

**FÉDÉRATION MONDIALE
DES
ORGANISATIONS D'INGÉNIEURS**

**RAPPORT BIENNAL
1999-2001**



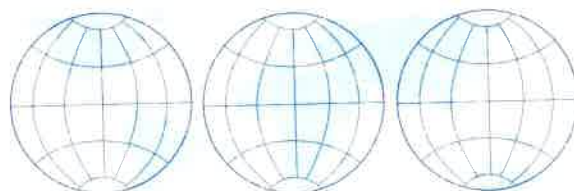
***WORLD FEDERATION
OF
ENGINEERING ORGANIZATIONS***

**BIENNIAL REPORT
1999-2001**



OFFICERS AND EXECUTIVE COUNCIL MEMBERS
MEMBRES DU BUREAU ET DU CONSEIL EXECUTIF
(2000 / 2001)

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	O. Awoyinfa	(FAOE)
	C. A. Dall'Acqua	(UPADI)
	A.Z. Laidin	(FEISEAP)
	G. Radhwan	(FAE)
	T. Ridley	(CEC)
	I.H. Siddiqui	(FEISCA)
	V. Sitsev	(USEA)
	J. Toth	(RCC)



WFEO, FROM MADRID TO MOSCOW GENERAL ASSEMBLIES (1999/2001)

by *President José Medem Sanjuan*

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1. Internal functioning of WFEO

1.1. General Assembly of Madrid

The General Assembly of the World Federation of Engineering Organizations, invited by the Instituto de la Ingeniería de España (IIE), met in Madrid on November 18 and 19, 1999, as the conclusion of a week dedicated to engineering and engineers.

This meeting was prepared by several previous events which took place during the first days of the week:

- a Focus Session was dedicated to the role of WFEO in assisting Less Developed Countries;
- the four Standing Technical Committees (STC) reviewed their activities during the current year and prepared new programmes to be launched in 2000;
- the Finance and Administration Committee and the Engineering Affairs Committee co-operated in setting up the programmes and budgets for the coming biennium;
- a Food Engineering Forum gathered international specialists in this discipline of increasing importance;
- the Executive Council received their reports and prepared the recommendations for the General Assembly.

Simultaneously, the IIE had organized technical visits to several sites demonstrating the vitality of Spanish engineering, as well as a very attractive Technical Convention on Engineering and International Cooperation, consisting in three roundtable discussions about Telecommunication, Transport and Energy.

The General Assembly meeting was formally opened by the Presidents of IIE, Eng. José Manuel CHICOT and of WFEO, Eng. Conrado BAUER, with Dr. John BORIGHT of

the National Research Council (USA) and Dr. Mohamed EL ASHRI, CEO and Chairman of the Global Environment Facility as key-note speakers.

The General Assembly in particular took the following decisions:

- it approved with pleasure the admission of Puerto Rico as National Member of the Federation, welcomed back the German delegation, and noted with concern the withdrawal of United Kingdom; several National Members (Bangladesh, India, Italy, Lebanon) who decided to significantly increase the level of their participation were shown warm appreciation;
- it awarded the WFEO Medal of Engineering Excellence to Professor Martin GREEN (Australia) and the Medal of Excellence in Engineering Education to Professor Jack LEVY (UK);
- it also awarded WFEO Medals for Outstanding Services to retiring Vice-Presidents ROURKE and THOM, as well as to the late Vice-President Donald LAPLANTE;
- it elected or re-elected as Vice-Presidents of the Federation Messrs I. AKINTUNDE (Nigeria), GASCA (Mexico), GULYAEV (Russia), IOAKIMIDIS (Greece), Dato LEE Yee Cheong (Malaysia) and MICHEL (France);
- it elected as representatives of the National Members to the Executive Council Messrs DOUMIT (Lebanon), FUCHS (Germany), GREAR (Australia), GUITART (Spain), OHGAKI (Japan) and ZHONG (China);
- it accepted with thanks the invitation of Russia to hold the next meeting in Moscow in 2001.

The activities and projects of the Federation were debated at length, and especially:

- the setting up of a Virtual Engineering Library for Sustainable Development was approved. This major project, to be studied in co-operation with UNESCO, will provide all engineers with a gateway to the sources of global documentation in this field. All WFEO Committees will participate in this programme;
- the proposal from Tunisia to host the Committee on Information and Communication was approved,
- the constructive participation of the Federation in the elaboration of the Earth Charter was confirmed;
- the World Engineers Convention (WEC), to be held for the first time in Hanover in June 2000, was accepted as a regular WFEO event and proposals to host the next WEC were invited.

1.2. Executive Council

During this period 1999 – 2001 we had two Executive Council meetings, the first in Madrid (19.11.99) and the second in Bucharest (19/20.09.00), organized in a perfect way by The General Association of Engineers in Romania (AGIR) under the chairmanship of Mihai Mihaita.

Two Vice Presidents, M. Abdelhamid and J. Michel, were elected as members of the Executive Board, and new responsibilities were assigned to the different members of the Council in accordance with each one's availability, competence and wishes. A Senior Group was created including Past President W. Carrol, Vice Presidents W. Rourke and D. Thom and other former officers like H. Hugi in order to give advice to the President and Executive Council, benefiting from their long experience.

The Strategic (as a long term document) and Action Plans (as a flexible short term plan) have been updated thanks to Past President Bauer and Dato Lee and we expect of all the National Members their collaboration for their correct implementation.

The Code of Ethics has been revised by B.W. Carroll and a new version of Code, incorporating both the Code of Ethics and the Code of Environmental Ethics, has been prepared, with English, French and Spanish versions, to be approved in our next General Assembly in Moscow.

1.3. Executive Board

During the period 1999-2001 the following Executive Board meetings were held:

- 24.02.00 Paris
- 03.07.00 Gaza (Palestine)
- 19/20.03.01 Paris

After each of the two Board meetings in Paris we held the ICET Executive Councils together with UATI. The Board meeting in Gaza was organized by Vice-President M. Abdelhamid of the General Union of Palestinian Engineers (GUPE) with a meeting with President Yasser Arafat, an engineer himself, who showed great interest in the Federation's programmes, especially those concerning water resources. On this occasion the Board was received also by the Association of Engineers and Architects in Israel (AEAD).

2. Relations with UNESCO

2.1. Staff changes in UNESCO

The new Director General of UNESCO is Mr. Koichiro MATSUURA, (Japan) who received the presidents of

WFEO and UATI at the beginning of 2000 in a very friendly meeting. He has supported the 1st World Engineers Convention which was held in June 2000 in Hanover, sending a video message for the opening ceremony.

Recent nominations of UNESCO regarding the Staff in direct relationship with WFEO are the following:

- Mr. M. N. Barbosa, from Brazil, as Deputy Director General
- Mr. W. R. Erdelen, from Germany, as Assistant Director General for Natural Sciences.
- Ms. E. Mitrafanova, from Russia, as Assistant Director General for Administration.
- Mr. B. Rouhban, from Lebanon, Section Chief of Engineering.

The situation of WFEO has improved inside UNESCO and we have established contacts with Mr. Erdelen and Mr. Rouhban in order to get more support from UNESCO. In any case we count with the valuable support of Mr. A. Marjoram inside UNESCO and for the 2nd WEC.

2.2. Framework Agreement with ICET

UNESCO has signed with ICET a Framework Agreement on March 19th, 1999 for the end of the current sexennial period. This agreement aimed at the initiation of a process of partnership between UNESCO and ICET in a way specific to umbrella NGOs, having a formal partnership association with UNESCO. The three projects within the scope of the Framework agreement are:

- The International Commission for Higher Engineering Education
- The World Technology Report
- The Virtual Library for Sustainable Development

The concrete results of this co-operation are detailed further down in the report of the Executive Director.

According to UNESCO, the evaluation of cooperation with ICET members - WFEO and UATI - has been successful in terms of immediate goals and objectives, and in the wider promotion of engineering, with the recommendation that the agreement be renewed.

3. International engineering events

Our World Federation has organized and attended many international engineering events during this period of 1999-2001. The most important are:

3.1. World Congress on Sustainable Development **(Calcutta, Dec. 2000)**

“Engineering and Technological Challenges of the 21st century” took place in Calcutta (India) on 20-23 January 2000. Organized by the Institution of Engineers of India under the sponsorship of WFEO, this congress was opened by the Prime Minister of India, Shri Atal Bihari Vajpayee, and gathered over five hundred participants, including a large number from abroad. President Medem and Vice-presidents J. Poirot and Dato Lee attended the opening ceremony.

