency and private organizations such as Jebsen & Jessen (SEA) Pte Ltd, Shell Companies in Singapore admit students as interns. The internship programme is not a pre-

requisite for graduation; it had been implemented to provide additional opportunities for students to gain environmental management experience in Singapore before graduating from the Programme. Typically, students are attached for a period of two to three months with these organizations.

In 2008, the following students participated in the internship programme:

- Mr A.M.M. Adeeb was attached to Grenidea Technologies Pte Ltd. He was attached to the corporate communications department and assisted in the promotion of environmental awareness of Grenidea's products to both internal and external clients.
- Ms Deepika Shrestha was attached to CUGE Research where she assisted in the research and analysis of studies related to landscape and spatial planning. These studies form part of the preliminary thoughts

and formation of an outline framework for NParks.

- Mr Faysal Kabir Shuvo was attached to the Planning and Policy Division at National Parks Board. He was involved in a Green Space Indicators Study, a study of parks and greenery areas for social and recreation purposes to determine the amount of land needed for social sustainability.
- Mr Asadullah was attached to the Central Nature Reserve at National Parks Board. He was involved in a project of map sampling plots and individual trees and leaf specimens sorting.
- Mr Kenneth Loh was attached to Shell Companies in Singapore on Bukom Island where he assisted in the setting of policies involving health, safety, security and other environmental issues in a business environment.

8. MEM Seminar Series, Workshops and Field Trips AY2008-2009

The MEM Programme organizes a Seminar series every year to explore various environmental issues from a global and an inter-disciplinary perspective. Local and overseas speakers are invited to present at these seminars. MEM alumni

also use this forum to share their work experience with current students. These seminars are usually open to the public as the programme's contribution to public education.

Seminars

- **"We are all green now?: The Next Steps for Environmental Education and Advocacy"**
Mr. Warren Fernandez, Deputy Editor and Foreign Editor, Straits Times
- **"Environmental Sustainability in Real Estate Development - CDL's Perspective"**
Mr. Eddie Wong, General Manager (Projects), City Developments Ltd
- **"Environmental Benefits and Costs: Some Corrective Advice from Behavioural Economics"**
Prof Jack Knetsch, Professor Emeritus, Economics and Resource Management, Simon Fraser University, Canada
- **"Forest Carbon Projects: The Opportunities and Obstacles to Financing Afforestation, Reforestation, and 'Avoided Deforestation' through Carbon Markets"**
Dr David Neidel, Coordinator, Asia Training Program, Environmental Leadership and Training Initiative
- **Seminar on "Environment Management in Singapore"**
Mr Lee Yuen Hee, Chief Executive Officer, National Environment Agency

- **Seminar on "solar Energy: Singapore's Sunrise Sector"**
Mr Christophe Inglin, Managing Director, Phoenix Solar Pte Ltd & Chairman, Clean Energy Committee, Sustainable Energy Association of Singapore(SEAS)
- **Workshop on Planning and Design of Eco-Cities**
Mr Peter Head, Director, ARUP
- **Workshop on Environmental Ethics**
Dr Ho Hua Chew, Chairman of the Conservation Committee of The Nature Society (Singapore)
- **Seminar on "Campus Sustainability Initiatives in Universities"**
Dr Peck Thian Guan, Director, Office of Safety, Health and Environment, National University of Singapore
- **Seminar on "Thinking Global Acting Glocal: Challenges for Nature Conservation in the New Millennium"**
Dr Geh Min, Former President of the Nature Society (Singapore)
- **Seminar on "Transparency, Inclusiveness and Accountability in Environmental Decision-Making"**
Mr Lalanath de Silvar, Director, The Access Initiative (TAI), World Resources Institute
- **Seminar on "Sustainable Luxury Management: High-End Brands and Corporate Responsibility in Difficult Times"**
Dr Jem Bendell, Director, Lifeworth Consulting, Associate Professor, Griffith Business School
- **Seminar on "Sustainable Luxury Management: High-End Brands and Corporate Responsibility in Difficult Times"**
Dr Jem Bendell, Director, Lifeworth Consulting, Associate Professor, Griffith Business School
- **Seminar on "Water Issues in Management" UNCC Experience"**
Dr Seetharam Kallidaikurichi E, Director, Institute of Water Policy, Visiting Professor, LKY School of Public Policy & Prof Asit K. Biswas, President, Institute for Water Management, TWCWM, Mexico
- **Seminar on "Biodiversity Conservation Management, Planning and Design Issues"**
Mr Wong Tuan Wah, Director (Conservation), National Parks Board & Mr Damian Tang, Assistant Director, Design, National Parks Board
- **Seminar on "Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage"**
Prof Daniel C. Esty, Director, Yale Center for Environmental Law and Policy & Director, the Center for Business and the Environment, Yale University
- **Seminar on "Million Dollar Questions: Can (And Will) The World Craft A Meaningful, Inclusive, Efficient And Equitable Climate Agreement?"**
Assoc Prof Shreekanth Gupta, Lee Kuan Yew School of Public Policy, National University of Singapore
- **Seminar on "A Zero City - What this means for Masdar."**
Dr. Scott Kennedy & Dr. Sgouris Sgouridis, Masdar Institute of Science and Technology



