

**FÉDÉRATION MONDIALE  
DES  
ORGANISATIONS D'INGÉNIEURS**

**RAPPORT BIENNAL  
2003-2005**



***WORLD FEDERATION  
OF  
ENGINEERING ORGANIZATIONS***

**BIENNIAL REPORT  
2003-2005**



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**(2003 / 2005)**

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# **WFEO, FROM TUNIS TO PUERTO RICO GENERAL ASSEMBLIES (2003/2005)**

*by President Lee Yee Cheong*

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It seems only yesterday that I assumed the WFEO presidency in the WFEO General Assembly October 2003, Tunis. Now my two-year term is coming to a close. It is time to take stock.

## **I Membership Outreach and Development**

### **(a) ASEAN and Asia Pacific**

Immediately after the last WFEO General Assembly, I attended the annual conference of the ASEAN Federation of Engineering Organizations (AFEO) in Jogjakarta, Indonesia. I gave the keynote address, the first of my WFEO presidency. It was most appropriate as I am the first Asian WFEO President and my very first physical engagement with WFEO was the General Assembly in Jakarta, Indonesia in 1979. I managed to get the message across that WFEO need the support of all ten national institutions of engineers in ASEAN. In May 2004, I attended the Annual General Meeting of the Institution of Engineers Singapore, WFEO's new national member. In July 2004, I visited the Institution of Engineers Cambodia. IET Cambodia subsequently applied for WFEO membership; so also the Society of Engineers Myanmar after written appeal from me. Both applications were accepted. AFEO members turned out in force for the World Engineers' Convention 2004 (WEC 2004), November 2004, Shanghai, China. I attended the AFEO annual convention in Yangon Myanmar, December 2004 and the AFEO Board meeting in Phnom Penh April 2005. AFEO is now a WFEO International Member. It is gratifying to see the revival of interest in WFEO of WFEO national members, P.I.I. of Indonesia and PTC of the Philippines.

In June 2004 I was in Taipei to address the annual conference of WFEO affiliate, the Chinese Institute of Engineers. I was extremely well received as it must have been the first visit by a WFEO President for many a long year.

I encouraged the newly established Korean Federation of Engineering Organizations to attend WFEO General Assembly in Tunis that led to their admission as WFEO national member. KFEO participated actively in WEC 2004 and invited past-president Jose Medem to visit Korea in December 2004. As a result, KFEO decided to apply to take over the chair of the WFEO Standing Committee on Communication and Information from Tunisia after WFEO General Assembly in Puerto Rico. I have scheduled a visit to Seoul in early October 2005 to cement this relationship.

I am very pleased that during my presidency, Australia and New Zealand have become much more supportive of WFEO. I am scheduled to visit Canberra early September 2005.

### **(b) UPADI and the Americas**

I was in Mexico City September 2004 for UPADI's XXIX Convention. The Convention was opened by President Vicente Fox of Mexico. I briefed UPADI General Assembly on WFEO and invited those UPADI national members that were not in WFEO to join WFEO standing technical committees as the first step to WFEO membership. For me, the most memorable experience was addressing the Forum of 500 Outstanding Mexican Engineering Students on the UN Millennium Development Goals (MDGs). The annual conference of the Panamerican Academy of Engineering was also held at the same time. I was elected a corresponding member of the Academy together with WFEO past-presidents Jose Medem and Conrado Bauer. WFEO Mexican national member UMAI assured me that they would in future participate fully in WFEO activities. The Dominican Republic and Aruba showed interest to be closer to WFEO.

One of my ambition as WFEO president was to get the Canadian Council of Professional Engineers, CCPE, back into the WFEO fold, as CCPE was one of the most proactive members of the Commonwealth Engineers Council when I was CEC Chairman 1993-2000. I met in Toronto, January 2004 the Chairman and President of CCPE. I was pleased that CCPE accepted my invitation to send top level representatives to WEC 2004 and to attend WFEO Executive Council meeting in Shanghai in the process of deciding whether to rejoin WFEO. I reinforced the personal relations with CCPE leaders during UPADI Convention and during WEC 2004. I am delighted when CCPE informed me officially in July 2005 that it will rejoin WFEO for an initial trial period of 3 years.

### **(c) Federation of Arab Engineers**

In March 2005, I attended the 2005 Conference of the Federation of Arab Engineers in Bahrain. I greatly welcomed the opportunity to interact with many leaders of WFEO national members in Arab countries. It was my first visit to Bahrain. I was most impressed. President-elect Kamel Ayadi, past-president Jose Medem and vice-president Hisham Shehabi joined me in reviewing the pressing problems of WFEO. Sudan sought me out to inform me that they would like to be much more active in WFEO. I expressed my wish to the incoming Egyptian president of FAE that Egypt should resume a leading role in WFEO.

### **(d) Africa**

With the persistent efforts of WFEO president-elect Kamel Ayadi, the revival of WFEO international member, the African Federation of Engineering Organizations, has

continued apace. Tunisia, Libya, Nigeria, Tanzania and South Africa are currently the active national members of WFEO. Ghana showed renewed interest in WFEO. Cameroon joined WFEO and Senegal has just applied for membership.

### **(e) Technical Chamber of Greece and Europe**

I attended Helleco 2005 in Athens, February 2005 at the invitation of WFEO national member, the Technical Chamber of Greece. I attended the meeting of the WFEO Technical Standing Committee on Engineering and the Environment (CEE) to review matters arising out of the last CEE meeting during WEC 2004. This was the last CEE meeting chaired by WFEO Vice President G.P. Lal whose subsequent resignation will be sadly felt by WFEO. I have been pursuing the CEE proposal to link TCG and CAST, China to look into the engineering and environment impacts of Olympic Games on the host cities, using Athens 2004 and Beijing 2008 as benchmarks. I believe this will be a ground-breaking initiative for WFEO. I discussed this with CAST in Beijing May 2005. However due to unavoidable circumstances, the TCG exploratory mission to Beijing originally scheduled for July 2005 has to be postponed to end 2005.

Despite WFEO being in Paris and the then WFEO Executive Director being resident in Brussels, no progress has been made to get more European countries to join WFEO. In fact, Austria withdrew. An expression of interest and request for a meeting from Denmark with the then WFEO Executive Director went begging for months until I took matters into my own hands and hosted the dinner in Paris for the leaders of the Danish Society of Engineers early February 2005. WFEO Executive Director Tahani Lefebure and WFEO Presidential Advisor, Gerard Baron are scheduled to visit Copenhagen in September 2005.

## **II The United Nations**

### **(a) UN Millennium Project**

I was in New York November 2003 for the UN Millennium Project (MP) Task Force Coordinators meeting and was privileged to meet UN Secretary-General Kofi Annan for the first time during a briefing session for him by the MP.

I made a quick visit to ICE London in January 2004 to discuss the proposed infrastructure services study for UN MP STI Task Force. Due to budget constraint, the study was not proceeded with. I deem it a great opportunity lost for the engineering profession, as appropriate infrastructure for development and the MDGs is very

much in vogue. I fear the economists will once again propose the wrong strategies!

In February 2004, I joined the MP mission to Africa led by MP Director and Special Representative of UN Secretary-General, Professor Jeffrey Sachs of Columbia University. The mission spent a fortnight in Senegal, Ghana, Kenya and Ethiopia. I engaged with WFEO national members in Ghana and Kenya and encouraged the formation of national institution of engineers in Senegal and Ethiopia.

I was in New York again in April 2004 for the UN Commission on Sustainable Development 12th Annual Session (CSD-12). The MP "Science, Technology and Innovation" (STI) Task Force met at the same time in the Rockefeller Foundation. I chaired a meeting of Professor Jeff Sachs with CSD civil societal Major Groups, sparking the Youth Group to launch an E-consultation group called MDGYouth to prepare their own report "Youth and the MDGs: Opportunities and Challenges for Implementation". I am honoured to be the advisor to MDGYouth. The report was completed and publicly launched during CSD-13 April 2005 in New York. After the launch, I submitted the report to Professor Jeff Sachs in person.

In July 2004, I joined Professor Jeff Sachs in a special two-day meeting on the MDGs with the OCED Development Assistance Committee in OECD Paris. I promoted WFEO with OCED deputy Director General, the Special Representative of the EU to OCED/UNESCO and high officials of the French Foreign Ministry. I wrote to them subsequently that WFEO Executive Director would call on them to explore possibilities of cooperation with WFEO. I was disappointed that there was no follow through.

I was in Nairobi, Kenya for the MP STI Task Force meeting in August 2004. This led to my being appointed to the National Economic and Social Council Kenya (NESC). NESC was established in January 2005 to fast-track poverty reduction and economic development and is chaired by the President of Kenya, His Excellency, M. Kibaki. I am one of two non-resident non-Kenyan members of NESC and currently chair the NESC Task Group on infrastructure. After the inauguration in January in 2005, NESC met in February, and June 2005 and is scheduled to meet again early September 2005. In July 2005, I initiated a high level NESC visit to Malaysia to examine the developmental experiences of Malaysia.

In September 2004, I attended the final meeting of the MP Task Force coordinators in New York to finalise the UN MP reports due end December 2004. The last quarter

of 2004 was very hectic in finalising the draft of the STI Task Force report "Innovation: Applying Knowledge in Development", sending the draft out for peer review throughout the world and revising the draft a number of times due to numerous comments and suggestions received. My MP STI Task Force Co-Chair, Professor Calestous Juma of Harvard bore the blunt whilst I helped as much as possible via Email. The MP Report "Investing in Development: A Practical Plan to Achieve the MDGs" and all MP Task Force Reports were launched by UN Secretary-General Kofi Annan on 17 January 2005. This was followed by national launches in around 100 countries. I represented Jeff Sachs at the Thailand launch on 18 January 2005.

With the reports completed in December 2004, what remains for MP Task Force Coordinators to do is advocacy. I was a speaker on MDGs at the UNESCO/Government of Vietnam Regional Conference "Dialogue between Cultures and Civilisations for Peace and Sustainable Development" Hanoi, December 2004. In the same month, I chaired a MDG session at the Australian Universities International Alumni Convention in Hong Kong. In January 2005, I was invited by the Intermediate Technology Development Group (ITDG) as keynote speaker on "Science and Technology and the MDGs" in London. I shared the platform with Sir David King, the UK Chief Scientist. I arranged for Professor Jeff Sachs to attend the Board meeting of the InterAcademy Council (IAC) in Amsterdam January 2005 to discuss MP/IAC collaboration for MDGs. I accompanied Professor Jeff Sachs to meet Malaysian Prime Minister/Chair of the Organization of Islamic Conference (OIC) in Kuala Lumpur March 2005 to explore possible MP involvement in the OIC/Islamic Development Bank Capacity Building Initiative. I have been in touch with Kamel Ayadi and Hisham Shehabi whether WFEO national members can proactively participate in the Initiative. I chaired a session on "S&T and the MDGs" at the Annual Meeting of the InterAmerican Development Bank in Okinawa, Japan, April 2005, I joined a MDG panel during the UN General Assembly High Level South-South Committee meeting in UN New York, June 2005. Hopefully there will be a role for me as WFEO President during the crucial UN Summit General Assembly September 2005.

In my advocacy for the MDGs, I play the same tune over and over again. *"It is engineering that creates wealth. There is urgent need to promote the use of the terminology 'Science, Engineering and Technology (S.E.T.) in place of S&T. For less developed countries to uplift themselves and achieve the MDGs, they need basic infrastructure and related SMEs. Governments of developing countries must invest in academies of engineering, enhance the capability of national institutions of engineers and*

*institutions of engineering technologists. Engineering faculties of Universities must focus on entrepreneurial and innovative programmes, graduating job creators rather than job seekers."*

The MP reports formed the developmental basis of the UN Secretary-General's report "In Larger Freedom, towards development, security and human rights for all" March 2005 to UN member states for the UN Summit General Assembly September 2005 during which heads of governments are expected to commit global and national political will and resources to achieve the MDGs by 2015. I am gratified by his emphasis on S.E.T. in the report, particularly on engineering, infrastructure, SME development and S.E.T. advice. This is the first UN Secretary-General's report to the UN General Assembly to feature so prominently engineers and engineering. I include here some significant extracts:

*"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."*

Through the MP, I have managed to put engineering in general and WFEO in particular at the top global policy making table i.e. the UN Summit General Assembly 2005.

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It is now up to the global engineering profession and engineers in government, industry and academia through WFEO to sustain the engineering message at the top table by assisting developing countries achieve the MDGs by 2015.

## **(b) UNESCO**

As WFEO's home is in UNESCO, it goes without saying I have always paid the highest attention to relations with UNESCO. In fact, it was my personal intercession with UNESCO Director General H. Matsuura in Columbia University New York, April 2003 that got UNESCO and Dr. Tony Marjoram into the MP STI Task Force.

I met Dr. Walter Erdelen, UNESCO Assistant Director General for Natural Sciences in January and again in May 2004 to canvas his support for the UNESCO/WFEO "Engineering for a Better World" (EBW) Initiative proposed by the US engineering community and the US State Department as an US policy emphasis on rejoining UNESCO in October 2003. The WFEO new Capacity Building Committee (CBC) hosted by the American Association of Engineering Societies (AAES) has been anchoring this. WFEO CBC held a crucial kick off planning conference on the EBW Initiative in Washington DC June 2004. The conference was a roaring success with delegates from WFEO national members from Pakistan, Kuwait, Lebanon, South Africa, Tunisia, China, Canada, Spain, Argentina, Brazil, Moldova, Ghana, Malaysia, Australia and of course USA. WFEO affiliate, the Chinese Institute of Engineers, Taipei also participated. I was grateful for the participation and support from the State Department led by Mr. George Atkinson, Science and Technology Advisor to the US Secretary of State, Don Booth and Andrew Reynolds; the US National Academy of Engineering President and Foreign Secretary, Bill Wulf and George Bugliarello. The Conference was also attended by representatives from FIDIC, the World Bank, OAS, ABET, CAETS, US National Academy of Sciences and of course, Tony Marjoram of UNESCO.