Under the chairmanship of Prof. G.P. Lal, who also chairs the WFEO Committee on “Engineering and the Environment”, numerous presentations were made about the answers brought by the engineering community to the threats on our environment, in India as well as elsewhere in the world: domestic and industrial waste, air and water pollution, global warming, etc. The Congress also was a new opportunity to promote the “Code of Ethics” recommended by WFEO as early as 1985 and which remains more than ever appropriate. The “Calcutta Manifesto”, published at the end of the proceedings, summarises their conclusions and recommendations.

3.2. International Construction Industry Summits **(Zermatt, Feb. 2000 and 2001)**

The German Firm Institut für Arbeits-und Baubetriebswissenschaft Dr. Gerhard Dressel GMBH&Co (IfA) organizes every year in Zermatt (Switzerland) an IfA-Symposium as an International Construction Industry Summit with the cooperation of WFEO and FIEC.

The first from 30.01. to 04.02.00 was devoted to “Dialogue in Change-Increasing Quality in Co-operation with all Partners in the Construction Industry” and the theme of the Second Seminar from 28.01-02.02.01 was “Best Practice in Construction-Ideal Added Value Using Sustainable Development in Construction”.

President Medem participated with key address in both Seminars.

3.3. 1st World Engineers' Convention **(Hanover, June 2000)**

The first World Engineers' Convention has been the technical event of Hanover's EXPO 2000. This three day event from 19-21 June 2000 was organized by the VDI, the German Association of Engineers, in collaboration with the EXPO 2000 GmbH. With 130000 members the VDI is Europe's largest organization in the field of science and technology.

Dedicated to EXPO's dominant theme 'Man - Nature - Technology' the Convention has covered for the first time all aspects of technology, evaluating the visions and solutions of the international technical community with regard to the key issues of the new century and incorporating them into the world wide debate. Around 3400 participants have attended the five Professional Congresses of the event, focussing on the subjects of Mobility; Information and Communication; Energy; Environment - Climate - Health and the Future of Work.

Leading personalities including Jürgen E. Schremp, Chairman of the Board of Daimler Chrysler AG, James Wolfenson, World Bank President, Koichiro Matsuura, Director General of UNESCO (video message), and Ricardo Diez Hochleitner, President of the Club of Rome, have participated at the opening ceremony.

The World Engineers' Convention strives to bridge the boundaries between industrialised, newly emerging and developing countries as well as different generations.

WFEO has worked very actively together with VDI in the organization of the WEC through an Advisory Board chaired by the President of WFEO. We think that it has been the most important event of the engineering profession so far, demonstrating at a real international level the decisive role engineers are playing in our community.

The results of this first WEC have been summarized in the Memorandum on the WEC 2000, which will be part of the first UNESCO World Engineering and Technology Report.

3.4. 5th World Congress on Engineering Education **(Warsaw, Sept. 2000)**

The fifth World Congress on “Engineering Education and Training for the 21st Century Requirements” was held in Warsaw (Poland) from 12 to 14 September 2000, organized under the auspices of WFEO by the Polish Federation of Engineering Associations (NOT). Our Committee on Education and Training had a very active participation in this Congress, which gathered more than 150 specialists from 30 countries. President Medem sent a video message for the opening ceremony.

3.5. International Waters Workshop **(Washington, June 2001)**

Last year in Honolulu WFEO and FIDIC established a joint committee in order to tackle common problems concerning the engineering community. The first joint initiative was to co-organize a Chief Executive Officers

(CEOs) Workshop on GEF international watershed projects. WFEO's and FIDIC's interests and capabilities are complementary, with WFEO providing direct access to professionals, academic institutions and learned bodies. FIDIC, on the other hand, represents world-wide the private sector consulting engineering industry. GEF (Global Environment Facility), an Agency of the World Bank, is working to help developing nations and countries with economies in transition to conserve their freshwater, coastal and marine biodiversity as well as to work together in addressing their trans-boundary basins and large ecosystems. It has initiated over 50 projects in 131 recipient countries, allocating \$ 410 m in grants and almost \$ 500 m in co-finance.

The objective of the International Waters Workshop, jointly organized by GEF and WFEO/FIDIC is to encourage CEOs from private and public water companies, investors and engineering firms to share views on the private sector and water-related investments, to actively support developing countries as they respond to GEFs Hague World Water Forum announcement.

The three contemplated projects are:

- Mekong and South China Seas
- The Danube/Black Sea Basin
- The Parana, Paraguay, Plata River Basins and Patagonia Shelf

The workshop took place on June 7-8, 2001 at the World Bank in Washington with 10 experts coming from developed countries and 18 from developing world to explore the various ways that GEF partners and harnesses the know-how and financial resources of the private sector to support developing countries on global water issues.

From the side of WFEO Jim Poirot together with Jane Alspach (ComTech) have played a decisive role in the organization and development of this workshop, with the participation of Vice President Dato Lee and President Medem.

3.6. International Mechanical Engineering Congress (Karachi, May 2001)

The First International Mechanical Engineering Congress held in Karachi May 2001 was organized by the Institution of Engineers Pakistan, with the cooperation of WFEO and other International Members like FEISCA and CEC, along with "Exptech" Industrial Exhibition. The technical sessions dealt with topics related to civil, mechanical, electrical, chemical, metallurgical, telecommunication, nuclear, electronics, aeronautical,

industrial, structural, petro-gas, marine and computer engineering.

The President of WFEO was invited to participate with key-addresses at the opening and closing ceremonies.

3.7. 16th International Conference on Production Research (Prague, July 2001)

The 16th International Conference on Production Research (ICPR) has been held in Prague (Czech Republic) 30 July – 3 August 2001. It has been arranged by the Czech Association of Scientific and Technical Societies (ČSVTS), our National Member in collaboration with the Czech Technical University in Prague, the Engineering Academy of the Czech Republic and WFEO.

This ICPR Conference is regarded worldwide as the ranking conference in the promotion of research and teaching in Industrial and Production Engineering. President Medem was invited as guest of honour to participate in the opening ceremony.

3.8. 2nd World Engineers' Convention (Shanghai 2004)

In our last General Assembly WFEO decided to install the WEC as a fixed institutional event for the world-wide technical community, realized each 4-5 years, in different countries, like an Olympiad of Engineers, organized by a leading national engineering society, under the aegis of WFEO. The Chinese Engineering Organizations have decided to organize the second WEC in Shanghai in the year 2004.

The Chinese Association for Science and Technology (CAST) will join forces with the Chinese Academy of Engineering (CAE) and the Shanghai Association for Science and Technology (SAST) to set up what is going to become the second "World Engineers' Convention". UNESCO will participate in this event and thus contribute in perpetuating the concept and the associated publication of the "World Engineering and Technology Report", for the benefit of the community of engineers and of mankind as a whole.

The Steering Committee has been created recently and the new Advisory Board, under the Chairmanship of the President of WFEO, will meet for the first time in Moscow September 10th, 2001. As members of this Advisory Board will be invited the Vice Presidents of WFEO, the Presidents of our International Members and of some of our National Members, the Presidents of our Associates as well as Representatives of other International Organizations like FIDIC, CAETS, ICSU, GEF, etc.

4. Support of the Standing Technical Committees

Most of the technical activities of our Federation are carried out successfully by the four STCs. Therefore we have to support their activities, and try to co-operate with their seminars.

4.1. CIC (Tunisia)

The *Committee on Information and Communication*, chaired by K. Ayadi has organized very successfully international seminars in Tunis, which I attended.

- Urban Environment and the Arab City of the 21st Century (04.04.00)
- Avenir du Travail et Emploi des Ingenieurs (Future of Work and Employment of the Engineers - 20.10.00)

The first seminar was organized by COI for the Arab Union of Engineers. Both events had a very large audience with the strong support of the Tunisian Government.

4.2. CET (Hungary)

The *Committee on Education and Training*, chaired by J. Ginsztler, participated in a very efficient way in the mentioned “5th World Congress on Engineering Education and Training for the 21st Century”, held in Warsaw (Poland) (12/14.09.00).

4.3. CEE (India)

The *Committee on Engineering and Environment*, chaired by G.P. Lal, organized the “International Congress on Sustainable Development” in Calcutta (January 2000), with a remarkable resonance in the environmental problematic.

4.4. ComTech (USA)

The *Committee on Technology*, chaired by J. Poirot, has made an outstanding effort for the perfect organization and development of the International Waters Workshop, held in Washington (07/08.06.01). J. Poirot is also responsible for the Earth Charter and for the follow up of the preparation of Rio + 10 in South Africa.