Mr. Warren Fernandez spoke on "We are all green now?: The Next Steps for Environmental Education and Advocacy"



Mr. Eddie Wong on "Environmental Sustainability in Real Estate Development - CDL's Perspective"



Prof Jack Knetsch on "Environmental Benefits and Costs: Some Corrective Advice from Behavioral Economics"

Field Trips and Visits to Government Agencies

In addition to the seminars, a number of field trips were organized. They included field trips to the Central Nature Reserve, Pulau Hantu as part of the project requirements for the module on Environmental Science; and HP Singapore, ORIGIN Exterminators Pte Ltd as part of the project requirements for Environmental Management and Assessment.



Guided field trip to Central Nature Reserve by Ms Karen Teo (NParks)



Visit to Pulau Hantu as part of the project requirements for BL5102 Environmental Science

9. Student Accomplishments

Ms Rachel Lim Hiong Li

Ms Rachel Lim Hiong Li (from Singapore) was recipient of the Shell Gold Medal and Prize for AY 2007-2008 for being the top graduating student in the year. Rachel is currently a Manager with the National Environment Agency.



Rachel Lim Hiong Li receiving the Shell Gold Medal and Prize from Mr. Lee Tzu Yang, Chairman, Shell Companies in Singapore

Marvin Joseph Fonacier Montefrio

Mr Marvin Joseph Fonacier Montefrio (from Philippines) was recipient of the Shell Best Dissertation Award in the academic year. His dissertation is entitled "Production and Utilization of Biodiesel Derived from Waste Cooking Oil: A Feasibility Study of Its Application in Marikina City, Philippines."



Mr. Marvin Joseph Fonacier Montefrio receiving his award from Mr. Lee Tzu Yang.

Marvin is currently a doctoral student at the State University of New York College of Environmental Science and Forestry (SUNY ESF).

10. Faculty Members' involvement in Industry

The Programme's faculty members are active in various environmental activities in Singapore. Their involvement includes conducting seminars and workshops, teaching on executive programmes, and acting as jury members in environment competitions.

In the Sembawang Greenwave Environmental Care Competition, Dr. Malone-Lee Lai Choo, Assoc. Professor Victor Savage and Emeritus Professor Koh Kheng Lian were regularly on the Judging Panel of the nation-wide competition.

In the annual ACCA Singapore Environmental and Social Reporting Awards, Assoc. Professor Lye Lin Heng and Ms Carrie Johnson are also regularly appointed as judges in the competition. Prof Lye is also on the panel of judges for the annual Singapore Environmental Achievement Award, organized by the Singapore Environment Council. Prof Lye was also on the judging panel of the Senoko Power Weather Study project for schools.

Dr. Malone-Lee Lai Choo also participated as a panelist on the roundtable on "Environmental Challenges in South-East Asia" organized by Shell and the Singapore Institute of International Affairs on 11th October 2007.

11. Workshops Conducted for Industry Partners in 2008-2009

SEI-MEM Executive Programme, 4-5 Feb 09; 30-31 March 09

Since the successful initiation of the Environmental Management Executive Programme for senior management of the Ministry of Environment and Water Resources, Singapore which was attended by the Permanent Secretary of MEWR, Mr. Tan Yong Soon, together with CEOs, Directors and senior management of the National Environmental Agency (NEA) and Public Utilities Board (PUB), the MEM has been conducting many similar Executive Programs for government agencies.