The EBW concept was incorporated into the US Draft Resolution "Creation of a Cross-Sectoral Program in Technical Capacity Building" that was tabled at the UNESCO Executive Board meeting April/May 2005. UNESCO Executive Board adopted the US Resolution and UNESCO Director General Matsuura accepted its thrust as direction to be pursued within the organization. The US resolution was co-sponsored by 23 countries (Afghanistan, Australia, Czech Republic, Hungary, Italy, India, Jamaica, Yemen, the United Kingdom of Great Britain and Northern Ireland, China, Ecuador, Egypt, France, Germany, Japan, Jordan, Slovakia, Sri Lanka,

Turkey, the United Republic of Tanzania, Russian Federation and Tunisia). Twenty-five speakers from Australia, India, Afghanistan, France, Indonesia, Japan, Jordan, Russian Federation, Algeria, Morocco, Ukraine, Mauritius, Switzerland, Iceland, Rwanda, Ghana, Ecuador, Hungary, Yemen, Senegal, Burkina Faso, Sri Lanka, China, Turkey and Venezuela took the floor in discussion. Universal and unanimous support and congratulations were expressed to the US for the presentation of what all regarded as an important Draft Decision. This was one of the best supported and accepted Draft Decisions in recent UNESCO Executive Boards. What is so pleasing is that the US Ambassador to UNESCO, Her Excellency Dr. Oliver attributed the widespread support to the lobbying efforts of WFEO national members throughout the world, especially those whose countries were members of the UNESCO Executive Board. Dr. Oliver told me that the all round congratulation and positive comments from fellow members of the UNESCO Executive Board was a most pleasant surprise to the US UNESCO Mission. It surprised the UNESCO high level executives even more. In running UNESCO with scant attention to engineering and technology for so long, they were astounded by the all round response of the Executive Board. She was convinced that it was in large measure due to WFEO's positive effort within a short space of time to obtain support for the US Resolution. I have worked hard in promoting this UNESCO Initiative as I believe strongly that a high-profile sustained and successful joint programme with UNESCO will ensure the sustainability of WFEO in Paris. I urge you all to support the UNESCO Cross-Sectoral Technical Capacity Building Programme through WFEO CBC. The real hard work lies ahead to translate resolution into deliverable action.

The other important and successful UNESCO initiative in engineering with which WFEO has been associated is the DaimlerChrysler/UNESCO Mondialogo Engineering Awards. The DaimlerChrysler-UNESCO Mondialogo Partnership initiated two years ago seeks to promote intercultural dialogue, understanding and exchange among young people. The Partnership has arisen from shared aims and convictions of both DaimlerChrysler and UNESCO that encouraging intercultural dialogue and exchange all over the world is the way to the future. The Mondialogo Engineering Awards under the Mondialogo Programme are now amongst the most prestigious awards for University engineering students worldwide. They enable engineering students from universities in both the developed and developing countries to work together to develop engineering project briefs and concepts in response to the challenges of the MDGs and sustainable development.

For the inaugural awards of May 2005, the international jury that was co-chaired by Dr. H. Kohler of DaimlerChrysler and Dr. M. Barbosa, Deputy Director General of UNESCO met in Stuttgart in March 2005 to assess project submissions for sustainability, feasibility and quality of intercultural dialogue within each project team. I am honoured to be a juror. More than 1,700 young engineers and students from 79 nations registered for the contest, forming 412 international teams. At the inaugural Mondialogo Engineering Awards Ceremony in Berlin on 30 May 2005, I was overwhelmed by the spirit of joy and celebration of the 21 teams of some 65 young engineering student winners, with several winning partnerships involving Engineers Without Borders (EWB). The young engineering student winners assured Jury members that they are determined to implement their projects. I have been trying to help find implementation funding for their projects. I have already written to the Chair of the Organization of Islamic Conference, Prime Minister Dato Seri Abdullah Ahmad Badawi of Malaysia, President of the Inter-American Development Bank, Dr. E. Iglesias, Professor Jeffrey Sachs, Director of MP, Dr. John Mugabe, NEPAD Science and Technology Advisor and presidents of WFEO national and international members. My efforts are appreciated by DaimlerChrysler. Professor Jeffrey Sachs was so attracted by the Mondialogo Engineering Awards that he urged me to work with MP to get every University in the world with their faculty members and students to undertake a MDG project. Russ Jones is assisting me in this new initiative.

It is my hope that through WFEO's active participation in UNESCO's Cross-Sectoral Technical Capacity Building Programme, the DaimlerChrysler/UNESCO Mondialogo Engineering Awards and the proposed MP/WFEO "Every University a MDG Project" initiative, WFEO will be recognised in the global S.E.T arena as a proactive leader in poverty reduction and economic development for the MDGs.

#### **(c) UN Commission on Sustainable Development**

Due to MP STI Task Force a meeting in New York, I had the assistance of Tony Ridley and James Moody marshalling the delegation of 15 under the WFEO banner during CSD-12. The WFEO delegation included ASCE President Patricia Galloway, CEO Pat Natale and International Director Mike Sanio. During that fortnight, I made a hectic one-day visit to Washington DC, meeting with AAES, ASCE and the US State Department on EBW and WFEO CBC. Together with CBC Chair Russell Jones, I walked the streets of New York knocking on the doors of the Ford Foundation, the Carnegie Foundation and a Soros Foundation on behalf of CBC. I addressed the

Youth Caucus of CSD-12 and engineering students and young engineers at Columbia University.

I attended UNCSD-13 in New York April 2005. I am very grateful to Emilio Colon for anchoring the WFEO participation. After nurturing WFEO participation as co-partner of the International Council for Science (ICSU) in the civil societal Science and Technological Community (STC) Major Group in CSD-9 2001, World Summit on Sustainable Development (WSSD) Johannesburg 2002, CSD-11 2003, CSD-12 2004 and CSD-13 2005, I feel confident that I can pass the baton of WFEO participation in CSD-14, 2006 and CSD-15, 2007 to WFEO US and Puerto Rico national members.

#### **(d) UN World Summit on Information Society (WSIS)**

Under the able leadership of President Elect Kamel Ayadi, WFEO projected a high profile during the initial WSSD Geneva, December 2003. As leader of the civil societal Science and Technology Community, WFEO has been actively preparing itself for the final WSSD in Tunis, November 2005. I am confident Kamel as WFEO President in his home ground will assure a highly successful WSSD for WFEO in Tunis.

### **III World Engineers Convention 2004 (WEC 2004), Shanghai, China**

WEC 2004 was held from Nov. 2 to Nov. 6 in Shanghai, China. Sponsored by WFEO and UNESCO, WEC 2004 was organized by Chinese Association of Science and Technology (CAST), Chinese Academy of Engineering (CAE) and Shanghai Municipal Government.

In the lead-up to WEC 2004, I invited UN Secretary-General Kofi Annan in 2003 to WEC 2004. He was unable to attend but did send a message of greeting. In November 2003, I visited the 2003 Shanghai International Industrial Fair which was the associated Exhibition of WEC 2004. I was given the VVIP treatment by the City of Shanghai. In May 2004 I visited Beijing and had a working meeting with CAST, CAE and SAST on WEC 2004. I again visited Shanghai with then WFEO Executive Director, Françoise Come, August 2004 for a comprehensive progress meeting with CAST and SAST on WEC 2004. I was back to China October 2004 with two stops in Shanghai to review last minute preparations for WEC 2004. All the while, I bombarded WFEO international and national members in person and by Email to send large delegations to WEC 2004.

In the event, WEC 2004 with its theme "Engineers shape the sustainable future" attracted more than 3,000



participants from 70 different countries. It was a roaring success. It was without any doubt the pinnacle of my WFEO presidency! I would like to quote at some length from the WEC 2004 Report:

- *Opening Ceremony*

*The president of Chinese Academy of Engineering, Prof. Xu Kuangdi chaired the opening ceremony. Warm greetings to WEC 2004 were given by the Vice Premier of China, Mr. Huang Ju, the United Nations Secretary-General, Kofi Annan, represented by Mr. Maurice Strong, the UNESCO Director General, Mr. H. Matsuura, the President of WFEO, the President of China Association of Science and Technology (CAST), Prof. Zhou Guangzhao, the President of National Academy of Engineering, USA, Dr. William A Wulf, the Secretary General of Communist Party in Shanghai, Mr. Chen Liangyu, and the Mayor of Shanghai, Mr. Han Zheng. All the speeches point out that engineering and engineers play vital important role in addressing poverty reduction, sustainable development and the UN Millennium Development Goals (MDGs). At the end of the opening ceremony, a video show with many attractive engineering works in the world and the heartfelt wishes of children from different parts of the world: "I want to be an engineer" moved many participants to tears.*

- *Plenary Sessions*

*12 world renowned keynote speakers from Asia and the Pacific, Europe, North America, and South America delivered excellent speeches in the plenary sessions. The remark by the only scientist keynote speaker, Dr. Ron Ekers, is well worth repeating: "Scientists are good at making dreams, engineers help them to make the dreams becoming reality."*

- *Special Session "WFEO and UN"*

*The special session was convened by WFEO President to reinforce the importance of WFEO representing engineers and engineering at the top policy making tables of the UN especially with regard to MDGs. The special representative of UN Secretary-General, Maurice Strong, commended WFEO for this important initiative when he closed the Special Session.*

- *Parallel Sessions*

*The 8 parallel technical sessions were: Network engineering and information society; Biological engineering and health care; Transportation and sustainable mega-cities; Environmental protection and disaster mitigation; Agricultural engineering and food security & safety; Resources and energy, Power and energy; Ecological materials and green manufacturing.*

*More than 2,000 delegates attended these sessions, 800 of which are overseas delegates from 60 countries. The 800 Papers received from about 30 countries were collected in the proceedings of WEC 2004 in 8 hefty volumes. 281 papers were presented orally, and around 500 papers were presented in the form of posters.*

- *Virtual Forums, Forum on Women in Engineering, Young Engineers' Forum*

*WEC 2004 established five virtual forums via the Internet: (a) Women Participation in Engineering, (b) Young Engineers, Engineering Education and Accreditation, (c) Responsibilities and Ethics, (d) Road of Industrialization in Developing Countries, and (e) the WEC 2004 Declaration. Renowned personalities and relevant organizations were invited to manage the five forums: Mrs. Shirley Malcom, Executive Director, American Association for the Advancement of Science (AAAS), USA for forum (a), former H.K.I.E president, Prof. T. P. Leung from Hong Kong for forum (b), former WFEO Vice President Mr. David Thom from New Zealand and former WFEO Vice President, Mr. William Rouke from Australia for forum (c), Prof. H. R. Liu from China for forum (d), and WFEO Executive Council member, Prof. Zhong Yixin for forum (e). Some forums were in operation from October, 2003 while others from June, 2004.*

*During WEC 2004, forums on Women in Engineering and Young Engineers were successfully held.*

- *The Exhibition of China's Significant Achievements in Engineering*

*The Exhibition of China's Significant Achievements in Engineering, a major program of WEC 2004, was held in Shanghai New International Expo Center on November 4-9, 2004. The exhibition was co-organized by the Chinese Academy of Engineering (CAE) and the Shanghai Association for Science and Technology (SAST), in coordination with the Shanghai International Industry Fair (SIF).*

*The exhibition was the first one of its kind since the founding of the People's Republic of China. It occupied an area of 2,500 square meters and displayed the engineering achievements of China such as aerospace science and technology, West-east Gas Pipeline Project, Three Gorges Project, state power grid, nuclear power industry, and iron & steel industry, etc. It was an overall review of China's 50-year achievements in engineering fields as well as major engineering projects for the coming five to ten years. The crowds the exhibition attracted and the publicity it generated amply repaid the WEC 2004 corporate sponsors: Shanghai Baosteel Group Corporation,*

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*China National Petroleum Corporation, China Petrochemical Corporation, Anshan Iron and Steel Group Corporation, Shanghai Automotive Industry Corporation (Group), and State Grid Corporation of China.*

- *Project Show for Future Engineers*

*111 projects were displayed in the show, representing China, USA, Denmark, India, Malaysia, R.O. Korea, Japan, Indonesia, Pakistan, Canada, Poland, Hong Kong and Macao. After review and evaluation, five first prizes, 15 second prizes and 30 third prizes were finally awarded during the closing ceremony of WEC 2004.*

- *Exchange Forums between Shanghai Advanced Manufacturing Industry and Worldwide Engineers*

*The three forums: "Foster Engineer's Training", "the Development and Application of Advanced Equipment Manufacturing Technology - Automotive and Information Technology Manufacturing Industry" and "Sustainable Development of Modern Manufacturing Industry - Chemical, Modern Equipment, Medical, and Resource Industry" were held on November 2, 4 and 5, respectively.*

*The first forum was held at the Shanghai International Convention Center with over six hundred participants. Mr. Xu Jianguo, Vice Secretary of Shanghai Municipal Government and Director of Shanghai Economic Commission presided over the forum. Mr. Hu Yanzhao, Vice Mayor of Shanghai Municipal Government, Prof. Kuangdi Xu, President of Chinese Academy of Engineering, Sir Alec Broers, President of Royal Academy of Engineering, UK, Prof. W. Wulf, President of National Academy of Engineering, USA, Prof. Ki-Jun Lee, President of National Academy of Engineering, Korea, Mr. Guinot, Vice President of French Academy of Engineering, delivered speeches and put constructive proposals on the topic of fostering engineer's training. They pointed out that the current education for engineers is too special and narrow and so it is necessary to strengthen and broaden fundamental knowledge for the future engineers.*

- *Forum on the Development of Shanghai Urban Construction*

*The forum was held on the afternoon of November 3 and 5, focusing on two topics: "Municipal Management and Safety" and "Major Engineering Designing, Construction, and Rail Transportation". Six hundred engineers attended.*