5. Contacts with National Members

I have followed the policy of reinforcing the relations between the Presidency and the different National Members (NM) in order to facilitate the mutual understanding and stimulate their active collaboration with our Federation.

This was the main reason for accepting almost all invitations to attend their meetings, congresses and conventions. I had personal contacts with the following NM:

5.1. Brazil

Federacao Brasileira de Associacoes de Engenheiros (FERAE), Sao Paulo (12.12.99) on the occasion of a visit to CONFEA.

5.2. China

China Association for Science and Technology (CAST) and Shanghai Association for Science and Technology (SAST) on the occasion of the meetings in Shanghai (21.11.00) and Beijing (22.11.00) for the preparation of the 2nd WEC.

5.3. Czech Republic

Czech Association of Scientific and Technical Societies (ČSVTS), Prague (30.07-03.08.01) on the occasion of the 16th International Conference on Production Research.

5.4. France

Conseil National des Ingénieurs et des Scientifiques de France (CNISF) Paris (19.03.00) with G. Baron, responsible of foreign affairs and with President Karcher in Jerez (30.04.01).

5.5. Germany

Verein Deutscher Ingenieure (VDI), on the occasion of the Advisory Board meeting in Frankfurt (16/17.03.00) and the 1st WEC in Hanover (19/21.06.00).

5.6. Hungary

Federation of Technical and Scientific Societies of Hungary (MTESZ), Budapest (08/10.10.00) on the occasion of the “2nd Forum of Engineers chambers and Associations of Engineering in Dialogue”.

5.7. India

The Institution of Engineers, India (IEI), Calcutta (18/25.01.00) on the occasion of the International Congress on Sustainable Development, N. Delhi (06/07.04.01) for the Platinum Jubilee of the State Centre and Ahmedabad (08.04.01), visiting the area devastated by the earthquake.

5.8. Israel

Association of Engineers and Architects in Israel (AEAI), Tel Aviv (04.07.00) in a meeting with Executive Director E. Cohen-Kagan and Secretary J. Mark.

5.9. Italy

Consiglio Nazionale degli Ingegneri (CNDI), Jerez (30.04.00), on the occasion of the meeting of the southern countries of FEANI and Porto (11.05.01) in the ECCE meeting.

5.10. Japan

Science Council of Japan (SCI), Engineering Division, Tokyo (15/18.05.00) on the occasion of the Conference of the World's Scientific Academies.

5.11. Nepal

Nepal Engineers' Association (NEA), Kathmandu (10.04.01) on the occasion of the 7th National Convention, and the FEISCA Seminar on Harmonisation of Engineering Qualification, Accreditation and Registration in FEISCA Countries.

5.12. Pakistan

The Institution of Engineers, Pakistan (IEP), Karachi (26/28.05.01) on the occasion of the 41st Annual Convention and the 1st International Mechanical Engineering Congress.

5.13. Palestine

General Union of Palestinian Engineers (GUPE), Gaza (03.07.00) on the occasion of the Executive Board meeting organized by Vice President M. Abdelhamid.

5.14. Portugal

Ordem dos Engenheiros (ODE) Jerez (30.04.00) on the occasion of the meeting of the southern countries and Porto (11.05.01) in the ECCE meeting.

5.15. Romania

The General Association of Engineers in Romania (AGIR), Bucharest (18.09.00) on the occasion of the celebration of the Executive Council meeting organized by Prof. Mihai Mihaita.

5.16. Russia

Union of Scientific and Engineering Associations (USEA), Moscow (10/17.02.01) on the occasion of the Conference "Professional Technical and Military Education in XXI Century".

5.17. Spain

Instituto de la Ingeniería de España (IIE), during the whole period 1999-2001.

5.18. Switzerland

Schweizerischer Ingenieur-und Architektenverband (SIA), Geneva (28.02.00) with H. Hugi and Geneva (02.02.01) with H. Hugi and Badoux, new Swiss representative in WFEO.

5.19. Tunisia

Conseil de l'Ordre des Ingénieurs (COI), Tunis (01.04.00, 20.10.00, and 16/19.04.01) on the occasion of seminars organized by COI.

5.20. United Kingdom

Institution of Civil Engineers (ICE), London (15/16.03.00) on the occasion of the Council Meeting Commonwealth Young Professionals Millennium Conference and on

13.04.00 for the ICE Gala Dinner, Telford Award to D. Tom and on 07.11.00 for the Presidential Address of the new President of ICE.

5.21. USA

American Association of Engineering Societies (AAES), Honolulu (07.13.09.00) for the FIDIC Annual meeting and Washington (05/06.03 and 07/08.06.01) on the occasion of the International Waters Workshop. Besides AAES I could meet, together with Dato Lee, M. Malcom, Head Directorate for Education and Human Resources Programs of AAAS, John Boright and John Campbell of NAS, Larry R. Kohler, the new Executive Director of ICSU and W.C. Salmon, Secretary of CAETS. All these contacts will contribute to strengthen the existing good relations between WFEO and all these Institutions.

6. Contacts with International Members

Our International Members, as umbrella organizations of national engineering bodies organized on a geographical or other regional basis, are of utmost importance for our World Federation because they represent the engineering profession in these areas. Recently they got the voting right in the General Assembly meetings of WFEO. I have tried to involve them in our activities and in order to strengthen the relations with the presidency I have attended their assemblies and meetings.

In all my addresses I proposed a better co-ordination of the many existing international engineering bodies, asking all the countries belonging to these Regional Organizations which still are not members of WFEO, to join us as soon as possible in order to reach all the nations around the world.

6.1. UAE

The Union of Arab Engineers organized with the collaboration of the Conseil de l'Ordre des Ingénieurs (COI) in Tunis (16/19.04.01) its 22nd Congress related to "Sustainable Development and the Role of Engineers in its Achievement" with the active participation of 15 Arabic countries.

6.2. CEC

The Commonwealth Engineers Council met in London (14.03.00), celebrating the Commonwealth Young Professionals Millennium Conference. I had the privilege to address the young engineers from around the world, explain them the role young professionals should play in our engineering organizations. On this occasion Dato Lee Yee Cheong finished his presidency and Prof. Tony Ridley, from Imperial College, was appointed the new President.

6.3. FEANI

The European Federation of National Engineering Associations Annual Business Meetings were held in Hamburg, (02/06.10.00) organized by the Deutscher Verband Technisch-Wissenschaftlicher Vereine (DVT). I had the opportunity to address the audience during the opening ceremony.

6.4. FEISCA

The Federation of Engineering Institutions of South and Central Asia organized with the collaboration of the Nepal Engineers' Association (NEA) in Kathmandu (11/12.04.01) a Seminar on "Harmonisation of Engineering Qualification, Accreditation and Registration in FEISCA Countries" trying to tackle the hot issue of mobility of professionals in this sub-continent. I had the opportunity to explain what WFEO is doing in this respect with the task group "accreditation" chaired by W. Fuchs.

6.5. UPADI

The Pan American Federation of Engineering Associations celebrated its XXVI Convention in Panama (21/25.08.00) with different technical Congresses and with a special Pan American Forum of the Engineering for the Development with the participation of governments, financial institutions, the civil society and the private sector. During this Convention Brazil was elected for the new headquarters of UPADI and Claudio dall'Acqua Amaury was appointed new President.

During this meeting the Pan American Academy of Engineers was founded, I was one of the signatories. Our good friend Miguel A. Yadarola was elected President, D. Reyes Guerra Vice President V. Mendizabal Secretary and our beloved W. Carrol Member. Congratulations to all of them.

6.6. USEA

The Union of Scientific and Engineering Associations together with the Government of the Russian Federation and the Russian Ministry of Education organized in Moscow (14.02.01) the Conference "Professional Technical and Military Education" in XXI Century. As special guest I had the honour to intervene during the inaugural session.

Over the period of three centuries the professional education in Russia has become one of the largest educational systems in the world based on cultural and historical traditions of this country and on their powerful intellectual potential.

7. Relations with Associates

As you know, Associates are organizations, firms or individuals who wish to interact with our Federation but do not fulfil the membership conditions. We try to increase the number and importance of our Associates and at the same time we want to strengthen the existing good relations between them and WFEO to a mutual benefit of both parts. My activities in this field have been the following:

7.1. ECCE

The European Council of Civil Engineers organized in Porto (11/12.05.01) its Council meeting with the assistance of 15 European member countries. In my intervention I proposed a closer collaboration between our existing committees. During the meeting Slovenia and Croatia expressed the desire to become members of WFEO.