In 2005, the MEM Program signed the Singapore Environment Training Programme (SETP) Memorandum of Understanding (MOU) with the Singapore Environment Institute (SEI) with the objective of establishing co-operation in

the provision of capacity building and training on environmental issues.

In AY 2008-2009, five executive workshops were conducted. The courses covered include Environmental Planning, Environmental Law, Environmental Science and Environmental Management and Assessment.

The faculty members who taught on these two programs were: Assoc. Prof. Lye Lin Heng, Prof Koh Kheng Lian, Asst Prof Lim Lei Theng, Assoc Prof Michael Ewing-Chow, Dr. Malone-Lee Lai Choo, Ms Carrie Johnson and Prof. Chou Loke Ming.

The courses were very well received.

Executive Workshop for the National Parks Board (NParks), 14 August 08

The MEM Programme has also been approached to customize an executive workshop on environmental law for staff of the National Parks Board.

Assoc Prof Lye Lin Heng, Prof Koh Kheng Lian and Asst Prof Lim Lei Theng taught the program.

The course was very well received. National Parks Board has since approached the programme requesting a full range of modules to be customized for their senior staff.

**Ministry of Foreign Affairs, Singapore
16-17 March 09**

The program was approached by the Ministry to customize a course on Climate Change taking into consideration a multi-disciplinary perspective.

Assoc Prof Assoc Prof Jeffrey P. Obbard, Faculty of Engineering; Asst Prof Lim Lei Theng, Faculty of Law; Assoc Prof Shreekanth Gupta, Lee Kuan Yew School of Public Policy; Assoc Prof Wong Poh Poh, Faculty of Arts & Social Sciences; Assoc Prof Jesuthason Thampapillai, Lee Kuan Yew School of Public Policy; Mr Ralph J Strebels, Senior Counsel, Legal & Policy, Carbon Conservation Pte Ltd; Prof Koh Kheng Lian, Faculty of Law; Mr Tan Kai Liang, Faculty of Law; Assoc Prof Victor Savage, Faculty of Arts & Social Sciences; Asst Prof Kua Harn Wei, School of Design & Environment; Asst Prof Asanga Gunawansa, School of Design & Environment

12. Graduates of 2008-2009

The following MEM students graduated from the Programme in the academic year, and are now working in the organizations indicated:

GRADUATES 2008 / 2009			
Name	Country of Origin	Place of Employment	Title
Mr Ang Boon Kiat	Singapore	National Environment Agency	Manager
Mr Cheng Yen Shaun	Singapore	Republic Polytechnic	Lecturer
Ms Liang Mui Keow	Philippines	Singapore Polytechnic	Lecturer
Mr A.M.M.Adeeb	Bangladesh	-	-
Mr Asadullah S/O	Pakistan	-	-
Ms Deepika Shrestha	Nepal	CUGE National Parks Board	Research Manager
Ms G.Kannagi	Singapore	National Parks Board	Assistant Director (Development Administration)
Mr Jaideep Singh Panwar	India	Ernst and Young, India	Consultant
Mr Loh Peng Kiam, Kenneth	Singapore	Electronic Realty Associates Pte Ltd	Manager
Mr Mohammad Ali Naghizadeh	Iran	Envirosolutions and Consulting	Environmental Assistant Consultant
Mr Priyank Dinkerbhai Desai	India	DP Architect	Architect
Ms Pun Wui-Mei	Singapore	National Environmental Agency	General Manager
Mr S.M Faysal Kabir Shuvo	Bangladesh	Department of Architecture, School of Design and Environment	Doctoral Student



Speech for Provost

Master of Science (Environmental Management)

Welcome and Award Presentation Ceremony

1st August 2008

Prof Tommy Koh

Dean Prof Heng Chye Kiang

Distinguished Guests, Ladies and Gentlemen

Good Morning.

Former United Nations Secretary-General, Kofi Annan once expressed that ***“Our greatest challenge in the 21st century is to turn the currently abstract idea of sustainable development into reality for all people”***.