- *Video Show of Great Engineering Works*

*Fourteen programs of video were submitted by nine organizations representing eight countries. They were*

*shown in the public areas of Shanghai International Convention Center, and at the breaks of plenary sessions.*

- *Cultural Activities*

*Thanks for the host city, Shanghai, the cultural activities in the three evenings were all of high level and full of joy. Participants enjoyed singing, dancing, music performance, acrobatic show, etc. in the hall and along the riverside.*

*One special performance is worthy to be remembered: The Song of World's Engineers, which is specially written, composed and performed by Shanghai Jiaotong University's orchestra and chorus.*

- *The Shanghai Declaration*

*The Shanghai Declaration was a beautiful fruit harvested from the big tree of WEC 2004. All the participants were unanimous that the Declaration will serve as a strategic guide for partnership between all stakeholders in engineering for our sustainable future. The Shanghai Declaration was unanimously adopted as the WFEO Declaration at the Special WFEO General Assembly convened after the close of WEC 2004. A copy was delivered to UN Secretary-General through Mr. Maurice Strong.*

- *Closing Ceremony*

*The closing ceremony was chaired by CAST Vice President, Professor Hu Qiheng. WFEO President gave a speech of thanks to all concerned. China handed over the WEC baton to Brazil for WEC 2008.*

*I cannot thank enough the China Government, CAST, CAE and the Shanghai City Government for the "Greatest Engineers' Show on Earth". The tremendous impact of WEC 2004 still reverberates around the world. On behalf of all fortunate enough to be in Shanghai during WEC 2004, I can only say to our hosts, "Thanks for the Memory".*

*In July 2005, I was in Beijing meeting CAST on WEC 2004 follow-up action with particular reference to the proposed 'World Engineers' Walk of Fame' in Shanghai, the Women Engineers' Forum and Young Engineers International.*

## **IV WFEO Administration**

### **(a) Executive Board and Executive Council Meetings**

*The first WFEO Executive Board meeting chaired by me was held on 29 January 2004 in Paris. It was also the*

official hand over from Pierre de-Boigne to incoming WFEO Executive Director, Madam Francoise Come. After the Executive Board meeting, WFEO Executive Board members met Dr. Walter Erdelen, UNESCO Assistant Director General for Natural Sciences. In early May 2004, I was again in Paris to update myself with Francoise Come on WFEO administration. We met with US Ambassador to UNESCO Dr. Oliver and UNESCO A.D.G. Walter Erdelen and Tony Marjoram. I was very encouraged by their support of the UNESCO/WFEO EBW Programme. I visited the office of WFEO National Member CNISF with Francoise Come and had a comprehensive discussion on possible WFEO/CNISF joint activities in Paris as well as on Francophone and the Federation of Francophone Engineers. However there was no follow through.

The 2004 Executive Council meeting was held in Shanghai November 2004 during WEC 2004. It was a successful and harmonious meeting in keeping with the warm and friendly ambience of WEC 2004. The only regular report not available was the Executive Director's report.

The 2005 Executive Board meeting in Paris January 2005 was a crisis meeting with the WFEO financial account showing an alarming deficit due to staff salary exceeding budget. Although WFEO had three part time staff on its payroll, the then Executive Director was resident in Brussels and commuting to Paris at high cost and the Communications Manager was on contract to UNESCO to work on Mondialogo. Effectively, only Tahani Lefebure was holding the fort. The situation was unsustainable. At the end of the Executive Board meeting, the Executive Director tendered her resignation and the contract of the Communications Manager was not renewed.

The WFEO financial situation was thus stabilised with the drastic reduction of Head Office staff. Meanwhile Pierre De-Boigne and Gerard Baron came forward to help Tahani in sorting out WFEO administration in Paris. I appointed both my presidential advisors.

I returned to Paris in May 2005 for meeting with Tahani, Pierre, Gerard and Russ Jones to review the ongoing Head Office administration, the revised 2005 budget and the updated 2006 budget. I was glad to note that subscription income was received earlier than normal. I attributed this to the very positive impact of WEC 2004 on WFEO members. I was able to agree terms with Tahani to assume the post of full time Executive Director with authority to employ subordinate staff as the need arises. Furthermore, Pierre was kind enough to accept my offer of WFEO Deputy Treasurer 2005-2007 and Gerard

accepted my proposal to recommend to the General Assembly in Puerto Rico to be appointed a WFEO Vice President 2005-2007 to work with Tahani and the Deputy Treasurer in assuring the proper functioning of the Head Office in Paris.

Meanwhile President Elect took the WFEO website to Tunis and initiated the WFEO electronic newsletter with outstanding success. This greatly eases the burden on WFEO Head Office.

### **(b) WFEO General Assembly 2005**

I visited CIAPR in San Juan, Puerto Rico, October 2003 to see to the arrangements for the WFEO General Assembly 2005 and to be briefed on the taking over of WFEO Standing Committee on Technology (ComTech) by CIAPR from AAES, USA. I paid courtesy calls to the President of the Senate and the Speaker of the House of Representatives of the Commonwealth of Puerto Rico. They both assured me of Government support for WFEO General Assembly 2005 and WFEO ComTech. I also visited the engineering faculties of two Universities to interact with engineering students and young engineers, urging them to set up Engineers Without Borders (EWB) in Puerto Rico with the help of CIAPR.

Since then, I have been in close touch with CIAPR and all WFEO members to assure the success of the General Assembly. I have been ably assisted by Tahani since May 2005.

## **V The Tsunami Catastrophe**

On 26 December 2004, the disastrous tsunami resulting from the earthquake off Aceh, Indonesia, devastated the coastal areas of the Indian Ocean. Indonesia, Thailand, Malaysia, Myanmar, Sri Lanka, India, Maldives and Somalia suffered various degrees of destruction with an estimated loss of lives of 200,000. It was a natural catastrophe of unparalleled magnitude in living memory. In the aftermath of the Tsunami, military contingents from Indonesia, Australia, Malaysia, and USA converged on Aceh to build emergency jetties, roads and bridges so that aid efforts could reach the badly affected areas with minimum delay. Their efforts were successful and most praiseworthy. In my view, the unsung heroes were military engineers. On behalf of WFEO, I salute them.

The other two charitable organizations I would like to mention in this connection are "Registered Engineers for Disaster Relief (RedR)" and "Engineers Without Border (EWB)".

### **(a) Corps of Engineers**

Since the Tsunami, I have been in discussion with General (retired) Hank Hatch of the US Corps of Engineers on the possibility of capacity building of similar military engineering corps in developing countries to enhance their disaster relief and rehabilitation capabilities in their own countries. With such capabilities, they can also be a most disciplined force in the construction of basic physical infrastructure as well. I feel strongly that our engineering colleagues in the military could well be a major driver of capacity building for the MDGs in developing countries.

### **(b) RedR**

RedR was very active in Tsunami relief. Besides the more established RedRs in UK and Australia, RedR India mobilized themselves and performed with distinction. I have been a strong advocate of establishing RedR in developing countries. RedR will reinforce their civil defence capability and capacity. I urge WFEO members to initiate the formation of RedR in their countries. Malaysia is in the process of establishing RedR Malaysia with help from RedR Australia.

### **(c) Engineers Without Borders (EWB)**

Inspired by the Nobel Peace Prize winning "Doctors Without Frontiers", EWBs have mushroomed in many countries. Whilst many EWBs are still in the formative stage, EWB USA and EWB Canada are well established. I am an International Advisory Board member of EWB Canada. In February 2004, I attended their Annual Conference and Annual General Meeting. It was my first contact with EWB anywhere. EWB Canada is the most amazing young engineers' organization I have ever come across. By 2004, merely three years after formation, EWB Canada have sent 1000 volunteers overseas; have volunteers contribute 100,000 hours of volunteer overseas work; and raised well over 1 million Canadian dollars. My most recent contact with EWBs was the EWB International Workshop convened by Tony Marjoram in UNESCO May 2005. I commend his effort in assembling EWB leaders from all over the world to compare their experiences. Whilst it may be premature to consider the formation of an international organization, the face-to-face networking opportunity in Paris will facilitate future efforts to this end. I urge all WFEO national members to encourage their engineering faculties and young engineering students and engineers to form EWB.

## **VI Academies of Sciences and Academies of Engineering**

Whilst I have campaigned persistently for due recognition of engineering amongst the global S.E.T community, I

have always done so within the framework that S.E.T community is one. The S.E.T community must work closely together for poverty reduction and economic development through the MDGs. For me, the best advocacy is within the sanctum of the scientific community, namely the academies of sciences. I have never forgotten that it was the then ICSU President, Professor Yoshikawa, a renowned Japanese engineer and then president of WFEO national member, the Science Council of Japan, that opened the door for WFEO as co-partner in the STC Major Group in 2001 and WSSD 2002 that led WFEO to be actively involved in MP.

### **(a) The InterAcademy Panel (IAP) and the InterAcademy Council (IAC)**

Wearing my Academy of Sciences Malaysia hat, I attended the triennial 2003 General Assembly of the InterAcademy Panel (IAP) of the ninety odd national academies of sciences of the world in Mexico City. IAP has the priority objective of establishing academies of sciences and strengthening existing academies in developing world. One lesson that WFEO must learn from our scientific counterparts is the very successful soliciting for financial support of the international scientific community. As an example, IAP is based in Trieste, Italy with its Secretariat in the Academy of Sciences of the Developing World (TWAS). IAP and TWAS have managed to convince the Italian Government to pass legislation in Parliament to grant EURO 500,000.00 annually to IAP and TWAS each. Why cannot WFEO lobby the French Government for similar financial support?

In January 2004, I attended the Board meeting of the InterAcademy Council (IAC) in Amsterdam as I have been a founding board member 2000-2005 of IAC. I requested UN Secretary General's Special Representative, Maurice Strong, to be the UN Secretary-General's Special Representative for WEC 2004. To me, Maurice is the de facto UN Secretary-General's Special Representative for Science and Technology. IAC was set up by IAP on the suggestion of Maurice to Kofi Annan who launched with great fanfare at UN Head Office the first IAC Study Report "Inventing a Better Future: A Global Strategic for Capacity Building in Science and Technology" on 5 February 2004 and the second IAC Study Report on "Improving Food Security and Productivity in Africa" on 25 June 2004. I attended my last IAC Board meeting in Amsterdam January 2005. IAC is currently carrying out the third study on Energy for Sustainability.

### **(b) The Council of Academies of Engineering and Technological Sciences (CAETS)**

The twenty five odd national academies of engineering are the members of CAETS. I find CAETS not too

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concerned with the problems of the developing world. CAETS has no sustaining programme to promote academies of engineering in developing countries. This is understandable as the great majority of CAETS members are from the developed world.

**(c) ASEAN Academy of Engineering and Technology (AAET)**

At the AFEO Board meeting in Jogjakarta, October 2003, I proposed the establishment of the ASEAN Academy of Engineering and Technology (AAET). The protem committee of AAET was appointed by me in July 2004 and met in Suzhou on 31 October 2004 during the annual roundtable meeting of the three East Asian engineering academies of China, Japan and Korea, all members of CAETS. With the active encouragement of the above three national engineering academies, AAET will be established formally in Pattaya Thailand in August 2005. AAET has the prime objective of being the top "think tank" in ASEAN in engineering and technology for poverty

reduction and for assisting less developed countries in ASEAN to achieve the MDGs.

I would like to urge WFEO members to form other regional academies like the Pan-American Academy of Engineering and AAET. Eventually, these regional academies can get together to establish the engineering academy of the developing world.

**VII Acknowledgement**

In closing, I would like to thank the WFEO national members and international members for all their support. In particular, my grateful thanks go to the WFEO Executive Council and Executive Board 2003-2005. I thank the WFEO staff for struggling on in less than comfortable environment. I wish incoming President Kamel Ayadi and his Executive Council 2005-2007 a most successful term of office.

8 August 2005, Kuala Lumpur, Malaysia

# MESSAGE FROM WFEO PRESIDENT ELECT

by Kamel Ayadi

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Puerto Rico will be hosting the forthcoming WFEO General Assembly in October 2005. This biennial gathering will provide an opportunity for WFEO leaders and National and International Members to review and assess the WFEO performance during the past couple of years and to explore new avenues of action to meet the fast-growing and urgent needs and expectations of engineers. In such a rapidly changing world, the engineering profession is facing so many challenges that require continuous adaptation of the way engineers think and work. WFEO must keep up with this continuing evolution, and therefore it should find innovative and effective ways to face these challenges. Civil society has become a major stakeholder in shaping the future of our World and is playing a key role in the decision making process at the international level. WFEO should adapt to this evolving role of civil society.

Our future action in WFEO should be oriented towards achieving two main goals:

- Making WFEO more visible at the international level and actively present at the most important events, working closely and in partnership with international organizations, representing effectively the engineering community and bringing the issues related to the engineering profession into the agendas of international events.
- Reinforcing the cohesion of WFEO National and International Members to the organization and thereby fostering the spirit of a vibrant community.

WFEO overall strategy and *raison d'être* could be synthesized in these two complementary objectives. The achievement of each of them would definitely make easier the accomplishment of the other and vice versa. WFEO can play a major role at the international level as the leading world-wide organization, representing the whole engineering community and speaking on its behalf- and perceived as such by its partners-only if it boasts a great capability in mobilizing the engineers which it is supposed to represent. However WFEO will be able to persuade national members of the advantages they could gain by being part of it, only if these members perceive WFEO as a prestigious international organization able to represent them and voice their views. Being visibly able to play a key and efficient role at the international level would enable WFEO to bring value to its members in return for the support the latter can provide to it.

WFEO has without doubt achieved a great deal towards meeting both objectives. As far as the first objective is concerned, one can mention the most extensive WFEO involvement in the Millennium Development Goals Project, which has been made possible thanks to the tireless and personal dedication of President Lee Cheong.

