

**UNESCO Workshop on Engineering and Technology for Poverty Reduction,  
Emergencies, and Sustainable Development in connection with  
Engineers Without Borders – International Network Meeting  
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**Keynote Address by Dato Lee Yee Cheong  
WFEO President/Co-Chair UN Millennium Project Task Force “Science, Technology and  
Innovation”**

Ladies and Gentlemen,

In the United Nations Millennium General Assembly, September 2000, the world’s leaders adopted the UN Millennium Declaration.

An UN initiative, the Millennium Project (MP), 2002-2005, is proceeding under Project Director Professor Jeffrey Sachs with the overall guidance of UN Secretary General Kofi Annan. The purpose of MP is to propose the best strategies for meeting the Millennium Development Goals (MDGs).

The MDGs are as follows:

- Goal 1: Eradicate extreme poverty and hunger**
- Goal 2: Achieve universal primary education**
- Goal 3: Promote gender equality and empower women**
- Goal 4: Reduce child mortality**
- Goal 5: Improve maternal health**
- Goal 6: Combat HIV/AIDS, malaria and other diseases**
- Goal 7: Ensure environmental sustainability**
- Goal 8: Develop a Global Partnership for Development**

Correspondingly, the 10 MP Task Forces to address the MDGs are constituted as follows:

- Task Force 1 Poverty and Economic Growth (Goal 1& 8, Targets 1, 13, 14, 15, 16)**
- 2 Hunger (Goal 1, Target 2)**
- 3 Education and Gender Equality (Goals 2 & 3, Targets 3, 4)**
- 4 Child Health and Maternal Health (Goals 4 & 5, Targets 5, 6)**
- 5 Expanding Access to Essential Medicines (Goal 6 & 8, Targets 7, 8, 17)**
- 6 Environmental Sustainability (Goal 7, Target 9)**
- 7 Water and Sanitation (Goal 7, Target 10)**
- 8 Improving the Lives of Slum Dwellers (Goal 7, Target 11)**
- 9 Trade and Finance (Goal 8, Target 12)**
- 10 Science, Technology and Innovation (Goal 8, Target 18)**

The World Federation of Engineering Organisations (WFEO), founded in 1967, is the global organization whose 90 National Members are the national institutions/societies of engineers and whose 10 International Members are the regional federations of engineering institutions/societies. WFEO thus represents some 15 million professional and graduate engineers worldwide. I am the first Asian to be WFEO president from 2003 to 2005.

In the past four years since I became president-elect in 2001 and then president, it has been my policy that WFEO must represent vigorously and proactively the engineering profession in the global policy setting tables especially with regard to issues of sustainable development and human welfare. This means interacting visibly and effectively with the United Nations and its specialised agencies as well as the international and regional development banks and financing agencies. The MDGs thus represent both a unique challenge and opportunity for WFEO.

Through my active participation in UN Commission for Sustainable Development (CSD) from CSD-9 2001 to WSSD 2002, I was invited to be the co-coordinator of MP Task Force 10 “Science, Technology and Innovation” (STI). With engineers from academia, industry, government and UN agencies, a majority of TF10 members are engineers.

In its final report “Innovation: applying knowledge in development” issued in January 2005, TF10 emphasizes the following areas of focus for developing countries:

- Improving the STI policy environment, including S.E.T advice mechanism, technology management training for top policy makers in government, industry and civil society.
- Building STI human capacities, including strengthening STI educational institutions and reorienting the role of universities in development, graduating job creators rather than job seekers.
- Promoting entrepreneurial and innovation activities, with incentives for enterprise development, industrial extension services, government technology procurement, and venture capital market.
- Investing in research and development, building scientific and technological capabilities, supporting under-funded research in design and innovation including research in manufacturing and product marketing.
- Technology foresight for developing countries to find niches in the global production chain.
- Forging regional and international STI partnerships.

TF10 is convinced by the successful development processes in Asia Pacific and S.E.Asia that:

For least developed countries to lift themselves out of poverty and achieve MDGs, they need:

- Basic infrastructure i.e. roads, schools, water, sanitation, irrigation, clinics, telecommunications, energy etc.
- Basic industries, namely small and medium enterprises (SMEs) for supply of goods and services to agricultural and natural resources exploitation industries. This means indigenous operational, repair and maintenance expertise and a pool of local technicians.
- Without the engineering and technology base, indigenous industries cannot upscale and economy cannot uplift.

To implement the above, the science and technology advice systems in developing countries need reorientation, with more government support and funding for establishment and nurturing of academies of engineering and technological sciences, professional engineering and technological associations, industrial and trade associations and the like.