7.2. IGIP

The Internationale Gesellschaft für Ingenieur-Paedagogik organized its 29th Symposium in Biel, Switzerland (27/30.03.00) with the theme Engineering Education in the 21st Century. My key address at the opening ceremony was related to "Optimising the Engineering Education".

7.3. ALAIST

La Asociacion Latino Americana de Ingeniería de Seguridad en el Trabajo has organized in Curitiba, Brazil, (28.05-02.06.01) an International Seminar on Assurance of Working Accidents, attended by Vice-President K. Ayadi. Afterwards in Sao Paulo (15/17.08.01) another Event COBRASSEMT is taken place with a Conference by President Medem about "Concepts of the Working Security applied by the EU".

8. Relations with International Organizations

We keep trying to reinforce our links with other similar or complementary International Organizations in order to better co-ordinate our activities and to get a synergetic effect around the world. Our efforts were directed towards the following organizations.

8.1. FIDIC

As I explained in point 3.5 there is a close collaboration between WFEO and FIDIC in the launching, organization and managing of the International Waters Workshop together with GEF. This joint committee WFEO/FIDIC founded in Honolulu (Sept. 2000) should not only handle this important issue as a first attempt of co-operation, but in the future try to solve jointly the many common challenges we are facing.

8.2. ICSU

We have with ICSU, the International Council of Scientific Unions, a bilateral agreement to collaborate in issues of sustainable development. For the ninth session of the United Nations Commission on Sustainable Development CSD9 WFEO has participated in the Dialogue paper by Scientific and Technological communities for Multi-Stakeholder dialogue Segment on Sustainable Energy and Transport, after having consulted their membership in an effort to reflect a wide range of views from engineering. The main inputs into ICSU Energy Paper CSD 9 was done by Academician Dato Lee Yee Cheong, Vice President of WFEO and Vice President of the Academy of Sciences Malaysia. We must recall that WFEO participated in Rio 1992 Conference, led workshops in CSD6, 7 and 8 and contributes in the drafting of the Earth Charter (Jim Poirot).

8.3. UATI

In chapter 2.2. we explained the framework agreement UNESCO/ICET, where UATI was one of the partners of ICET.

This International Union of Technical Associations and Organization was established on March 2, 1951, on UNESCO's initiative in order to facilitate its relations with engineering and industrial activities. In this frame, UATI takes up on the one hand, the representation of international and multidisciplinary engineering and technology fields where professionals can come only on their own and on the other hand the answer to the expectations of its members.

Although WFEO and UATI collaborate since many years together inside ICET, both organizations are not quite similar but in a sense complementary. There are certain peculiarities which unable to merge both organizations in one only body. Both UATI and WFEO gather all engineers around the world, UATI by professional branch and WFEO by nation. Right now there are many themes in common but the main issue of co-operation is the prevention and preparedness of natural disasters, to be tackled by a join committee WFEO/UATI.

8.4. Relations with UN Agencies

There are many contacts and collaborations with different Agencies of UN like IUCN (The World Conservation Society), UNDP (United Nations Development Programme), UNIDO (United Nations Industrial

Development Organization), UNDP (United Nations Development Programme), UNEP (United Nations Environment Programme), etc.

8.5. Relations with other international bodies

Along the period 1999-2001 contacts have been established and collaborations have been maintained or initiated with other International Organizations like IAP (Inter-Academy Panel), WEC (World Energy Council), COSTED (Committee on Science and Technology in Developing Countries), IPCC (Intergovernmental Panel on Climate Change), NRC (National Research Council), WBCSD (World Business Council for Sustainable Development), IEEE (Institute of Electrical and Electronics Engineers), etc.

9. Acknowledgement

My warmest congratulation and my deepest gratitude to all the members of WFEO, especially to Past President C. Bauer, Vice Presidents, Members of the Executive Council and Board, Chairmen and Members of our Standing Committees and Task-Forces, to all our National and International Members, to our Seniors and last but not least to our Staff in Paris and in other cities, around the world for the formidable effort done in order to keep our Federation alive, strong and better known between the engineering community in particular and by our society around the world in general.

10. Conclusions

WFEO is the largest International Federation, aiming to reach all the countries around the world, with a balanced representation of the different regions in the governing bodies of our Federation, assuring a fair and positive collaboration between developed and developing countries with an increasing human and technical solidarity.

The World Federation belongs to all of us and what ever we will achieve in the next future will be due to the combined efforts of all of us.

We must keep moving forward with your decisive collaboration with a real sense of purpose and move at a convenient speed to keep up with the developing needs of all our members.

A NEW PERIOD

by *Conrado E. Bauer – WFEO Past President (1999-2001)*

Next September, in the XVIII General Assembly of our World Federation which will take place in Moscow, I will finish my period of two years as a member of WFEO Board and Executive Council in my position of Past President. From that moment on, I will start **a new period** of my work within the Federation which began in November, 1979 in the General Assembly held in Jakarta during which WFEO Standing Technical Committee on Engineering and Environment was created and I was appointed as its Chairman, position that I kept till 1987. Then, in 1991, in the General Assembly carried out in Dar es-Salam, I was designated WFEO President-Elect and Chairman of the Commission on Engineering Affairs. Four years later, in Budapest, I began my 4-year period as President of the Federation which ended in Madrid, 1999.

From Jakarta to Moscow, there is a 22-year span in which I have been tied to WFEO, its realisations and activities, a bond that I want to maintain in my position as President of the Senior Advisory Commission until 2003. In this new period I will contribute to the strengthening and the continuous and efficient functioning of this Commission created to give advice to WFEO President.

During the last two years, with the leadership of President Medem, WFEO has intensified its international presence, has reinforced its relations with UNESCO and UATI, consolidating ICET mission of representing the world Engineering and Technology and, with its support and participation in the Hannover World Engineers' Convention, has institutionalised the world meeting of Engineers – the next one to be held in Shanghai, 2004 – and the publication of the World Engineering and Technology Report, both every four years. I truly believe that by means of this consolidation, the steady updating and compliance with the Strategy and Action Plans, its relevant team of executives and staff, and its more

dynamic and efficient functioning structure, supported by an increasingly massive communication technology, WFEO will reaffirm in the near future its function of being an effective linking factor and a strong engine to drive forward the activities of the world engineering and the prestige of its representative entities and their participation in the discussion on national and global strategies for development.

We, engineers, can thus consolidate our ethic codes and the systems of study accreditation and professional updating, and encourage the technological development and innovation which, appropriately analysed and applied by engineers, may be used by governments and social sectors to move towards a world-wide equitable, encouraging, peaceful and sustainable development.

In order to carry out this task and, at the same time, to support engineering activities aimed at avoiding unsustainable consumption and overcoming poverty and segregation everywhere, we should call for and obtain the active participation of all our international and national members, increasing its number and commitment to join all the related sectors, intensifying the presence of and relations with young engineers and students of Engineering, Engineering Schools and Institutes, consulting, technical, educational, scientific, social and cultural organizations.

I am deeply convinced that WFEO, maintaining its political, ideological, racial and religious neutrality, has a very important role to perform, promoting engineering progress and representing engineers in the international scenario for the betterment of Mankind.

Buenos Aires, June 2001.

REPORT OF THE TREASURER

by John McKenzie

For many years the main restraint on WFEO, preventing the carrying out of many tasks which would have been to the benefit of WFEO projects and of great assistance to the less developed people of the world, has been finance. Each year we have had to struggle to procure enough finance to support the main calls upon WFEO. Each year we have had difficulty in backing the main objectives of the standing committees.

Resulting from the discussions on an initial paper in the 1999 Madrid General Assembly the Executive Council appointed a Task Group on Financial planning to tease out and to bring forward a financial plan for WFEO for the next four years to be submitted to the Executive Council in Bucharest in 2000. The outlines of this task were discussed in the General Assembly 1999. The proposals and plans were to assist the President and the Executive Director to focus on likely sources of finance and to put before the Executive Council ways to improve the financial foundation of WFEO. While this was in progress the UK withheld from membership and a number of much-valued Associates resigned. This made the task more urgent.