These words aptly echoed the most fundamental concern of Singapore’s Inter-Ministerial Committee on Sustainable Development (IMCSD) when it announced its vision and holistic sustainable development strategy for Singapore going forward (at a press conference on Tuesday, 28 July 2008). Their vision for a

“Lively yet Liveable Global City” and Singapore as an ***Eco-City State*** underlined a two prong supporting front:

- encouraging people and industries to adopt practices which are sustainable in the long term, and
- developing new capabilities and technologies which optimize resources and improve environmental performance.

At this junction, I am again reminded of Kofi Annan. He said, ***“Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family.”*** And in Johannesburg 2002, he recognized and propounded that ***“Education at all levels is key to sustainable development”***.

While government sets the direction, formulate policies and implement them, the degree of involvement of the academic community in environmental education and training reveals the society’s commitment to the goals of sustainable development.

At NUS, we are committed to teaching excellence and cutting-edge research in the environment studies. The introduction of the M.Sc Environmental Management Programme (MEM), among other relevant initiatives, is a strong indicator of our pledge to the creation and dissemination of knowledge in the environment field - a field that will have tremendous impact on the quality of life in this country and our planet. Another fine example is our School of Design and

Environment which is actively pursuing many research projects in this area and will soon be setting up a Centre for Sustainable Urban Development. It is evident that environmental issues such as climate change and water are being featured increasingly in our teaching programmes, research activities, and even management administration.

MEM is a multi-faculty programme hosted by the SDE. Its inter-disciplinary curriculum embraces theories and methods drawn from a wide range of subject areas, including science and technology, economics, law, business and planning. The well-structured curriculum is designed to allow students to appreciate the complexities of the scientific, technological, policy, business and managerial issues involved in addressing global environmental concerns. The broad scope of the programme and its management orientation underscores our belief that while developing legislation, technology and good environmental policy are important; building the necessary institutional and human resource capacity is the also key to attaining longer term and more enduring benefits. Here, I would like to acknowledge the contribution of SDE and all Faculties/Schools involved - the deans, the committee members, and the teaching and administrative staff. Their continued support is crucial to our aspiration to make this a truly outstanding academic programme on environment.

Education for sustainable development is a new kind of education and MEM has developed strong relationships with, among other top renowned institutions, Yale University's School of Forestry and Environmental Studies (or FES) and Duke

University's Nicholas School of the Environment and Earth Sciences (Nicholas School). FES, as I understand, is the oldest and reputedly the best school on the environment in the United States. These associations have seen students benefiting from joint seminars, faculty and student exchanges. On this note, I am pleased that a professor from Yale regularly teaches a course on the Programme and Lin Heng has regularly been invited to teach at Yale. We will be formalizing our relationship with the Nicholas School in an MOU that provides for student exchanges and joint faculty/student academic projects.

It is also most heartening that corporations like City Developments Ltd, Shell Companies in Singapore, and organizations such as the National Environment Agency, Public Utilities Board and National Parks Board, have chosen to partner the MEM Programme. We see mutual benefits in these partnerships. The overriding goal is to seek useful, practical and effective solutions to environment and natural resource management issues locally, and in time, globally. Marking the importance of such collaborations, SDE will sign an MOU with City Developments today to pursue various forms activities such as joint research projects, joint workshops, seminars and student internships. Today, we shall also witness the presentation of awards by the Shell Companies in Singapore to our top students. Shell's support through the Awards, bursaries, internship and other grants, is a major source of support and encouragement to us. I thank you all for your kind support.

Lastly, let me address our new students: You have come from many different backgrounds, professions, and different countries and cultures. I welcome you to the NUS community. I want to encourage you to tap into the extraordinary resources of the university to pursue your goals and ambition, to be a good manager and a leader in the environment field. We encourage you to push the knowledge frontiers on natural systems, develop innovative methods and technologies to restore degraded environments and advance the science of sustainability. I wish you the very best as you embark on this exciting journey of discovery and leave you with these words from the Dalai Lama, who said ***“Today, more than ever before, life must be characterized by a sense of Universal Responsibility, not only nation to nation, and human to human but also human to other forms of life”.***

Thank you.