The UN MP report and all MP TF reports were launched by the UN Secretary-General Kofi Annan in New York on 17 January 2005 followed by national launches in more than 100 countries. MP and Task Force reports and supporting documents are posted on [www.unmillenniumproject.org](http://www.unmillenniumproject.org).

UN Secretary General in turn has issued his report “In Larger Freedom: towards development, security and human rights for all” 21 March 2005. The MP reports formed the developmental basis of his report to UN member states for the UN Summit General Assembly September 2005 during which heads of governments will hopefully commit globally and nationally political will with all the needed resources to achieve the MDGs by 2015.

I am most gratified by his emphasis on science, engineering and technology (S.E.T.) in the report, particularly on engineering, infrastructure, SME development and S.E.T. advice. As I believe this is the very first UN Secretary-General’s report to feature so very prominently engineers and engineering, I am pleased to include some extracts for your information:

### **Quote**

The unprecedented combination of resources and technology at our disposal today means that we are truly the first generation with the tools, the knowledge and the resources to meet the commitment, given by all States in the Millennium Declaration, “to making the right to development a reality for everyone and to freeing the entire human race from want”.

As the Millennium Project’s report makes clear, our agenda is still achievable globally and in most or even all countries — but only if we break with business as usual and dramatically accelerate and scale up action until 2015, beginning over the next 12 months. Success will require sustained action across the entire decade between now and the deadline. That is because development successes cannot take place overnight and many countries suffer significant capacity constraints. It takes time to train the teachers, nurses and engineers, to build the roads, schools and hospitals, and to grow the small and large businesses able to create the jobs and income needed. Many of the poorest countries will need major capacity-building investments to put in place and maintain the necessary infrastructure and to train and employ qualified personnel.

Sustainable economic growth will require significantly increased investments in human capital and development-oriented infrastructure, such as energy, transport and communications. In addition, small and medium-sized firms require a favourable legal and regulatory environment, and expanded access to financial capital, including microfinance. This is crucial for providing decent jobs that both provide income and empower the poor, especially women and younger people.

To increase countries' indigenous capacity for science and technology, including information and communications technology, Governments should establish scientific advisory bodies, promote infrastructure as an opportunity for technological learning, expand science and engineering faculties, and stress development and business applications in science and technology curricula.

Scientific advances and technological innovation have an important role to play in mitigating climate change and in facilitating adaptation to the new conditions. They must be mobilized now if we are to develop the tools needed in time. In particular, research and development funding for renewable energy sources, carbon management and energy efficiency needs to increase substantially.

To help drive economic development and to enable developing countries to forge solutions to their own problems, a significantly increased global effort is required to support research and development to address the special needs of the poor in the areas of health, agriculture, natural resource and environmental management, energy and climate.

Information and communication technologies can significantly contribute to the achievement of the Millennium Development Goals. To fully utilize the potential of information and communication technology (ICT), we need to address the digital divide, including through voluntary financing mechanisms, such as the recently launched Digital Solidarity Fund.

Regional infrastructure and policy cooperation are essential for supporting economic development. This is particularly so when developing countries are landlocked or small islands, both of which need special support. But other countries that may simply have small populations or are dependent on their neighbours for transport, food, water or energy, also need assistance.

I intend to appoint a Scientific Adviser to the Secretary-General, who will provide strategic forward-looking scientific advice on policy matters, mobilizing scientific and technological expertise within the United Nations system and from the broader scientific and academic community. In 2005, to consolidate the links between United Nations development efforts and the world's leading minds in relevant fields I intend to launch a Council of Development Advisers. This Council, working in close cooperation with the Secretary-General's Scientific Adviser mentioned above, will comprise some two dozen people, who should represent a cross-section of leading world scientists, policy-making officials and political leaders. They will advise both me and UNDG on the best ways to support the achievement of the Millennium Development Goals.

**Unquote**

The UN Secretary-General's Report is available also from [www.unmillenniumproject.org](http://www.unmillenniumproject.org)

Through WFEO and TF10, I have helped put engineering at the top global policy making table i.e. the UN Summit General Assembly 2005. We should not continue to harp on the rhetoric of the MDGs. Instead we should focus on what UN Secretary-General considers important for deliberation and decision by the UN Summit General Assembly as contained in his Report. It is now up to the global engineering profession and engineers, young and old, in government, industry and academia to rise to the occasion to help implement the developmental aspects of his Report and help the developing world to achieve the MDGs.

In my speech at the opening of the WFEO World Engineers Convention 2004 November, Shanghai, I quoted Kofi Annan in his October 2004 address to students of Tsinghua University, the top engineering university in China, "Go out and make the world better". I urge all of you to join me and WFEO to go out and make the world better.

Thank you.