The opinion of the Task Group supported by the Executive Council was that the most favourable sources of increased finance were:

1. Obtaining more Associates by each National Member acting as the recruiter in the country concerned and thereby obtaining some National advantage;
2. Every Standing Committee pursuing self-help with vigour as far as it can;

Associating WFEO meetings with exhibitions and persuading the exhibition organizers to contribute to WFEO as the result of sponsorship;

3. To try to obtain royalties through sponsorship of congress, seminars and exhibitions.

In the longer term all Members and especially International Members should try to introduce new members to WFEO and to act as the advocates of WFEO.

The Task Group was asked to draft guidelines for all Members to assist them in the tasks outlined above. This has been done. But there is no substitute for each Member striving to spread knowledge of WFEO and being active in all the facets put forward by the Task Group.

The guidelines propose face to face informed meetings. In the case of associates it would be practical to suggest the financing of a specific activity in their field of interest as an alternative to payment of an annual fee. A personal relationship between the approacher and the approached is helpful and a copy of the Newsletter or a brochure is all the paper that is needed. The potential associate should understand their full inclusion in WFEO. Setting up foundations/trusts/charities is frequently helpful but these are usually restricted to a particular country or tax system.

Bear in mind that the larger our number of members and associates the greater our influence is likely to be.

The more headway we can make with these efforts the greater will be our opportunities of making real our aspirations.

Staff

The staff of the Secretariat remained, for financial reasons, at its previous very low level: the Executive Director and his Assistant, both working part time.

This can be considered as sufficient in "normal" periods but proves to be somewhat inadequate when special events have to be prepared like the General Assembly meetings, or in case of prolonged absence of one person.

The situation could be improved with:

- the possibility to hire additional secretariat help during periods of need;
- and the assistance of a staff dedicated to communication (Newsletter and Web site).

Much will depend on the exchange rate of the Euro (in which most expenses are made) to the US Dollar (in which subscriptions are called).

Accommodation

After a period of two years during which UNESCO allocated two suitable office rooms (and a storage place for the Federation's archives) situated in the immediate vicinity of our partner UATI, the pressure is building up again on ICET (as on all NGOs) to reduce their office surface. WFE's offices have recently been squeezed into those of UATI. All NGOs are to be regrouped in one common building by the end of 2001, and it is hoped that common facilities (meeting rooms, etc.) will help maintain decent office surfaces.

Financial situation

The very low financial reserves of the Federation could be increased, through:

- a very strict control of all expenses,
- the favourable US \$/FFR rate of exchange,
- and constant pressure to encourage the members to settle their subscriptions.

They now (1 January 2001) reach close to the amount of annual administration expenses, or half the total expenses including subventions to the Standing Committees. Nevertheless, efforts are to be maintained to obtain a better commitment of the members as well as their implication in the recruitment of more members or Associates.

Very little room for innovation was thus available for the preparation of the budgets for 2002 and 2003. In order to be able to increase the sums allocated to the Committees'

Personnel

L'équipe du Secrétariat est restée, pour des raisons financières, au même effectif très bas : le Délégué Général et son Assistante, tous deux à temps partiel.

Ceci peut être considéré comme suffisant en temps « normal », mais ne convient plus lorsqu'il faut préparer des événements particuliers comme les réunions d'Assemblée Générale ou en cas d'absence prolongée d'une personne.

Cette situation pourrait s'améliorer :

- s'il était possible de prendre une secrétaire additionnelle en période de pointe ;
- si on pouvait avoir un assistant chargé de la communication (Bulletin et site Web).

Ceci dépendra essentiellement du taux de change de l'Euro (monnaie de la plupart des dépenses) par rapport au Dollar US (monnaie de calcul des cotisations).

Installations matérielles

Après avoir bénéficié pendant deux ans de deux bureaux UNESCO convenables (et d'un local d'archives) situés à proximité immédiate de notre partenaire UATI, l'ICET (comme toutes les ONG) est de nouveau soumise à pression pour réduire sa surface de bureaux. Les bureaux de la FMOI ont récemment été resserrés au sein de ceux de l'UATI. Toutes les ONG doivent se regrouper dans un bâtiment commun fin 2001, et on peut espérer que la mise en commun de moyens logistiques (salles de réunions, etc.) permettra de disposer de surfaces de bureaux acceptables.

Situation financière

Les réserves financières très basses de la Fédération ont pu être remontées grâce à :

- un contrôle très strict de toutes les dépenses,
- un taux de change US \$/FFR favorable,
- et une pression constante sur les membres pour qu'ils règlent leur cotisation.

Elles approchent maintenant (au 1^{er} janvier 2001) le montant des dépenses d'administration annuelles, ou la moitié des dépenses totales y compris les subventions aux Commissions Permanentes. Néanmoins, il faut continuer à s'efforcer d'obtenir des membres une meilleure participation et une plus grande implication dans le recrutement de nouveaux membres ou Associés.

Il y a très peu d'espace pour l'innovation dans la préparation des budgets pour 2002 et 2003. Afin de pouvoir augmenter de manière significative les sommes

programmes by a significant amount, an essential effort for the efficiency of the Federation, an adjustment (5%) of the subscription for 2003 will be necessary.

Contacts with the members

The Executive Director joined his efforts to the President's in order to visit as many member organizations as possible or meet their representatives when they visit Paris. The Secretariat receives a great number of information requests, which are dealt with as completely and accurately as possible, with the aim of making the members feel "at home" in WFEO. This result will be more efficiently achieved when the Federation's Web site is fully operational: we are working on this with a new team of young consultants and with the help of the Committee on Information and Communication. First concrete results are expected to be presented to the next General Assembly in Moscow.

Co-operation with UNESCO

As you know WFEO and UATI (International Union of Technical Associations) have created ICET (the International Council for Engineering and Technology) at the instigation of UNESCO to serve as an umbrella entity representing professional organizations in engineering and technology, with which UNESCO could have one framework agreement.

As far as WFEO is concerned, the co-operation has included:

- conferences and meetings like: the World Conference on Science (Budapest – July 1999) or the 1st World Engineers' Convention (Hanover – June 2000) brilliantly organized by our German member, the Union of German Engineers (VDI);
- the proposal to develop a Virtual Engineering Library on Sustainable Development (VELSD), with the particular assistance of the Institution of Engineers, Australia and of the Technical University of Queensland;
- the publication of the final Memorandum of the World Engineers' Convention as part of the first UNESCO "World Engineering and Technology Report", with the collaboration of VDI. (Germany);
- the proposal to create an International Committee of Higher Engineering Education (ICHEE), or, better, to use the existing Committees on Education and Training of WFEO and UATI in such an advisory role;

allouées aux Commissions pour leurs programmes, effort essentiel pour l'efficacité de la Fédération, un ajustement (5 %) des cotisations pour 2003 sera nécessaire.

Contacts avec les membres

Le Délégué Général s'est associé aux efforts du Président afin de rendre visite au plus grand nombre possible d'organisations membres ou de rencontrer leurs représentants lorsqu'ils passent à Paris. Le Secrétariat reçoit un grand nombre de demandes d'information, qui sont traitées aussi vite et précisément que possible, dans le but de faire sentir aux membres qu'ils sont « chez eux » à la FMOI. Ce résultat sera atteint avec plus d'efficacité lorsque le site Web de la Fédération sera pleinement opérationnel. Nous y travaillons avec une nouvelle équipe de jeunes consultants et avec l'aide du Comité Information / Communication. Les premiers résultats concrets sont attendus pour une présentation à la prochaine Assemblée Générale à Moscou.

Coopération avec l'UNESCO

Comme vous le savez, la FMOI et l'UATI (Union Internationale des Associations et Organismes Techniques) ont créé l'ICET (Conseil International des Sciences de l'Ingénieur et de la Technologie) à l'instigation de l'UNESCO pour servir d'entité factière représentant les organisations professionnelles dans le domaine des ingénieurs et de la technologie, avec laquelle l'UNESCO a passé un Accord-Cadre.

Pour ce qui concerne la FMOI, la coopération a compris :

- des conférences et réunions comme la Conférence Mondiale sur la Science (Budapest – Juillet 1999) ou les premières « Journées Mondiales des Ingénieurs » (Hanovre – Juin 2000) brillamment organisées par notre membre allemand, l'Union des Ingénieurs Allemands (VDI) ;
- une proposition pour développer une Bibliothèque Virtuelle des Ingénieurs pour le Développement Durable (VELSD), avec l'aide en particulier de l'Institution des Ingénieurs d'Australie et de l'Université Technique du Queensland ;
- la publication du Mémoire final des « Journées Mondiales des Ingénieurs » qui préfigure le premier « Rapport Mondial sur la Technologie » de l'UNESCO, avec la collaboration du VDI. (Allemagne) ;
- une proposition de créer une Commission Internationale de l'Enseignement Supérieur des Technologies (COMIEST), ou, mieux, d'utiliser les Commissions Formation existantes à la FMOI et à l'UATI dans ce rôle de conseiller ;

– the continuing participation in the International Strategy for Disaster Reduction (ISDR - formerly IDNDR). Prevention and preparedness will be the main tasks of the joint WFEO/UATI Working Group launched in our last ICET meeting held in Paris in March 2001;

– the development in the areas of engineering accreditation and mobility of engineers. UNESCO advised in the preparation of a questionnaire, which has been sent to all our National Members to collect the existing information regarding this important issue, and will assist in the analysis and exploitation of the answers.