WFEO has also been effectively and continuously contributing to the World Summit on the Information Society during the past three years. In recognition of its role, it was selected along with ten other international organizations to make a statement at the WSIS first phase plenary session. The invitation to speak that I, as the WFEO President-Elect, received arose from the WFEO successful world congress on the Digital Divide held in Tunis in October 2003, in conjunction with the last General Assembly. Before the WSIS, WFEO was active in the World Summit on Sustainable Development, thanks to the dedication of its leaders and particularly, President Lee Cheong.

WFEO has accomplished a great deal when it succeeded in persuading UNESCO Executive Board to adopt a resolution on "Cross-sectoral Activities in Technical Capacity Building". This resolution to which WFEO has contributed through its standing committee on Capacity Building, under Russ Jones's efficient leadership, will strengthen engineering and capacity building activities with the UNESCO structure. Many other examples could be mentioned to illustrate the WFEO efficient involvement in international UN events.

The real challenge now is how to maintain and consolidate these achievements in the future. Some of these accomplishments, we must admit, are rather the result of personal dedication of individual WFEO leaders than the consequence of a global effort and don't always reflect a global and long term policy pursued by WFEO members and structures. As the future President of WFEO, I commit myself to pursuing the effort deployed by my predecessors to better consolidate the WFEO position at the international level. I will urge the standing committees to contribute to this endeavor by, among other, carrying out activities in line with the UN Agencies programs. What the CIC has achieved during the past years in connection with the WSIS could serve as an example. The WFEO involvement in the MDGs Project should be pursued. Our dedication to issues such as Sustainable Development, Information Society, Natural Disaster Mitigation, Poverty Eradication, Capacity Building, Global Warming should remain at the top of WFEO priorities.

There is so much to say as far as the second objective is concerned. Despite the effort deployed by the current and past presidents towards increasing membership and raising the interest of engineering organizations to bring as many national members as possible into the WFEO core circle, the reality is that WFEO strength is far from reflecting the potential that exists inside the world-wide engineers community. The situation is that some engineering organizations are not so keen to join WFEO, either because they don't believe in it or they lack information about what WFEO is and what it is doing.

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The existing relationship between WFEO and its national and international members is not as vibrant as it should be. Priority must be given to the activities that are of high interest to national members, without which it won't be possible to ensure their continuing involvement and interest in WFEO. I believe that world mobility and accreditation are two issues around which WFEO can mobilize engineering organizations world-wide. WFEO World Congress on Engineering Education on "Mobility of Engineers", due to be held in Budapest in March 2006, will provide a real opportunity to address the issue of mobility and to draw up a plan of action for the next years. This congress will be the most important WFEO event for the next year. We should put all our efforts into it.

Women are under-represented in the engineering profession. They are almost absent from WFEO. I think there is a lot to do in terms of empowering women and to bring them closer to WFEO. I hope initiatives in that sense will emerge in the upcoming years. I am in contact with our American colleagues to hold a WFEO World Congress on "Women in Engineering, Science and Technology". New WFEO efforts should also be oriented towards young engineers. We definitely need their dynamism and new ideas as they need the WFEO support and wisdom. Women and Young engineers will be one of my priorities for my two year presidency term.

Communication within WFEO needs to be promoted. The lack of communication could partially explain the unsatisfactory current situation. I have started tackling this issue with the establishment of the Tunis office, whose role is to promote communication and networking. The electronic Newsletter which arose from this initiative is currently being distributed world-wide and will be enhanced by additional tools of communication. These communication tools are helping create new synergies between WFEO and its members.

WFEO activities must reflect the needs and aspirations of the world-wide engineers' community. These needs differ from one continent to another depending on the culture, economic context and geographical situation of each country. Least Developed Countries have specific needs that must be taken into consideration. African engineering organizations have proven that they are worthy of consideration. Despite their financial difficulties, they have always participated in all the WFEO initiatives. I have launched some initiatives during the past couple of years to revitalize the African Federation of Engineering Organizations. The result is encouraging. African organizations are more and more present in WFEO events and a new engineering organization was created in Senegal just after my meeting with Abdoulaye Wade, President of Senegal. This sort of effort should be pursued. We can't afford to let Africa down while it is at the top of the UN and Heads of State meetings agendas.

# REPORT OF THE TREASURER

by *Stefanos I. Ioakeimidis*

Our Organization, the World Federation of Engineering Organizations (WFEO), has an important Role to play and a Mission to fulfill.

The WFEO Mission is:

- To provide information and leadership to the engineering profession on issues of concern to the public or the profession (for instance concerning the engineering mobility).
- To serve society and to be recognized by national and international organizations and the public as a respected and valuable source of advice and guidance on the policies, interesting concerns that relate engineering and technology to the human and natural environment (for instance, the protection of natural disasters or to the efforts against poverty, hunger, disease, illiteracy).
- To make information on engineering available to the countries of the world and to facilitate communication between its member nations (for instance the efforts to fill the technological or the information divide between nations).
- To foster peace, socioeconomic security and sustainable development among all countries of the world through the proper application of technology.
- To facilitate relationships between governments, business and people by bringing an engineering dimension to discussion of policies and investment.

To achieve the above mentioned objectives of our Mission, we need a stable structure (the administration), which should be the soul of our efforts. This means that we need a financial capability, which must be offered by the members of our World Federation.

The solution of the financial problem of WFEO, is a necessity for the existence of the Organization, but it is also a matter of moral order and reliability, if the Members of the Federation believe seriously what they declare as their Mission.

To tell the truth, the real cost of running WFEO is much higher than the cost expressed through our budget because our Members pay not only their contributions to WFEO, but also pay the cost of the participation of their representatives to the General Assembly, the Executive

Council, the meetings of the Standing Committees and sometimes part or the total cost of hosting Standing Committees of WFEO.

I have to repeat that my personal view, concerning our financial policy, is that it must be conservative. In any case (even if this means reducing or stopping some activities) we must have at any moment the possibility and the monetary reserves, to finance the administrative cost of WFEO for one year.

I hope that we have succeeded in this effort. Our Members know, that the continuous change in the parity between USD and Euro caused to WFEO very serious problems and a loss of 20% of our income. Because the contributions of our Members are in USD and our expenses in Paris are in Euros.

In order to face this difficult situation, we had:

- to reduce the financing of our Standing Committees,
- to try to reduce as much as possible the administrative cost,
- to call on the Members to pay their contributions of 2005 and their arrears.

The situation today (18/7/2005) is better and it is as follows:

<b>2005</b>	<b>Reserves at end of year-period</b>	
	<b>According to the 2005 Budget</b>	<b>49.609 USD</b>
	<b>According to the year-end forecast</b>	<b>157.521 USD</b>
<b>2006</b>	<b>Reserves at end of year/period. Budget</b>	<b>163.161 USD</b>
<b>2007</b>	<b>Reserves at end of year/period. Budget</b>	<b>230.639 USD</b>

I hope that with new ideas (Associates, Subventions, UNESCO Contracts) our financial situation may become better in the future.

The effort to face our current problems, was a collective one. The President of WFEO, Academician Dato Lee, who tried hard, the President Elect, the Past President, the new Executive Director, Lefebure Tahani, the members of the Financial Committee, the members of the Executive Council and of the Executive Board all participated in this collective effort.



**Staff**

I was appointed as new Executive Director for WFEO in May 2005, after the resignation of Mrs. Françoise Come.

The Staff of the Secretariat was reduced to one person, the Executive Director, for financial reasons.

This could prove to be somewhat inadequate at moments of preparation of the General Assembly and Executive Council meetings or special events such as the World Engineers' Convention, or in case of prolonged absence of the Executive Director.

The situation may be improved in the short term with the hiring of a part time trainee. A lot will depend on the exchange rate of the Euro to the US Dollar or the payment of at least part of the subscriptions in Euros, in which most expenses are made.

A much needed communication secretariat was established in Tunis, which is publishing a WFEO e-newsletter and is ensuring communication between members and the updating of the web site.

**Financial situation**

The unfavorable exchange rate of the Euro to the Dollar and the irregular and insufficient settlement of subscriptions during the last two years resulted in a deficit that the Federation is expected to absorb by the end of 2005, as a result of the reduction of the staff at headquarters and also thanks to the efforts made by members to pay their current year's dues on time. The reserves could be rebuilt by a very strict control of expenses and the settlement of subscriptions in Euros and on time.

Last year, due to the above reasons, it was difficult to meet all the financial needs of the Standing Committees and to forecast an increase in the allocations to the committee programs in the budgets for 2006 and 2007.

**Contacts with the members**

The Executive Director followed-up the efforts of President Dato Lee that led to the resumption of relations with several National Members and the recruitment of new ones. The Web site being operational and the efforts made by the new Communication secretariat in Tunis will further contribute to the enhancement of relations with members and the recruitment of new ones. We have already received several requests of membership that are being studied.

**Personnel**

J'ai été nommée au poste de déléguée générale de la FMOI en mai 2005 à la suite de la démission de Madame Françoise Côme.

Pour des raisons financières, l'effectif du Secrétariat a été réduit à une seule personne.

Ceci pourrait être insuffisant lorsqu'il faudra préparer les réunions d'Assemblée Générale et de conseil d'administration ou d'autres événements particuliers comme les Journées Mondiales de l'Ingénieur ou en cas d'absence prolongée de la Déléguée Générale.

Cette situation pourrait s'améliorer à court terme en engageant une stagiaire à mi-temps.

Cela dépendra principalement de l'évolution du taux de change de l'Euro par rapport au Dollar US ou du paiement d'au moins une grande partie des cotisations en Euro (monnaie de la plupart des dépenses).

Un secrétariat de communication dont la Fédération avait grand besoin a été créé à Tunis. Il publie le bulletin électronique de la FMO, assure la communication entre les membres et la mise à jour de notre site web.

**Situation financière**

Le taux de change peu favorable de l'Euro par rapport au dollar US ainsi que le paiement irrégulier et insuffisant des cotisations au cours des deux dernières années ont engendré un déficit que la Fédération espère pouvoir combler à la fin 2005 du fait de la réduction de l'effectif du secrétariat mais également grâce aux efforts des membres qui ont payé à temps leurs cotisations de l'année en cours. Les réserves financières pourraient être reconstituées grâce à un contrôle très strict des dépenses et le règlement des cotisations en Euro et dans les délais.

L'année dernière, pour les raisons évoquées ci-dessus, il était difficile de subvenir à tous les besoins des Commissions Permanentes et de prévoir une augmentation des contributions de la Fédération aux programmes de ces commissions dans les budgets 2006 et 2007.

**Contacts avec les membres**

La Déléguée Générale a assuré un suivi des efforts du Président Dato Lee qui ont abouti à la reprise des relations avec plusieurs membres nationaux et le recrutement de nouveaux membres. Les efforts du nouveau secrétariat de communication de Tunis et les mises à jour régulières de notre site web devraient permettre d'améliorer et de renforcer les relations avec nos membres et le recrutement de nouveaux membres. Nous avons déjà reçu des demandes d'adhésion qui sont actuellement à l'étude.

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## Cooperation with UNESCO

UNESCO supported the participation of African engineers in the World Congress on "Engineering and the Digital Divide" in Tunis in November 2003, one of the Preparatory Events for the World Summit on the Information Society (WSIS). UNESCO also supported the more recent WFEO Seminar on Knowledge Economy, Knowledge Management, Knowledge Sharing held in Tunis in 2005 also in the framework of WSIS.

With WFEO, UNESCO was a sponsor and member of the international advisory board of the second World Engineers Convention, held in Shanghai in November 2004, organized by the WFEO National Member, China Association for Science and Technology. UNESCO also supported the participation of engineers from developing countries in this event.

WFEO was involved in the UNESCO/Daimler Chrysler Mondialogo Engineering Award project, and received financial support for this - with President Dato Lee representing WFEO on the MEA Jury. These awards were announced in May 2005 in Berlin. It is hoped that the Award will enter a second cycle.

Finally, WFEO has been involved in preparing and gathering support to the Resolution on Cross Sectoral Activities in Technical Capacity Building that was adopted last spring by the UNESCO Executive Board. This resolution will enhance UNESCO engineering and technology programs.

UNESCO hosted a meeting of Engineers Without Borders in May 2005 with the goal of developing an EWB international network to which WFEO representation was invited. Two task forces were established and papers on function, structure and organization are being developed toward the development of EWB international, partly using WFEO as a model.

## Appreciation

Thanks to the support of the President and the Executive Council, the secretariat was able to carry out its tasks efficiently. Their assistance is highly appreciated.

## Coopération avec l'UNESCO

L'UNESCO a soutenu la participation d'ingénieurs africains au congrès mondial sur « l'ingénierie et la fracture numérique » à Tunis en novembre 2003, l'un des événements préparatoires du Sommet Mondial sur la Société de l'Information (SMSI). L'UNESCO a également soutenu le séminaire plus récent de la FMOI sur l'économie de la connaissance, la gestion de la connaissance et le partage de la connaissance qui s'est déroulé en juin 2005 à Tunis, également dans le cadre du SMSI.

En collaboration avec la FMOI, l'UNESCO a parrainé et fait partie du conseil consultatif international des Journées Mondiales de l'Ingénieur organisées par le membre national de la FMOI, l'association des sciences et de la technologie de Chine, et qui se sont déroulées pour la deuxième fois à Shanghai en novembre 2004. L'UNESCO a également soutenu la participation à cet événement d'ingénieurs de pays en voie de développement.

La FMOI a été impliquée dans le projet des Prix de l'Ingénieur Mondialogo de l'UNESCO/Daimler Chrysler et a reçu un soutien financier pour sa participation - le Président Dato Lee a fait partie du Jury du PIM. Ces prix ont été annoncés en mai 2005 à Berlin et l'on espère que ce projet sera reconduit.