As ICET consists in the conjunction of two organizations, WFEO and UATI, without a proper structure, a definition of roles and balance of the two member organizations would be useful and is being elaborated. No merger seems possible or advisable for the time being, but joint activities will lead to improved co-operation and efficiency.

As provided for in the Framework Agreement, an increased direct co-operation between UNESCO and our international or national engineering organizations around the world is to be encouraged.

The task of the Secretariat has been greatly facilitated by the confidence of the President, Executive Council members and member organizations. Let them all be assured of our gratitude for their constructive and indulgent assistance, and of our dedication to the Federation and to all engineers.

– la poursuite de la participation à la Stratégie Internationale pour la Réduction des Désastres (ISDR – anciennement IDNDR). La Prévention et la préparation seront les principales tâches du Groupe de Travail conjoint FMOI /UATI mis sur pied au cours du dernier Conseil de l'ICET à Paris en mars 2001 ;

– des avancées dans le domaine de l'accréditation et de la mobilité des ingénieurs. L'UNESCO nous a conseillés pour la préparation d'un questionnaire, qui a été envoyé à tous nos Membres Nationaux pour rassembler l'information existante sur ce thème important, et nous aidera à analyser et à exploiter les réponses.

L'ICET étant la conjonction de deux organisations, la FMOI et l'UATI, sans structure propre, une définition des rôles et des équilibres entre les deux membres est utile et est en cours d'élaboration. Il ne semble ni possible ni conseillé de les fusionner pour l'instant, mais le développement d'activités communes conduira à améliorer la coopération et l'efficacité.

Comme prévu dans l'Accord-Cadre, l'accroissement de la coopération directe entre l'UNESCO et nos membres internationaux ou nationaux dans le monde doit être encouragée.

La tâche du Secrétariat a été grandement facilitée par la confiance du Président, des membres du Conseil Exécutif et des organisations membres. Qu'ils soient tous assurés de notre gratitude pour l'aide constructive et indulgente qu'ils nous ont apportée et de notre dévouement à la Fédération et à tous les ingénieurs.

COMMITTEE ON EDUCATION AND TRAINING

by *Chairman Janos Ginsztler*

The members of the Committee on Education and Training accomplished a significant amount of work in pursuit of their goals: to improve engineering education and training at all levels, to ensure the quality of 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.

Issue Number 6 of "IDEAS" was published in October 1999 on "The impact of globalisation on engineering education and practice". It was based on the final report on one of the satellite conference of the World Science Conference (Budapest, 26 June – 1 July 1999) and on its main conclusions.

Issue Number 7 of this journal was published in November 2000 on "The necessary basic knowledge and abilities for engineering graduation".

The 8th issue is under preparation, the main theme of it will be "Internationalisation of the Engineering Curricula". The conclusions of the Bologna-agreement will be widely discussed.

Further contributions to the 8th issue are welcome till 15th October 2001.

Our Committee actively participated in the preparation and organization of the 5th World Congress on

Engineering Education (Warsaw, September 2000), which was opened by Aleksander Kwasniewski, President of the Republic of Poland.

We have played an active role in different international events, organized by UNESCO, UPADI, FEISEAP, FEANI, FEBRAE, ABET, SEFI, UATI, ICSU and others, dealing with the new challenges of engineering education. Links with other WFEO Standing Technical Committees, especially in the field of information technology and sustainable development were strengthened.

We are planning – among others – to deal with mutual recognition of qualifications, including the bilateral recognition; and to deal with accreditation of courses including postgraduate courses and protection of the title of engineer.

We plan to help with recent and up to date information the development of the "International Engineering Education Digest", a periodic review of developments around the world that are of interest to engineering education leaders.

The activity of our CET was continuously supported by the leaders of the Hungarian Engineering Federation (MTESZ: Prof. Pál Michelberger, Mr. László Halmai), by the State Secretariat of Research and Development of the Hungarian Ministry of Education (Prof. Gábor Náray-Szabó, Prof. Gábor Szabó) and of WFEO.

COMMITTEE ON INFORMATION AND COMMUNICATION

by *Chairman Kamal Ayadi*

The Information and Communication Committee focused its efforts on two main points:

a) Dissemination of information and communication culture among the engineering community by helping local engineering organizations to set up their own policy towards promoting the use of NTIC by engineers.

b) Playing an active role at the international level, by being present in the major event organized on the subject of NTIC.

* As part of the first point the CIC, in collaboration with the Lebanon Engineer's Order organized in March 2001 a successful two-day seminar entitled "Information and continuous training for engineers through internet". The seminar was the occasion of the launching of a campaign towards promoting the use of the internet by the Lebanon engineer's community.

A seminar to be organized in Lagos was originally planned for April 2001 and later postponed to August. Several engineering organizations from the neighboring countries are expected to take part in this event.

The CIC is also in touch with the Engineering Organizations in Brazil and Indonesia, as well as with the Federation of Arab Engineers, to jointly organize seminars.

* For the second point, CIC is preparing to play an active role in the next World Summit on the "Information Society", to be hosted in 2003 by either Tunisia or Switzerland, on the theme of the "Digital gap". CIC plans to organize an international seminar in 2003 on "Contribution of the engineering community to bridge the existing gap between developed and developing countries in terms of access to the NTIC". WFEO offered the International Union of Telecommunication (IUT) to hold this seminar as well as the General Assembly of 2003 in conjunction with the World Summit. CIC thus aims at presenting the views of the engineering community to the World Summit and launching an international reflection on this theme.

* CIC acted as a co-organizer of an international seminar held in Tunis in the 13th of June 2001 on the theme of "New economy and role of Engineers".

* CIC is also in touch with the organizers of the Africa Engineers Forum 2001 held in Harare, Zimbabwe in the 26th of June 2001. Numerous African engineer's organizations are expected to take part in this event. CIC's active role in this Forum aims at strengthening the links between WFEO and the African continent.

* The first issue of CIC's Newsletter is planned to be published in time for the General Assembly of the Federation.

COMMITTEE ON ENGINEERING AND THE ENVIRONMENT

by Chairman G. P. Lal

The Committee on Engineering and the Environment aims at developing through appropriate activities and education, a world-wide understanding and commitment to sustainable development and encourage pursuit of those programs and facilities within Agenda 21 of the UNCED World Summit that are applicable to engineering.

The Committee met in Bucharest on 18-20 September 2000 and in Paris on 19-20 March 20001.

The **World Congress on “Sustainable Development”** was hosted by the Institution of Engineers (India) on 20 - 23 January 2000 at Calcutta (India). Among its main features, an interesting program for encouraging students' participation in Sustainable Development was organized with the support of the Commonwealth Engineers' Council: an Essay Competition on the topic of “Choice of Technology for Sustainable Development of Developed/Developing Countries”. Mr George Oner Ogale from Kenya was the winner of the first prize.

The “Calcutta Declaration” formulated as a conclusion of the Congress stressed the role of Engineering in reducing the gap between developed and developing countries, essentially within the areas of economic growth, environmental education, access to water and energy resources.

This Declaration and its Recommendations have been published in the WFEO Newsletter and widely circulated for follow up action.

The **International Conference on “Construction Industry (Challenges for Sustainable Development), Disaster Management, Environment Management** was held on 18-20 November, 2000 at Chandigarh (India) with the sponsorship of WFEO.

The President of WFEO, Jose Medem Sanjuan, participated in a Round Table at New Delhi (India) on 7 April 2001, and in a Forum organized by the Nepal Engineers' Association and the Federation of Engineering Institutions of South & Central Asia (FEISCA) on 11 - 13 April 2001 at Kathmandu. Sustainable Development and Natural Disaster Mitigation were among the topics dealt with in these meetings. It appeared that Disaster Mitigation measures are increasingly important for ensuring sustainable development in long term planning perspective and technological innovations may help reduce the consequences. A World Congress on Natural Disaster Reduction, with intense deliberations and debates by experts, needs to be set up before long.

Quarterly issues of Newsletters have been published regularly since March 2000 in three languages (English, French and Spanish) and widely circulated within WFEO. Contributions from the member countries are most welcome.

The Committee wishes to express its appreciation to the Institution of Engineers (India) and the Secretariat for extending all the infrastructure facilities in carrying out the Committee's activities.

COMMITTEE ON TECHNOLOGY (COMTECH)

by *Chairman James W. Poirot*

ComTech's program consists of five major focus areas, that work together to fulfill its mission. In the last two years, ComTech has redeveloped its website (www.wfeo-comtech.org), which disseminates information from its published reports, newsletters (WFEO ComTech News), case study search, and meetings. In addition to the website, other projects include: United Nations Commission on Sustainable Development (UNCSD), Earth Charter, World Water Vision and Global Environment Facility (GEF).

ComTech's experts panels, produced annually, for UNCSD bring an engineering dimension to the international dialogue on sustainability issues. In 2000, ComTech produced a panel on "Sustainable Agricultural and Natural Resource Management Engineering Practices" (5/1/00); the 2001 panel was "Engineered Energy Technologies to Create Economical Solutions (4/17/01). Both resulted in written reports, internationally distributed.

On June 29, 2000, Mr. James Poirot represented WFEO at the official launch of the Earth Charter (The Hague, Netherlands). As a featured speaker, he reported WFEO's support for the Earth Charter by endorsing four resolutions presented at the 1999 General Assembly.

Meeting with President Mikhail Gorbachev, Mr. Poirot explained WFEO's resolutions on ethics and the Earth Charter. Mr. Gorbachev expressed support for engineering's involvement.

The World Water Vision, a 25-year project to articulate the world's water needs and to draw attention to all water issues, includes WFEO representation by ComTech Regional Vice President for North America, Dr. Joseph Delfino. In March 2000, he attended the Second World Water Forum at The Hague and, in August 2001, the Stockholm Water Week meetings.

In conjunction with the International Federation of Consulting Engineers (FIDIC), ComTech conducted a successful international waters workshop for the Global Environment Facility (GEF) (6/7-8/01). The objective was to help the GEF attract private sector involvement in GEF water projects. Sixty engineering CEOs from developing and developed countries discussed three strawmen for identified GEF-target regions: Black Sea/Danube River basin, Rio de la Plata in South America, and the East Asian Seas. Some follow-on activities are anticipated, including two regional conferences in Southeast Asia. Documents from the international waters workshop are posted on ComTech's website (www.wfeo-comtech.org).

I. BROAD PRINCIPLES

Ethics is generally understood as the discipline or field of study dealing with moral duty or obligation. This typically gives rise to a set of governing principles or values which in turn are used to judge the appropriateness of particular conduct or behavior. These principles are usually presented either as broad guiding principles of an idealistic or inspirational nature, or, alternatively, as a detailed and specific set of rules couched in legalistic or imperative terms to make them more enforceable. Professions that have been given the privilege and responsibility of self regulation, including the engineering profession, have tended to opt for the first alternative, espousing sets of underlying principles as codes of professional ethics which form the basis and framework for responsible professional practice. Arising from this context, professional codes of ethics have sometimes been incorrectly interpreted as a set of "rules" of conduct intended for passive observance. A more appropriate use by practicing professionals is to interpret the essence of the underlying principles within their daily decision-making situations in a dynamic manner, responsive to the need of the situation. As a consequence, a code of professional ethics is more than a minimum standard of conduct; rather, it is a set of principles which should guide professionals in their daily work.

In summary, the model Code presented herein expresses the expectations of engineers and society in discharging the engineers' professional responsibilities. The Code is based on broad principles of truth, honesty and trustworthiness, respect for human life and welfare, fairness, openness, competence and accountability. Some of these broader ethical principles or issues deemed more universally applicable are not specifically defined in the Code, although they are understood to be applicable as well. Only those tenets deemed to be particularly applicable to the practice of professional engineering are specified. Nevertheless, ethical principles or issues not commonly considered to be part of professional ethics may sometimes have implications on the engineer's professional role.

Issues regarding the environment and sustainable development know no geographical boundaries. The engineers and citizens of all nations should know and respect an environmental ethic. It is desirable therefore that engineers in each nation continue to observe the philosophy of the Principles of Environmental Ethics delineated in Section III of this code.

I. GRANDES LIGNES

L'Éthique est généralement perçue comme la discipline ou le domaine d'étude qui se rapporte au devoir ou à l'obligation morale. Cela engendre de façon compréhensible une série de valeurs ou de principes directeurs qui à leur tour sont utilisés pour évaluer la concordance d'une conduite ou d'un comportement. Ces principes sont habituellement adoptés ou bien comme de grandes lignes directrices de nature idéaliste ou inspirée, ou bien comme une série détaillée et spécifique de règles rédigées en termes juridiques ou impératifs afin de les rendre plus exécutoires. Les professions ayant le privilège et la responsabilité d'être autorégulées, comme la profession d'ingénieur, tendent à choisir la première voie en adoptant comme codes d'éthique professionnelle des ensembles de principes fondamentaux qui constituent la base ou le cadre d'une pratique professionnelle responsable. Selon ce contexte, les codes professionnels d'éthique ont parfois été interprétés à tort comme étant une série de « règles » de conduite à observer passivement. Il serait plus approprié que les professionnels interprètent l'esprit de ces principes tout au long de leur processus de prise de décisions, d'une façon dynamique qui réponde au mieux à l'exigence de la situation. Par conséquent, un code professionnel d'éthique plus qu'une ligne de conduite minimale ; est plutôt une série de principes qui guident les professionnels dans leur travail quotidien.

En bref, le modèle du code d'éthique présenté dans ce document exprime les attentes des ingénieurs et de la société dans l'exercice des fonctions des ingénieurs. Il est basé sur les grandes lignes des principes de vérité, d'honnêteté et de loyauté, de respect de la vie humaine et du bien-être, d'équité, de franchise, de compétence et de responsabilité. Même si certains de ces grands principes d'éthique, d'application universelle, n'y sont pas définis de façon précise, ils sont néanmoins applicables. Ne sont spécifiés dans ce code que les préceptes considérés comme étant spécialement applicables à l'exercice de la profession de l'ingénieur. Pourtant, des principes d'éthique qui ne sont pas communément considérés comme faisant partie de l'éthique professionnelle peuvent parfois avoir une incidence sur le rôle professionnel de l'ingénieur.

Les questions liées à l'environnement et au développement durable ne connaissent pas de frontières géographiques. Les ingénieurs et les citoyens de tous les pays doivent connaître et respecter une éthique de l'environnement. Il est donc souhaitable que les ingénieurs de chaque pays continuent à se conformer à la philosophie des Principes d'Éthique de l'Environnement définis dans la Section III de ce code.

II. PRACTICE PROVISION ETHICS

PROFESSIONAL ENGINEERS SHALL:

- hold paramount the safety, health and welfare of the public and the protection of both the natural and the built environment in accordance with the Principles of Sustainable Development;*
- promote health and safety within the workplace;
- offer services, advise on or undertake engineering assignments only in areas of their competence and practice in a careful and diligent manner;
- act as faithful agents of their clients or employers, maintain confidentially and disclose conflicts of interest;
- keep themselves informed in order to maintain their competence, strive to advance the body of knowledge within which they practice and provide opportunities for the professional development of their subordinates and fellow practitioners;
- conduct themselves with fairness, and good faith towards clients, colleagues and others, give credit where it is due and accept, as well as give, honest and fair professional criticism;
- be aware of and ensure that clients and employers are made aware of societal and environmental consequences of actions or projects and endeavour to interpret engineering issues to the public in an objective and truthful manner;
- present clearly to employers and clients the possible consequences of overruling or disregarding of engineering decisions or judgements;

* Sustainable development is the challenge of meeting current human needs for natural resources, industrial products, energy, food, transportation, shelter, and effective waste management while conserving and enhancing the Earth's environmental quality and the natural resources base essential for the human needs of future generations.