Pour terminer, la FMOI a été impliquée dans la préparation et la recherche de soutien à la résolution sur les activités transversales dans le domaine du renforcement des capacités techniques adoptée au printemps dernier par le Conseil Exécutif de l'UNESCO. Cette résolution va étendre les programmes de l'ingénierie et de la technologie au sein de l'UNESCO.

L'UNESCO a accueilli une réunion d'Ingénieurs sans Frontières en mai 2005 à laquelle la FMOI était invitée. L'objectif est d'établir un réseau international d'ISF en utilisant partiellement la FMOI comme modèle.

## Reconnaissance

Grâce au soutien du Président et du Conseil d'Administration, le secrétariat a pu mener à bien ses tâches. Leur soutien est reconnu avec gratitude.

# COMMITTEE ON EDUCATION AND TRAINING

by Janos Ginsztler

During the past period the Committee acted in accordance with its Plan of Action for 2003-2005.

The members of our CET accomplished a huge amount of work in pursuit of their goals: to improve engineering education and training at all levels, to ensure the quality of engineering graduates all over the world.

They participated and lectured at different national and international conferences all over the world and prepared professional reports for their Engineering Federations and for their governments.

Our most active members were in this period: H. Shihaby (Bahrain), R. Jones (USA 2003/2004) W. Myszalski (Poland), L. Lerner (Brazil), X.S. Liu (China), D.R. Reyes Guerra (El Salvador), S.I. Ioakeimidis (Greece), M.P. Chowdiah (India), H. Al-Khayat (Kuwait), F.O. Canabal (UPADI), P. Molnár (Slovakia), M.A. Yadarola (Argentina), G.R. Johnson (USA), F. Daher (Lebanon), M. Al-Hajeri (Kuwait), W.S. Butcher (USA), B.J. Grear (Australia), R. Petrikova (Czech Republic), O.M. Micheloud (Argentina), A. Ramsay (Great Britain), J.N. Al-Dabeeek (Palestine), V. Hopp (Germany), Zs. Sárközi-Zágoni (Hungary).

The Committee met 3 times since the last General Assembly of WFEO: in Tunis (October 2003), in Prague (June 2004), and the 33rd Committee Meeting was held in Shanghai (November 2004). The next 34th Committee Meeting of our CET will be organized in Puerto Rico (October 2005).

We have played active role in different international organizations, and international events organized by UNESCO, UPADI, FEISEAP, FEANI, FEBRAE, ABET, SEFI, UATI, ICSU, ABENGGE, Pan-American Academy of Engineering, EURO-CASE, CAETS, IACET, ASEE and others, dealing with the new challenges of engineering education.

Our CET supported the initiative of R. Jones, to set up a new Standing Committee on Capacity Building.

Tasks – following the Bologna agreement were widely discussed. Links with other WFEO Standing Committees were strengthened.

Issue number 10 of "IDEAS" was published in December 2003 on "Future Directions of Engineering Education and Continuing Engineering Education". Issue number 11 of "IDEAS" was published in November 2004 on "Special needs of developing countries in the field of engineering education". Significant professional articles of outstanding authors from Spain, Argentina, USA, Bahrain, China, India, Mexico, Australia, Hong Kong, Indonesia and Hungary are to be found in these issues. The 12th issue is under preparation, its main theme will be "University Graduates' Managerial Knowledge and Skills – Way to Global Excellence". Further contributions to this issue are welcome till the end of October 2005.

The members of our CET are actively participating in the preparation and organization of the 7th World Congress on Engineering Education (Budapest, Hungary, 4-8 March 2006).

The main tracks of this World Congress will be:

Accreditation of engineering qualifications; Establishing substantial equivalence; Regional agreements; Registration and licensing; Case studies from industry on mobility issues; Curriculum to promote the mobility of engineering students.

The activity of our CET was continuously supported by the leaders of the Hungarian Engineering Federation (MTESZ: Prof. Tamás Zettner, Mr. Gábor Széles, Ms. Ágota Kósz), by the National Office for Research and Technology (Dr. Miklós Boda), and of WFEO (Prof. Dato Lee Yee Cheong).

# COMMITTEE ON INFORMATION AND COMMUNICATION

by Kamel Ayadi

During its current term, the Committee on Information and Communication has carried out the following activities:

## 1: Activities within the framework of WSIS

The WFEO General Assembly held in Tunisia in October 2003, asked the CIC to lead the WFEO contribution to the WSIS second phase. It was also decided to involve as many WFEO National Members as possible in the WSIS by encouraging them to hold regional encounters within the framework of the World Summit on the Information Society (WSIS). As part of the implementation of these recommendations, the following events were organized by or with the contribution of the CIC:

- “Engineering, the Knowledge Society” a side event to the WSIS first phase, Geneva 10-12 December 2004
- “The Information Society: Challenges and Opportunities for Development” Brasilia: August 2004. This event was organized by CONFEA and was coordinated by CIC Vice-President Cesar Benoliel.
- “The Engineering Profession and the Information Society”: “Santiago de compostela, Spain 19-20 October 2004. This seminar was organized under the leadership of the CIC Vice-President, Maria Jesus de Prieto
- International Seminar on “Knowledge Economy, Knowledge Sharing, Knowledge Management” Tunis, 17 June 2005

**In addition** to these events, CIC was present at the main encounters that were organized as part of the WSIS preparatory process:

- “WSIS informal meeting”: Tunis, March 2004.
- “WSIS Prepcom1”: Hammamet(Tunisia), June 2004.
- “WSIS Prepcom2”: Geneva, 17-25 February 2005
- “Meeting of the civil Society Bureau”: Cap town, South Africa Sept 2004.
- The 23rd Arab Engineering Congress: “Toward Development of Engineering Infrastructure in the Arab World” Bahrain, 14-16 March 2005. The CIC chairman was a keynote speaker at this event and gave a presentation highlighting the WFEO contribution to WSIS.

**CIC also** participated actively in the WSIS first phase, (Geneva December 2003). It was represented by a strong delegation. The CIC Chairman delivered an address, on behalf of the Scientific and Engineering Community at the plenary session.

As the focal point of the Science and technology family, CIC attended the WSIS Civil Society Bureau meeting, and has been active within this entity by interacting directly and online with the rest of the Civil Society components.

CIC also participated in the followings events:

- International Seminar on “International Practice of Engineers”, *organized by the Academia Panamerica de Ingenieria*: Mexico, 23-24 September, 2004. *Jean Michel* who represented the CIC at this encounter gave two presentations on:

“Impact of the Bologna Declaration and the European Space in Higher Education on the mobility of engineers”

“The recognition of actual competencies of engineers & the register of professional competencies EuroRecord”

- Colloquium, “l’Entrepreneuriat au Maghreb, INSA Lyon, Mai 2005”. Rachid Bouchaala, a CIC member took part in this event and gave a presentation about the WFEO activities and its involvement in the WSIS.

## 2: Communication and publication

CIC has published and distributed the following documents during the past period:

- The proceedings of the WFEO World Congress on Digital Divide held in Tunis on October 2003 (250 pages).
- The proceedings of the international seminar on “Knowledge Economy, Knowledge Sharing, Knowledge Management”.
- The Newsletter “Infogineer”.

**Starting February 2005** CIC launched a monthly electronic newsletter which is being regularly sent to a wide and increasing number of subscribers among WFEO National, International and Executive members and other partners of WFEO. The CIC is also taking in charge the management and update of the WFEO web site. CIC is working to develop new tools of communication in order to promote this activity within WFEO.

## 3: CIC HOST COUNTRY AND FUTURE CHAIRMAN

As it was agreed upon at the WFEO General Assembly held in Tunis October 2003, the term of the actual chairman should come to an end at the next GA. The future chairman will be selected following a transparent process among those members who have been the most involved in the CIC activities. Other criteria will be taken into account while selecting the host country. A formal letter inviting National Members to host the CIC was circulated. The Korean Federation of Engineering Organizations has offered to host the CIC. Its offer will be examined and decided upon at the WFEO next General Assembly in Puerto Rico.

## 4: Future Activities

CIC will proceed with the WFEO contribution to the WSIS towards the second phase. It will hold in particular a parallel session to the WSIS and will be actively present at the Prepcom3, as well as in the main events leading to the Summit.

# COMMITTEE ON ENGINEERING AND THE ENVIRONMENT

by Prof G. P. Lal Immediate Past Chairman – B. J. Vasoya Chairman

## **1. ROLE OF THE COMMITTEE**

The role of the Committee on Engineering and Environment is to develop through appropriate activities and education, a world-wide understanding and commitment to sustainable development and encourage pursuit of those programmes. Technology has to develop to increase efficiency in the use of resources so that availability of natural resources and the increasing demand may match. This requires clear understanding, commitment and education for practicing "Sustainable Development".

## **2. PUBLICATION OF CEE NEWSLETTER**

The Committee is publishing regularly a quarterly newsletter in three languages viz. English, French and Spanish. This is circulated to Committee Members, Associates and Organizations.

The March 2005 issue of the newsletter has also been published and sent to all concerned.

### **2.1 CEE WEBSITE**

The Committee's Website (<http://www.wfeo-cee.org>) launched earlier is being regularly updated. The site gives some basic information, Newsletter extracts, forthcoming events etc. to cater to the needs of the professionals in the cause of Sustainable Development.

### **2.2 PUBLICATION OF COMPENDIUM TITLED "ENGINEERING AND THE ENVIRONMENT"**

As a part of ongoing endeavour in advocating the significance of sustainable development of engineering and environment, the Committee had published a book on "Engineering and the Environment. This book is a compilation of articles chosen from different sources. The Book was distributed to CEE Members, WFEO Executive Council Members, Presidents of National Members, WFEO Headquarters at Paris, various other stake holders, NGOs, Libraries etc.

### **2.3 WORLD CONGRESS ON NATURAL DISASTER MITIGATION ON 19-21 FEBRUARY 2004, INDIA**

Sponsored by the World Federation of Engineering Organizations (WFEO) and co-sponsored by many International and National Organizations, Govt. of India, Corporate Bodies, NGOs etc. the Congress was organized by The Institution of Engineers (India) at New Delhi on 19-21 February 2004. The Congress was inaugurated on 19th February 2004 by Hon'ble Prime Minister of India in presence of other Central Ministers and dignitaries Prof Jose Medem Sanjuan, Immediate Past President, WFEO also participated. During the Inaugural Session Dr R A

Mashelkar, an internationally renowned scientist was awarded the WFEO Medal of Engineering Excellence 2003 which was due to be presented in General Assembly 2003. The Valedictory Session was graced by the Hon'ble Deputy Prime Minister of India on 22nd February 2004. In all, 700 delegates from 35 countries participated in the Congress. The technical deliberations and Panel Discussions resulted into formulation of final recommendations of the Congress and a New Delhi Declaration was released by the Congress. The proceedings have been printed in two volumes.

### **2.4 WORLD ENGINEERS' CONVENTION (WEC) 2004**

a) The Committee had taken appropriate action to propagate about the World Engineers' Convention 2004 held at Shanghai on 2-6 November, 2004 through its Newsletter and separate communications.

b) A delegation consisting of 8 members from India led by President, IEI, participated in WEC 2004. Out of 7 papers accepted, three were presented in person.

## **3. CEE MEETING AT SHANGHAI**

A meeting of the Committee was held on 1st November 2004 at Shanghai, under the Chairmanship of Prof G P Lal. The Committee approved appointment of Mr. Spyros Papagrorgiou (Greece) and Mr. Salim Aoun (Lebanon) as Vice Presidents and welcomed Engr Babagana Mohammed (Nigeria), Dr. Ishi Yumio (Japan) and Mr. Jorge Spilalnik (Brazil) as members. Letters were sent to the members concerned about their appointment. The minutes were circulated to all the members.

## **4. CEE MEETING AT ATHENS**

A meeting of the Committee was held at Athens on 4 February 2005 during the HELECO 2005 between 3-6 February 2005, under the Chairmanship of Prof G P Lal. Minutes were circulated to the members.

As decided in this meeting, Mr Spyros Papagrorgiou, Vice President, CEE had modified the document on "Environment and Olympic Games" based on the Athens experience which would be useful for the Beijing Olympic Games. The document has been forwarded to President, WFEO and others.

## **5. PUBLICATION OF CEE SILVER JUBILEE REPORT 1979-2004**

At the suggestion and inputs received from Past President, WFEO and Past Chairman, CEE, Mr. Conrado Bauer and Past Chairman CEE, Mr. David Thom a book has been finalized by Prof G P Lal, immediate Past

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Chairman, CEE giving activity report of CEE since its inception to commemorate the Silver Jubilee year of the Committee (1979-2004). This book is likely to be published soon.

#### **6. CHANGE OF CHAIRMANSHIP**

On relinquishing the Chair of the Committee by Prof G P Lal, Mr. B J Vasoya's nomination to hold the Chair of CEE has been confirmed w. e. f. 26.05.2005 by President, WFEO.

The Committee is now functioning in full swing and carrying out its activities under the stewardship of Mr. Vasoya.

#### **CHAIRMAN, CEE-WFEO VISITS AND PARTICIPATIONS**

6 May 2005: Visited London and held discussions with the officials of EC, UK

13-16 May 2005: Attended the Annual Convention of The Institution of Engineers, Bangladesh, at Chittagong.

28 May – 6 June 2005: Attended the 33rd Annual Conference of the Canadian Society of Civil Engineering at Toronto.

12-18 June 2005: Led a 4-member IEI delegation and participated in the EMF and other related meetings at Hong Kong.

#### **7. CEE MEETING AT PUERTO RICO**

A meeting of the Committee has been scheduled on 17 October 2005 at San Juan, Puerto Rico.

#### **8. ACKNOWLEDGEMENT**

The Committee wishes to express its grateful thanks for the guidance, support and cooperation received from President, WFEO, Dato Lee Yee Cheong, President – Elect Engr Kamal Ayadi, immediate Past President, Prof. Jose Medem Sanjuan, Ms. Francoise Come, Past Executive Director, Ms. Tahani Lefebure, current Executive Director, WFEO, Paris and members of the Committee throughout the period.

The Committee also wishes to express its appreciation to The Institution of Engineers (India) and the Secretariat for extending all the infrastructural facilities.

# COMMITTEE ON TECHNOLOGY (COMTECH)

by Gilberto Toledo

## INTRODUCTION

**Governance.** During the year, two Vice President positions became vacant, one through resignation (already filled for North America) and the other through death (still unfilled for Middle East and Arab States)

## ACTIVITIES

### *UN Commission on Sustainable Development*

**CSD-13.** The meetings were held at the UN Headquarters. The themes for the two year cycle ending in April 05 were Water, Sanitation and Human Settlements. As the first policy year of its first implementation cycle, CSD-13 set an important precedent on how future cycles could be conducted and on what type of outcomes could be expected. CSD-13 provided policy measures to facilitate and enhance implementation and mobilize action on its themes, taking into account the economic, social and environmental dimensions of sustainable development. No matter how much goodwill existed at the start of CSD-13, it was never going to be easy to address serious and perennial differences on issues such as a rights-based vs. needs-based approach, financing, river basin management and transboundary waters, the role of the public and private sectors, good governance, and the international target on slum dwellers. CSD-13 did manage to agree on a set of guidelines on the three thematic issues. Indeed, some noted that it was a positive sign that the sticking points that held negotiations up by "external" issues on illegal settlements and occupied territories. WFEO was well represented, with Dr Emilio Colon present for the entire process and WFEO's President Dato Lee Yee Cheong, and other participants.

**CSD-14.** The process for CSD-14 has begun, with WFEO participation coordinated by ComTech. It is expected that other WFEO Standing Committees will be called to participate. The themes for the two year cycle beginning in April 05 are Energy for Sustainable Development, Industrial Development, Air Pollution/ Atmosphere, Climate Change and Cross-cutting issues. The Intergovernmental Preparatory Meeting is scheduled for 26 Feb to 2 Mar 2005 and the CSD-14 for 30 Apr to 12 May 2005 at the United Nations Headquarters in New York City.

**UN Small Islands Developing States (SIDS).** The International Meeting to Review the Implementation of the Program of Action for the Sustainable Development of Small Island Developing States was held on 10-14 Jan 2005 in Mauritius, with an NGO preparatory meeting from 5-9 Jan 05. Conclusions stressed that SIDS are located among the most vulnerable regions in the world

in relation to the intensity and frequency of natural and environmental disasters and their increasing impact, and face disproportionately high economic, social and environmental consequence. Most Small Island developing States, as a result of their smallness, persistent structural disadvantages and vulnerabilities, face specific difficulties in integrating into the global economy, thus trade becomes key for them. Climate change has already been impacting SIDS. WFEO was represented through ComTech by Dr. Emilio Colón by participating with NGO's and representing the Scientific and Technological Communities Major Group. From the roadmap developed, progress follow-up will continue through the CSD meetings as well as other UN activities.

**Adopt a Village Initiative.** Under the auspices of ComTech and CIAPR, an initiative to help remote communities in developing countries was launched. The initiative will be to engage the National Engineering Organizations in countries under development in assisting remote communities in need of basic infrastructure to develop it and maintain it through sustainable actions. Initial project will be developed in the Dominican Republic with the assistance of CODIA (Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores). Three communities have been evaluated for the initial efforts. The approach will be to address the needs on potable water, sanitation, roads, energy, homes, disaster preparedness, governance and capacity building through solutions with readily available materials and equipment in country. Work will include personnel from CIAPR, WFEO-ComTech, CODIA, local NGO's and the Government of the Dominican Republic. Funding for materials and equipment will be raised by CIAPR and CODIA, with man-power to be provided by the communities.

### *Conferences and Symposia*

**Hemispheric Meeting on Natural Disaster Reduction of University Campuses in the Americas.** The Office for Sustainable Development and Environment of the Organization of American States organized a conference on natural disaster risk reduction to campus facilities (Disaster reduction of University Campuses in the Americas-DRUCA). This track was part of a Latin American meeting on the Higher Education sector and risk held in Caracas, Venezuela, 12-15 July 2005 at the Universidad Central de Venezuela. The DRUCA Program activities draw on the expertise of a group of institutions that have undertaken natural hazards risk assessments and vulnerability reduction activities for their campuses. ComTech President, Gilberto Toledo participated in the conference.

The benefits of the program are several: – institutions that have begun to develop professional practices in

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vulnerability reduction had the opportunity to share experiences, knowledge, and expertise related to the design and implementation of vulnerability reduction planning for campus infrastructure. They addressed both physical (structural and non-structural) and financial aspects of mitigation. Institutions that have not yet undertaken vulnerability reduction efforts gain from the experience, expertise and knowledge in the initiation of similar efforts on their campuses.

The DRUCA Program began in June 2004 and focuses on the compilation and elaboration of guidance material for vulnerability reduction to natural hazards of campus facilities. The guidance material addresses programmatic considerations for designing and implementing a plan for vulnerability assessment, risk analysis, and mitigation planning for campus infrastructure. The conference in Caracas discussed the five DRUCA support areas of action: (i) information dissemination, (ii) capacity building, (iii) technical training (including professional continuous education and enhancement of higher education curriculums), (iv) issue awareness and (v) mentoring program. It also defined a plan of action, the presentation of the DRUCA guidance material, and discussion of the challenges that the higher education sector is facing in order to design and prepare mitigation plans. The OAS also presented a workshop on capacity building for designing and implementing risk mitigation plans for natural hazards. Questions addressed included: Are there doubts about how to start such a plan? How do we engage university administrators in such an important

priority? What resources (technical, human, financial) are being used at universities in both the public and private sectors, to prepare mitigation plans? How can we effectively use institutional resources to mitigate risk to natural hazards? Facilitators included personnel from the University of Washington (Seattle), George Washington University (D.C.), and North Dakota State University.

DRUCA is interested in the information on building codes, particularly the International Existing Building Codes; they are working as well with the American Concrete Institute and its Structural Concrete in the Americas group. They look forward to work with other professional structural design professionals, on natural hazard vulnerability reduction of existing as well as new facilities.

#### Available Material:

1. Getting Started – building support for mitigation planning. FEMA 386-1 September 2002
2. Building a Disaster Resistant University  
FEMA 443 August 2003
3. “Those who cannot remember the past are condemned to repeat it”. FEMA 386-3 April 2003
4. Bringing the Plan to Life – implementing the hazard mitigation plan. FEMA 386-4 August 2003
5. Integrating Manmade Hazards Into Mitigation Plan  
FEMA 386-7, Version 2.0, September 2003



# COMMITTEE ON CAPACITY BUILDING

by Russel Jones

The WFEO Standing Committee on Capacity Building was established at the WFEO General Assembly at Tunis in November 2003, on the basis of a proposal from the American Association of Engineering Societies. With the United States of America as host, Russel C. Jones was designated as chairman of the committee. WFEO President Dato Lee and Chairman Russel Jones wrote to each member country of WFEO requesting nominations for membership on the new committee. To date some 34 members from 27 countries comprise the membership of the Committee on Capacity Building.

An organizational meeting of the CCB was held in Washington, DC in June 2004, supported by the US National Science Foundation. Several initiatives were identified for priority pursuit. A first regular meeting of the committee was held in Shanghai in November 2004 during WEC 2004. A second regular meeting of CCB is scheduled for October 2005 during the WFEO General Assembly in Puerto Rico. Subsets of the CCB membership have met several times to further specific projects, and all members have been involved in ongoing projects via e-mail.

Following is a brief summary of the current major efforts of CCB:

- **Engineering for the Americas** – Working in conjunction with the Organization of American States, CCB has taken a leadership role in developing plans for enhancing engineering education and engineering practice throughout Latin America and the Caribbean. A major declaration in support of this capacity building effort was prepared for the meeting of the OAS Ministers of Science and Technology in Lima, Peru in November 2004 and adopted unanimously. The next major step is a Symposium in Lima at the end of November 2005, to bring together representatives of industry, academia and governments to develop plans for implementing the “Lima Declaration” adopted by the Ministers. Major funding for this conference is being provided by industry and government sources.
- **African initiatives** – Members of CCB have developed plans and proposals for several initiatives in technical capacity building in sub-Saharan Africa: a series of workshops for engineering educators on current best practices in engineering education internationally; stimulation of quality assurance systems for engineering education in Africa, built upon South African expertise; workshops on entrepreneurship, involving African business schools and engineering schools in joint activities; and an internship program for African engineering students providing work experiences in multinational companies with operations in Africa. Proposals for funding of these initiatives are under development, and a development consultant to assist in proposal preparation and pursuit is being retained through funding by UNESCO with a US State Department grant.
- **UNESCO interactions** – With the rejoining of UNESCO by the United States after an 18 year absence, the US

engineering community and WFEO have worked closely with the new US Ambassador to UNESCO to move toward enhancing engineering programs and establishing capacity building programs within the UNESCO structure. CCB chairman Jones spent two weeks in Paris in late 2004 developing a proposal for a cross-sectoral capacity building program that will draw upon UNESCO units in science and engineering, education, and information technology. The proposal was submitted to the UNESCO Executive Council at its spring 2005 meeting, and was unanimously adopted. WFEO President Dato Lee was instrumental in developing co-sponsors and support for the proposal from WFEO member countries.

## • Other activities:

- **Virtual engineering education exhibit** – planning to capture the major exhibit of educational materials at the annual meeting of the American Society for Engineering Education for electronic distribution to engineering educators worldwide
- **Entrepreneurship conference** – planning a conference on teaching entrepreneurship to engineering students, in Eastern Europe in 2006
- **South-South interactions** – pursuing a model of capacity building assistance to developing countries by countries that are part way up the development ladder (Chairman Jones participated in such an event in southern Africa recently)
- **Collaborative efforts** – actively interacting with organizations such as Engineers Without Borders International and several women in engineering groups to collaborate on capacity building efforts (Chairman Jones recently participated in an EWB-I meeting in Paris)
- **Virtual conference** – planning an electronic conference for engineering educators in developing countries who cannot get to international meetings, to be held in conjunction with an international conference in Brazil in 2006
- **Distribution of newsletter** – monthly issues of the “International Engineering Education Digest”, edited by Russel Jones and Bethany Oberst, are being broadly distributed by CCB through WFEO channels
- **Presentations on CCB efforts** – capacity building presentations have been made at several international conferences, including the 2004 International Conference on Engineering Education, the 2005 Annual Meeting of the European Society for Engineering Education, the 2005 Annual Meeting of the American Society for Engineering Education, the 2004 UPADI Congress, etc.

The members and chairman of the WFEO Committee on Capacity Building continue a high level of enthusiasm and activity in technical capacity building in developing countries, and expect to have more solid results to report in the next biennium.

# COMMITTEE ON ENERGY

by Jorge Spitalnik

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## 1. INTRODUCTION

This Report states the activities performed by the Energy Committee for the two-year period starting on October 16th 2003, after its creation by the WFEO General Assembly held in Tunis, Tunisia.

## 2. SCOPE & STRUCTURE

### 2.1 OBJECTIVES

The Energy Committee has the mission of:

- analyzing and assessing engineering issues related to the supply and use of energy with a view on sustainable development;
- advising WFEO on ways and means to deal with the problems related to the supply and use of sustainable energy,
- gathering and disseminating information on the state-of-the-art of different energy options, including their technical and economic feasibility based on engineering criteria and technological maturity, and
- helping engineers to receive updated, reliable information on advantages and disadvantages of the different energy sources for them to advise on energy policy-making decisions.

### 2.2 PRODUCTS & CONTENTS

Reports on Power generation will deal with the different sources of energy being considered worldwide (fossil fuels, renewables, solar, geothermal, nuclear, hydro, wind power, urban waste, and others). In the area of Transportation, energy sources should include, among others, fossil fuels, solar and fuel cells. Hydrogen production and use is an important subject that will be included.

Other issues related to energy consumption that are planned to be dealt with are:

- Sustainable development in developed and developing economies,
- Energy use and quality of life,
- Large concentrations of energy demand and mega-cities requirements, and
- Energy conservation.

The report will be in the form of a booklet or publication, produced by a Task Group made up of engineers and scientists with expertise on each energy source considered. The Task Group members work on a voluntary basis. This document shall be of scientific and technical nature.

Contents of the publications should include, among other, the following aspects whenever applicable:

- Technology development and timing for industrial availability
- Worldwide availability of energy or fuel sources
- Largest unit capacities and installed unit investment
- Capital needs and manpower requirements
- Efficiency of fuel use and unit cost of energy
- Waste quantities and disposal
- Environmental impacts for the complete fuel cycle and during operation
- Influence on Climate Change
- Long distance transmission possibilities.

### 2.3 STRUCTURE

The Committee structure consists of a Chairman and six regional Vice-Chairmen representing: Africa, Asia/Pacific, Europe/Russia, Latin America, Mid-East/S. Central Asia, and North America.

Committee Officers appointed by their respective National Member organizations are:

#### a) Chairman

- Jorge Spitalnik (Brazil)

#### b) Vice-Chairs

- Africa – Prof. Abubakar S Sambo, Nigeria
- Asia/Pacific – Dr. Peter Greenwood, Australia
- Europe/Russia – Mr. Albert Mitja Sarvise, Spain
- Latin America – Mr. Mario Wiegers, Argentina
- MidEast/S. Central Asia – Mr. Pradeep Chaturvedi, India
- North America – Mr. John M. Tuohy, Jr., USA

#### c) Advisory Council

Energy experts from different countries acting as an advisory body on reports issued by Task Groups constitute the Advisory Council. The Advisory Council members provide consultancy on priority activities in their respective areas of interest, for inclusion in the Committee working programs.

Currently, the composition of this Council is made up by:

- Konstantinos Alexopoulos, Greece
- David Anderson, UK
- Remy Carle, France
- Jose Gasca Neri, Mexico

- Yogi Goswami, USA
- Ivan Nicolau, Puerto Rico
- Michael Sanio, USA

d) Task Groups:

As mentioned before, efforts to constitute Task Groups to report on the feasibility of different energy options have been conducted. The following groups have been considered so far:

- Wind Energy
- Solar Energy
- Urban Waste
- Hydrogen Utilization
- Biomass Energy.

The Task Group on Wind Energy has already started its work under the leadership of Prof. Geraldo Tavares (Brazil). The report of this Task Group, once finished, is viewed as the model for this type of publication.

The Committee is planning to start a survey, under Dr. Peter Greenwood's coordination, to assess the range of country views on nuclear power. The survey will include questions to cover issues related to nuclear generation, waste disposal, existence of nuclear engineering education programs, local nuclear power design and engineering, and national policy on nuclear power generation. Following this survey, the Committee will be able to decide to create a Task Group to report on the nuclear power option.

### 3. MEETINGS

The Committee has met in conjunction with WFEO annual meetings. During this period, the Committee held its first meeting in Shanghai, China, on November 1st 2004. It was recognized that the Committee program will

provide a unique contribution to the engineering profession by allowing engineers to present their independent and authoritative views on energy matters and it was recommended to refer to other WFEO Committees the need to establish conditions for the engineers to ensure they have educational tools related to improving their knowledge in economic issues, and to legitimize their involvement in policy activities.

### 4. OTHER ACTIVITIES

#### 4.1 INTERNATIONAL WORKSHOP (IWRESD-2004)

The Korea Federation of Engineering Organizations (KFEO) held in Seoul, from 3rd to 4th December 2004, the First International Workshop on the Role of Engineers for the Sustainable Development – IWRESD. The Chairman of the Energy Committee was invited to deliver a speech at this Workshop entitled “Engineers’ Competence for Sustainable Energy Policies”.

#### 4.2 UN CSD

Considering the WFEO active involvement at the UN Commission on Sustainable Development (CSD), Mr. Jack Tuohy representing the Energy Committee attended from 11 to 22 April 2005, some Sessions of CSD-13 in New York, in preparation for the future attendance of the Energy Committee to CSD meetings that will give emphasis to the subject of energy for sustainable development and industrial development.

### 5. WEC 2008

The Committee is actively engaged in the organization activities of the 3rd World Engineers’ Congress to take place in Brazil in 2008, under the co-sponsorship of WFEO, FEBRAE and CONFEA. The Energy Committee Chairman is a member of both the International Advisory Board and the National Advisory Board.

# THE SHANGHAI DECLARATION ON ENGINEERING AND THE SUSTAINABLE FUTURE

*World Engineers' Convention, Shanghai, 5 November 2004*

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## PREAMBLE

Three thousand engineers from 70 countries and regions came together for the World Engineers' Convention on November 2-6, 2004. WEC 2004 was sponsored by the World Federation of Engineering Organizations (WFEO) and co-sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO), and organized by the Chinese Association for Science and Technology (CAST), Chinese Academy of Engineering (CAE), and Shanghai Municipal Government. The theme of WEC 2004 was "Engineers Shape The Sustainable Future". Many important issues related to this theme were addressed in the plenary and five parallel sessions of the Convention and the virtual fora associated with WEC 2004.

## PROCLAMATION

Engineering and technology are vitally important in addressing poverty reduction, sustainable development and the other UN Millennium Development Goals, and need to be recognized as such. We, the participants at WEC 2004, proclaim the following:

### The Challenge

#### 1. The Situation

While having made encouraging progress in economic and other respects, the world today is facing many severe challenges. The environment continues to deteriorate, natural and man-made disasters are more frequent, some natural resource uses approach critical points, and the gaps between the rich and the poor, between developed and developing nations, continue to widen. All these factors are a major threat to global prosperity, security, stability and sustainable development.

### The Mission

#### 2. The Engineering Community

The bounden duty of engineers is to build a better life for society. To this end, engineers should dedicate themselves to developing a better world together with the public and private sectors, non-governmental and intergovernmental organizations, through the application of knowledge to convert resources into products and services. In this process, engineers should be aware of the need to achieve a balance between resource use and the needs of future generations, maintaining the environment and ecosystems to promote sustainable development. We need to develop goals and measurable indicators towards these goals.

#### 3. Governments

Governments need to recognize and reinforce the role of engineering in social and economic development,

addressing basic human needs and poverty reduction, bridging the "knowledge divide" and promoting intercultural dialogue, cooperation and conflict resolution. Governments also need to promote public and private support for engineering education and capacity building. This is most important in developing public understanding and the application of engineering and technology in all countries.

#### 4. International Organizations

Non-governmental organizations, such as WFEO, and inter-government organizations, such as UNESCO, can and should play vital roles in promoting the development and application of engineering to bridge the divide between countries. They also play important role in supporting and promoting international cooperation in engineering and technology, particularly between developed and developing countries.

### Responsibility and Commitment

#### 5. Sustainability

Engineers should take greater responsibility for shaping the sustainable future. Engineers should also create and apply technology to minimize the waste of resources, reduce pollution and protect the human health and well-being and the ecological environment.

#### 6. Ethics and Codes of Conduct

The principles of honesty, equity, freedom from bribery, corruption and fraud, on which engineering codes are based, should be emphasized. High standards in all aspects of engineering practice should be maintained worldwide, and ongoing debate about engineering ethics should be strongly fostered towards the aim of adoption of codes of conduct by all engineers and engineering bodies.

#### 7. Interdisciplinarity

Engineers should be clearly aware of the importance of interdisciplinary cooperation. We need to promote cooperation within the profession and also with natural and social scientists and the public in the creation and application of knowledge for sustainable development.

#### 8. Education and Capacity Building

Innovation and creation in engineering are of crucial importance. We need to promote human and institutional capacity building. Curricular and pedagogical reform in engineering education and continuous professional development to encompass wider social and ethical concerns are needed. This will enhance the attractiveness

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of engineering to young people. We need to promote and support young engineers – they are our future.

#### ***9. Women and Gender Issues***

Women are frequently constrained from reaching their full potential. Only when women and men realize their potential, will the development of human society realize its full potential. Hence, promoting the participation of women and addressing gender issues in engineering is crucial for the sustainability of the engineering community.

#### ***10. International Cooperation***

There are excessive disparities between people and countries. This can lead to increasing insecurity and conflict. International cooperation in engineering

facilitates the exchange of knowledge and promotes technological applications for health, wealth and well-being, poverty reduction and the culture of peace.

#### **CALL TO ACTION**

We, the participants at the World Engineers' Convention 2004, commit ourselves in this Shanghai Declaration on Engineering and Sustainable Future and issue a call. We call on engineers, engineering organizations, governments and international bodies to acknowledge and adopt the actions stated in this declaration. We consider that this Declaration gives practical expression and impetus to a commitment to engineering that can serve as a strategic guide for partnership between all stakeholders in engineering for our sustainable future.

The UN General Assembly held on 21 December 2001 endorsed the holding of the **World Summit on the Information Society (WSIS)** in two phases. The first phase took place in Geneva and was hosted by the Government of Switzerland from 10 to 12 December 2003 and the second phase will take place in Tunis hosted by the Government of Tunisia, from 16 to 18 November 2005. The GA recognized the urgent need to harness the potential of knowledge and technology for promoting the goals of the United Nations Millennium Declaration and to find effective and innovative ways to put this potential at the service of development for all.

The objective of the first phase was to develop and foster a clear statement of political will and take concrete steps to establish the foundations for an Information Society for all, reflecting all the different interests at stake. At the Geneva Phase nearly 50 Heads of state/government and Vice-Presidents, 82 Ministers, and 26 Vice-Ministers and Heads of delegation from 175 countries as well as high-level representatives from international organizations, private sector, and civil society provided political support to the WSIS Declaration of Principles and Plan of Action that were adopted on 12 December 2003. More than 11,000 participants from 175 countries attended the Summit and related events. The scope and nature of this ambitious project requires new public-private partnerships, many of which were formalized during the Geneva Summit. Some of them were specifically targeted at bridging the digital divide.

It was agreed at the first Preparatory Meeting of the Second Phase of the World Summit on the Information

Society (WSIS), that the focus of the Tunis Phase will be *"Follow-up and implementation of the Geneva Declaration of Principles and Plan of Action by stakeholders at national, regional and international levels, with particular attention to the challenges facing the Least Developed Countries"*. This has involved undertaking a stocktaking of the implementation by governments and all other stakeholders of the WSIS Plan of Action. In addition to this, the second Phase will also address pending issues such as Internet Governance and Funding.

The WSIS provides an unprecedented opportunity for the engineering community to voice its views on Information Society related issues. The Civil Society was invited from early beginning to contribute to this major event by providing input and encouraging its constituencies to hold events within the framework of the Summit.

Taking advantage of the privileged status the Civil Society enjoys in the WSIS, the WFEO - through its standing committee on Information and Communication - has been contributing to this event since the inception of its preparatory process three years ago. The WFEO has organized several events in different countries to address WSIS related topics from an engineering perspective. In October 2003, WFEO held an international congress on "Engineering and the Digital Divide" which was the milestone of the WFEO contribution to the Summit. This event provided an opportunity to highlight the key role engineers play in reducing the fast growing disparities between developed and developing countries in terms of access to ICT.

# INTERNAL AUDIT REPORT/ RAPPORT D'AUDIT INTERNE

for the period January 1st to December 31st 2004

## Internal Audit Report of the Accounts of the World Federation of Engineering Organizations (WFEO) for the period of January 1st to December 31st 2004

It was only on July 5, 2005 that I was able to verify in Paris the accounts of our Federation for the year 2004. These accounts certified by CMS Experts Associés in Paris, were established in accordance with the WFEO Rules.

The 2004 accounts are closed with a new significant deficit of 18 409 US\$, fortunately half the amount of the deficit of 2003. Equity on December 31, 2004 is only 82 000 US\$.

It is important to note here that the financial years from 1999 to 2002 registered profits varying between 25 000 and 35 000 US\$. It is unacceptable that at the closing of the 2004 accounts about thirty members – more than a third – have not settled their 2004 subscriptions.

The fact that the accounts of 2003 and 2004 are not balanced as well as the low equity can only jeopardize the Federation's good operation, efficiency and freedom of action.

Our Executive Council, in particular the Treasurer and our new Executive Director, have to reverse the situation back to making profits to rebuild the reserves. For this, the decisions made by the Executive Council in Shanghai in 2004 have to be executed in order to reduce significantly the expenses and obtain income that is also in Euros. The budgetary decisions must be thoroughly implemented.

In conclusion, I would like to recommend that our 2004 running accounts and balance sheet at the end of 2004 be approved by the Executive Council next October in Puerto Rico.

*Jean-Claude Badoux, Internal Audit  
Lausanne, 17 July 2005*

## Rapport d'audit pour la période du 01/01/04 au 31/12/04 – Rapport d'audit interne des comptes de la Fédération Mondiale des Organisations d'Ingénieurs

Ce n'est que le 5 juillet 2005 que j'ai pu vérifier à Paris les comptes de l'année 2004 de la FMOI. Ces comptes, certifiés par le cabinet parisien CMS Experts Associés sont établis en pleine conformité avec les règles de la FMOI.

Sur le plan comptable l'année 2004 se boucle par un nouveau et important déficit de 18 409 US\$, heureusement moitié moindre qu'en 2003. Le capital propre au 31 décembre 2004 n'est plus que de 82 000 US\$.

Il est bon de rappeler ici que chacun des quatre exercices de 1999 à 2002 s'était bouclé par un bénéfice de l'ordre de 25 000 à 35 000 US\$. Il n'est pas acceptable qu'à la clôture des comptes en 2004 une trentaine de pays membres – soit plus d'un tiers – n'aient pas réglé leurs cotisations 2004.

Le déséquilibre des comptes 2003 et 2004 et le faible niveau des fonds propres ne peuvent que mettre en cause le bon fonctionnement, l'efficacité et la liberté d'action de notre fédération.

Notre conseil exécutif, en particulier notre Trésorier, ainsi que notre nouvelle Directrice Exécutive, doivent impérativement renverser la vapeur, passer à nouveau à des bénéfices pour reconstituer les réserves. Pour y parvenir les décisions prises à Shanghai lors de la séance

du Comité Exécutif de novembre 2004 doivent impérativement être mises en œuvre et appliquées afin de diminuer sensiblement les dépenses et d'obtenir des recettes elles aussi en Euros. Les décisions budgétaires doivent absolument être bien suivies.

En conclusion je recommande que nos comptes de 2004 et notre bilan fin 2004 soient approuvés à Porto Rico en octobre prochain.

*Jean-Claude Badoux, Internal Audit  
Lausanne, 17 July 2005*

## REPORT OF THE AUDITORS/ RAPPORT SUR L'EXAMEN DES COMPTES for the period 1 January 2004/31 December 2004

We have audited the financial statements in accordance with Auditing Standards.

In our opinion the financial statements give a true and faire view of the state of the Federation's affairs at 31st December 2004 and of its net profit for the year then ended

Paris, 26 March 2005

Stéphane SZNAJDERMAN – Auditor  
C.M.S. EXPERTS ASSOCIÉS

149, boulevard Malesherbes – 75017 Paris (France)

Nous avons examiné les comptes en effectuant les diligences prévues par les normes définies par l'Ordre des Experts Comptables.

À l'issue de nos travaux, nous n'avons pas relevé d'éléments remettant en cause la régularité et la sincérité des comptes arrêtés au 31 décembre 2004 de votre Fédération.

Paris, le 26 mars 2005

Stéphane SZNAJDERMAN – Commissaire aux comptes  
C.M.S. EXPERTS ASSOCIÉS,  
149, boulevard Malesherbes – 75017 Paris (France)

## WFEO'S SCHEMATIC FINANCIAL STRUCTURE STRUCTURE FINANCIÈRE SCHÉMATIQUE DE LA FMOI (1 000 US \$)

### Resources / Ressources

200	400 (est.)
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Members' fees  
Cotisation des membres

Standing Committees' own resources  
Ressources propres des Commissions

### Expenditures / Dépenses

100	30	470 (est.)
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Administration  
other  
autres

Standing Committees' own programmes  
Programmes des Commissions

17 %

5 %

78 %

**BALANCE SHEET AS AT 31 DECEMBER 2004**

**BILAN AU 31 DÉCEMBRE 2004**

	<b>2004</b>	<b>2004</b>	<b>2003</b>
	<b>US \$</b>	<b>€</b>	<b>€</b>
<b>CURRENT ASSETS/ACTIF</b>			
Deposits/Dépôts	77	61	61
Debtors/ Créances	63 180	49 748	209
Investments/Titres	61 388	48 337	107 975
Bank/Banque	38 389	28 653	41 477
Prepayments/Charges d'avance	152	20	49
<b>TOTAL</b>	<b>163 186</b>	<b>126 919</b>	<b>149 771</b>
<b>CURRENT LIABILITIES/PASSIF</b>			
Creditors/Dettes	22 344	17 594	16 549
Deferred Income/Produits d'avance	4 729	3 724	13 186
<b>TOTAL</b>	<b>27 073</b>	<b>21 318</b>	<b>29 735</b>
Difference/Différence	136 113	105 601	120 036
Financed by/Financé par :			
Balance at January 1st/Report à nouveau	152 857	120 036	158 060
Profit of the year/Gain de l'exercice	- 18 410	- 14 496	- 38 024

**STATEMENT OF INCOME AND EXPENDITURES 2003-2004**

**COMPTE D'EXPLOITATION 2003-2004**

	<b>2004</b>	<b>2004</b>	<b>2003</b>
	<b>US \$</b>	<b>€</b>	<b>€</b>
<b>RESSOURCES/INCOME</b>			
Subscriptions/Cotisations			
And/et	254 742	200 584	220 770
Associates/Associés			
Interests and misceleanous/Intérêts et divers	6	5	27
<b>TOTAL</b>	<b>254 748</b>	<b>200 589</b>	<b>220 797</b>
<b>EXPENSES/DÉPENSES</b>			
Administrations	170 113	133 947	133 936
General Activities/Activités générales	47 485	37 389	43 407
Standing committees/Comités permanents	35 079	27 621	51 456
Promotion	346	272	12 113
Loss on exchange/Pertes de change	20 135	15 854	17 909
<b>TOTAL</b>	<b>273 158</b>	<b>215 083</b>	<b>258 821</b>
<b>Profit of the year/Gain de l'exercice</b>	<b>- 18 410</b>	<b>- 14 496</b>	<b>- 38 024</b>
Average exchange rate/Taux de change moyen	1,27		



# **STRATEGIC PLAN 2003-2005**

## **LE PLAN STRATEGIQUE 2003-2005**

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### **VISION**

WFEO is the internationally recognized and chosen leader of the engineering profession and cooperates with national and other international professional institutions in being the lead profession in developing and applying engineering to constructively resolve international and national issues for the benefit of humanity.

### **MISSION**

- To represent the engineering profession internationally, providing the collective wisdom and leadership of the profession to assist national agencies choose appropriate policy options that address the most critical issues affecting countries of the world.
- To serve society and to be recognised by national and international organizations and the public, as a respected and valuable source of advice and guidance on the policies, interests and concerns that relate engineering and technology to the human and natural environment.
- To make information on engineering available to the countries of the world and to facilitate communication between its member nations of worlds best practice in key engineering activities.
- To foster peace, socio-economic security and sustainable development among all countries of the world, through the proper application of technology.

### **KEY PERFORMANCE INDICATORS OF INTERNATIONAL LEADERSHIP**

- WFEO's view is sought out by governments and international agencies.

- WFEO has identified key international issues to which the engineering profession can contribute e.g. water supply and quality, security of infrastructure against major climate events.
- WFEO's committees will have developed high quality public policy statements, in their areas of expertise, which will assist governments and international agencies.
- WFEO 'office bearers' throughout the world actively promulgate the public policy statements.
- WFEO members actively promote WFEO policy statements to their own governments.
- WFEO members promote membership benefits to other national engineering organizations to reach a membership of over 100.
- WFEO committees include at least half of their members who are policy experts of the member associations.
- WFEO maintains an interactive web system and protocol to enable policy statements to be formulated and promulgated quickly.
- WFEO cooperates with likeminded bodies, such as, FIDIC, Transparency International, the World Bank and UNESCO.
- WFEO coordinates the worldwide improvement of the ethical behavior, image and recognition of engineers.
- WFEO committees will support the engineering profession in leading the alleviation of poverty and promoting sustainability throughout the world.



<b>Afghanistan</b>	<i>Islamic Association of Afghan Architects and Engineers</i>	<b>Poland</b>	<i>Naczelna Organizacja Techniczna</i>
<b>Algeria</b>	<i>Union Nationale des Agronomes</i>	<b>Portugal</b>	<i>Ordem dos Engenheiros</i>
<b>Argentina</b>	<i>Union Argentina de Asociaciones de Ingenieros</i>	<b>Puerto Rico</b>	<i>Colegio de Ingenieros y Agrimensores de Puerto Rico</i>
<b>Australia</b>	<i>The Institution of Engineers (Australia)</i>	<b>Romania</b>	<i>General Association of Engineers in Romania (AGIR)</i>
<b>Austria</b>	<i>Österr. Ingenieur und Architekten-Verein</i>	<b>Russia</b>	<i>Union of Scientific and Engineering Associations, Russia (USEA)</i>
<b>Azerbaijan</b>	<i>Azerbaijan Union of Scientific and Engineering Associations</i>	<b>Senegal</b>	<i>Union Nationale des Ingénieurs du Sénégal</i>
<b>Bahrain</b>	<i>Bahrain Society of Engineers</i>	<b>Singapore</b>	<i>The Institution of Engineers, Singapore</i>
<b>Bangladesh</b>	<i>The Institution of Engineers, Bangladesh</i>	<b>Slovakia</b>	<i>Association of Slovak Scientific and Technological Societies (ZSVTS)</i>
<b>Bolivia</b>	<i>Sociedad de Ingenieros de Bolivia</i>	<b>Slovenia</b>	<i>Slovenian Chamber of Engineers</i>
<b>Brazil</b>	<i>Federacao Brasileira de Associaoes de Engenheiros (FEBRAE)</i>	<b>South Africa</b>	<i>Engineering Council of South Africa</i>
<b>Bulgaria</b>	<i>Fédération des Unions Scientifiques et Techniques de Bulgarie (FNTS)</i>	<b>Spain</b>	<i>Instituto de la Ingenieria de Espana</i>
<b>Cameroon</b>	<i>Association des Ingénieurs Diplômés de l'Ecole Polytechnique de Yaoundé</i>	<b>Sudan</b>	<i>Federation of Sudanese Engineers</i>
<b>Canada</b>	<i>Canadian Council of Professional Engineers</i>	<b>Sri Lanka</b>	<i>The Institution of Engineers, Sri Lanka</i>
<b>Chile</b>	<i>Instituto de Ingenieros de Chile</i>	<b>Switzerland</b>	<i>Comité National Suisse de FEANI/FMOI</i>
<b>China</b>	<i>China Association for Science and Technology (CAST)</i>	<b>Syria</b>	<i>Order of Syrian Engineers and Architects</i>
<b>Colombia</b>	<i>Sociedad Colombiana de Ingenieros</i>	<b>Taiwan (China)</b>	<i>Chinese Institute of Engineers</i>
<b>Costa Rica</b>	<i>Colegio Federado de Ingenieros y de Arquitectos de Costa Rica</i>	<b>Tanzania</b>	<i>The Institution of Engineers, Tanzania</i>
<b>Côte d'Ivoire</b>	<i>La Fédération Nationale des Organisations d'Ingénieurs, Architectes Géomètres et Urbanistes de Côte d'Ivoire</i>	<b>Tunisia</b>	<i>Conseil de l'Ordre des Ingénieurs de Tunisie</i>
<b>Cuba</b>	<i>Union de Arquitectos y Ingenieros de la Construcción de Cuba</i>	<b>Turkey</b>	<i>Union of Chambers of Turkish Engineers and Architects (TMMOB)</i>
<b>Cyprus</b>	<i>Cyprus Professional Engineers' Association</i>	<b>Uganda</b>	<i>Uganda Institution of Professional Engineers</i>
<b>Czechia</b>	<i>Cesky Svaz Vedeckotěchnických Společností (CSVTS)</i>	<b>Ukraine</b>	<i>Union of Scientific and Engineering Associations of Ukraine</i>
<b>Dominican Republic</b>	<i>Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores</i>	<b>UAE</b>	<i>Society of Engineers</i>
<b>Ecuador</b>	<i>Sociedad de Ingenieros del Ecuador</i>	<b>UK</b>	<i>The Institution of Civil Engineers</i>
<b>Egypt</b>	<i>Egyptian Engineering Association</i>	<b>USA</b>	<i>American Association of Engineering Societies (AAES)</i>
<b>El Salvador</b>	<i>Asociacion Salvadoreña de Ingenieros y Arquitectos</i>	<b>Uruguay</b>	<i>Asociacion de Ingenieros del Uruguay</i>
<b>France</b>	<i>Conseil National des Ingénieurs et Scientifiques de France (CNISF)</i>	<b>Venezuela</b>	<i>Colegio de Ingenieros</i>
<b>Georgia</b>	<i>Association of Engineers in Georgia</i>	<b>Yemen</b>	<i>Syndicate of Yemeni Engineers</i>
<b>Germany</b>	<i>Verein Deutscher Ingenieure (VDI)</i>	<b>Zimbabwe</b>	<i>The Zimbabwe Institution of Engineers</i>
<b>Ghana</b>	<i>Ghana Institution of Engineers</i>		
<b>Greece</b>	<i>Chambre Technique de Grèce</i>		
<b>Hong Kong(China)</b>	<i>The Hong Kong Institution of Engineers</i>	<b>Regional Member / Membre Régional</b>	<i>West Indies Council of Caribbean Engineering Organizations</i>
<b>Hungary</b>	<i>Fédération des Sociétés Scientifiques et Techniques (MTESZ)</i>		
<b>India</b>	<i>The Institution of Engineers, India</i>	<b>International Members / Membres Internationaux</b>	<i>Commonwealth Engineers' Council (CEC)</i>
<b>Indonesia</b>	<i>Peresatuan Insinyur Indonesia</i>		<i>European Federation of National Engineering Associations (FEANI)</i>
<b>Iraq</b>	<i>The Iraqi Engineers' Union</i>		<i>Federation of African Organizations of Engineers (FAOE)</i>
<b>Ireland</b>	<i>The Institution of Engineers, Ireland</i>		<i>Federation of Arab Engineers (FAE)</i>
<b>Israel</b>	<i>Association of Engineers and Architects in Israel</i>		<i>Federation of Engineering Institutions of Southeast Asia and Pacific (FEISEAP)</i>
<b>Italy</b>	<i>Consiglio Nazionale degli Ingegneri</i>		<i>Federation of Engineering Institutions of South and Central Asia (FEISCA)</i>
<b>Japan</b>	<i>Science Council of Japan</i>		<i>Pan American Federation of Engineering Associations (UPADI)</i>
<b>Jordan</b>	<i>Jordan Engineers' Association</i>		<i>Regional Council of Co-ordination (RCC)</i>
<b>Kenya</b>	<i>Institution of Engineers</i>		<i>Union of Scientific and Engineering Associations (USEA)</i>
<b>Korea (South)</b>	<i>The Korean Federation of Science and Technology Societies (KOFST)</i>	<b>Associates / Associés</b>	
<b>Kuwait</b>	<i>Kuwait Society of Engineers</i>	<b>Distinguished Associate / Associé d'honneur :</b>	<i>Consolidated Contractors Group (CCG)</i>
<b>Lebanon</b>	<i>Ordre des Ingénieurs et Architectes du Liban</i>		
<b>Libya</b>	<i>Libyan Syndicate of Engineers</i>	<b>Associates / Associés :</b>	
<b>Malaysia</b>	<i>The Institution of Engineers, Malaysia</i>	<b>Non-profit Making Associates / Associés à but non lucratif :</b>	<i>European Council of Civil Engineers (ECCE)</i>
<b>Mauritius</b>	<i>The Institution of Engineers, Mauritius</i>		<i>Société Européenne pour la Formation de l'Ingénieur (SEFI)</i>
<b>Mexico</b>	<i>Union Mexicana de Asociaciones de Ingenieros (UMAI)</i>		<i>Latin American Engineering Association for Labour Security (ALAIST)</i>
<b>Moldavia</b>	<i>Engineering Association of Moldavia</i>		<i>Federal Council of Engineering, Architecture and Agronomics (CONFEA)</i>
<b>Morocco</b>	<i>Union Nationale des Ingénieurs Marocains</i>		<i>Internat. Gesellschaft für Ingenieurpädagogik (IGIP)</i>
<b>Nepal</b>	<i>Nepal Engineers' Association</i>	<b>Individual Associates / Associé individuel :</b>	
<b>New Zealand</b>	<i>The Institution of Professional Engineers</i>		<i>Dr. Mounir Ghribi (Italy)</i>
<b>Nigeria</b>	<i>The Nigerian Society of Engineers</i>		<i>Dipl. Eng. Hermann Sturm (Germany)</i>
<b>Pakistan</b>	<i>Institution of Engineers, Pakistan</i>		
<b>Palestine</b>	<i>General Union of Palestinian Engineers</i>		
<b>Peru</b>	<i>Sociedad de Ingenieros del Peru</i>		



**WFEO/FMOI**

The World Federation of Engineering Organizations  
Fédération Mondiale des Organisations d'Ingénieurs

**Secrétariat :**

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