II. ÉTHIQUE DE LA PRATIQUE DE LA PROFESSION

LES INGÉNIEURS PROFESSIONNELS S'ENGAGENT :

- à accorder la plus haute importance à la sécurité, à la santé et au bien-être du public et à la protection de l'environnement naturel et construit conformément aux Principes du Développement Durable* ;
- à assurer la santé et la sécurité sur les lieux de travail ;
- à n'offrir des services, ne donner des renseignements ou n'entreprendre des travaux d'ingénierie que dans les domaines de leur compétence uniquement et à exercer leur profession avec soin et application ;
- à se comporter en tant qu'agents fidèles de leurs clients ou de leurs employeurs, à respecter la confidentialité et faire connaître les conflits d'intérêt ;
- à se tenir informés afin de maintenir leurs compétences, à s'efforcer de faire avancer les connaissances utiles à leur profession et à fournir des possibilités de développement professionnel à leurs subordonnés et leurs collègues ;
- à se comporter de façon équitable et de bonne foi envers leurs clients, leurs confrères et les autres, à reconnaître le mérite là où il le faut, à accepter les critiques professionnelles honnêtes et justes ou à en faire ;
- à être conscients des conséquences de leurs activités ou projets sur la société et l'environnement, à faire en sorte que leurs clients et employeurs soient également conscients, et à s'efforcer de présenter les questions techniques au public d'une façon objective et véridique ;
- à présenter clairement à leurs employeurs et clients les conséquences possibles de tout rejet ou inobservation de décisions ou opinions technique ;

* Le développement durable consiste à répondre aux besoins humains courants en ressources naturelles, en produits industriels, en énergie, en produits alimentaires, en transport, en logement et en gestion efficace de déchets tout en conservant et en mettant en valeur la qualité de l'environnement de la Terre, les ressources naturelles et les bases socio-économiques essentielles afin de satisfaire les besoins des futures générations. L'application adéquate de ces principes contribuera considérablement à l'éradication de la pauvreté dans le monde

-
- report to their association and/or appropriate agencies any illegal or unethical engineering decisions or practices of engineers or others.

- à faire connaître à leur association et/ou aux agences compétentes toute décision ou activité technique illégale ou contraire à l'éthique, de la part d'ingénieurs ou d'autres.

III. ENVIRONMENTAL ENGINEERING ETHICS

ENGINEERS, AS THEY DEVELOP ANY PROFESSIONAL ACTIVITY, SHALL:

- try with the best of their ability, courage, enthusiasm and dedication, to obtain a superior technical achievement, which will contribute to and promote a healthy and agreeable surrounding for all people, in open spaces as well as indoors;
- strive to accomplish the beneficial objectives of their work with the lowest possible consumption of raw materials and energy and the lowest production of wastes and any kind of pollution;
- discuss in particular the consequences of their proposals and actions, direct or indirect, immediate or long term, upon the health of people, social equity and the local system of values;
- study thoroughly the environment that will be affected, assess all the impacts that might arise in the dynamics and aesthetics of the ecosystems involved, urbanized or natural, as well as in the pertinent socio-economic systems, and select the best alternative for development that is both environmentally sound and sustainable;
- promote a clear understanding of the actions required to restore and, if possible, to improve the environment that may be disturbed, and include them in their proposals;
- reject any kind of commitment that involves unfair and irreversible damages for human surroundings and nature, and negotiate the best possible engineering, social, and political solution;
- be aware that the principles of eco-systemic interdependence, diversity maintenance, resource recovery and inter-relational harmony form the basis of

III. ÉTHIQUE DE L'ENVIRONNEMENT POUR L'INGENIEUR

LES INGÉNIEURS, DANS LE CADRE DE LEUR ACTIVITÉ PROFESSIONNELLE, S'ENGAGENT :

- à essayer, au mieux de leur capacité, leur courage, leur enthousiasme et leur dévouement, d'améliorer la qualité de leurs réalisations, pour contribuer à un milieu sain et agréable pour tous, à l'extérieur comme à l'intérieur ;
- à s'efforcer d'atteindre les objectifs de leur travail en consommant le moins possible de ressources naturelles et d'énergie et avec une production minimum de déchets et de pollution de toute sorte ;
- à étudier en particulier les conséquences de leurs propositions et leurs activités, directes ou indirectes, immédiates ou à long terme, sur la santé des gens, sur la justice sociale et sur le système local de valeurs ;
- à étudier consciencieusement l'environnement qui sera affecté, à évaluer tout impact possible sur la dynamique et l'esthétique de l'écosystème impliqué, urbanisé ou naturel, et sur le système socio-économique concerné, et à faire le meilleur choix de développement qui soit à la fois bon pour l'environnement et durable ;
- à s'efforcer de bien faire comprendre les actions nécessaires au maintien et, si possible, à l'amélioration de l'environnement qui pourrait être endommagé, et à les inclure dans leurs propositions ;
- à rejeter toute sorte d'engagement qui puisse causer des dégâts injustes et irréversibles au milieu humain et à la nature, et à négocier la meilleure solution possible du point de vue technique, sociale et politique ;
- à être conscients que les principes de l'interdépendance des éco-systèmes, de la sauvegarde de la diversité, de la préservation des ressources et de l'harmonie des

humankind's continued existence and that each of these bases poses a threshold of sustainability that should not be exceeded.

relations forment les bases de la pérennité de la race humaine et qu'à chacune de ces bases correspond un seuil de durabilité qui ne devrait pas être dépassé.

IV. CONCLUSION:

Always remember that war, greed, misery and ignorance, plus natural disasters and human induced pollution and destruction of resources, are the main causes of the progressive impairment of the environment and that engineers, as an active member of society, deeply involved in the promotion of development, must use their talent, knowledge and imagination to assist society in removing those evils and improving the quality of life for all people.

IV. CONCLUSION

Il faut toujours se rappeler que la guerre, l'avidité et l'ignorance, s'ajoutant aux désastres naturels et à la pollution et la destruction des ressources provoquées par l'homme, sont les principales causes de la dégradation progressive de l'environnement et que les ingénieurs, en tant que membres actifs de la société, profondément impliqués dans l'effort de développement, doivent utiliser leur talent, leurs connaissances et leur imagination afin d'aider la société à mettre fin à ces maux et à améliorer la qualité de la vie pour tous.

**INTERNAL AUDIT REPORT/
RAPPORT D'AUDIT INTERNE**

for the period 1 January 2000/31 December 2000

**Internal Audit Report of the Accounts
of the World Federation of Engineering Organizations**

Having checked on 21 June 2001 the accounts of WFEO for the year 2000, I noted that these accounts certified by the Auditors CMS Experts Associés, are established in accordance with the rules of WFEO.

I have also verified that the necessary expenses have been made in conformity with the decisions of the General Assembly and the Executive Council.

The following two points should be noted:

- An office space for the Archives has been put at the disposal of WFEO by UNESCO. Therefore, there was no need since the middle of the year to keep the external room that had been rented for this purpose.
- The accounts have been kept in EURO since January 1, 2001. Unless subscriptions are computed in the same currency, the fluctuations of the US\$/Euro exchange rate will continue to significantly affect the financial situation of WFEO.

Made in Paris on June 21, 2001

Jean Roret
Deputy Treasurer

**Rapport d'Audit Interne des Comptes
de la Fédération Mondiale des Organisations
d'Ingénieurs**

Ayant vérifié le 21 juin 2001 les comptes de la FMOI pour 2000 j'ai constaté que ces comptes certifiés par le Cabinet CMS Experts Associés, sont établis en conformité avec les règles de la FMOI.

J'ai vérifié, en outre, que les dépenses nécessaires ont été effectuées en conformité avec les décisions de l'Assemblée Générale et du Conseil Exécutif.

Les deux points suivants sont à noter :

- Un local pour le stockage des Archives a pu être mis à la disposition de la FMOI par l'UNESCO. Il n'est donc plus nécessaire depuis le milieu de l'année, de conserver le local extérieur loué dans ce but.
- La comptabilité est tenue en EURO depuis le 1^{er} janvier 2001. Faute de calculer les cotisations dans la même monnaie, les variations du taux de change US\$/Euro continuent à influencer de manière significative sur la situation financière de la FMOI.

Fait à Paris le 21 juin 2001

Jean Roret
Trésorier Adjoint

**REPORT OF THE AUDITORS/
RAPPORT SUR L'EXAMEN DES COMPTES**
for the period 1 January 2000/31 December 2000

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

In our opinion the financial statements give a true and fair view of the state of the Federation's affairs at 31st December 2000 and of its net profit for the year then ended.

Paris, 26 March 2001

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.

A 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 2000 de votre Fédération.

Paris, le 26 mars 2001

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

90	30	470 (est.)
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Administration
other
autres
15 % 5 %

Standing Committees' own programmes
Programmes des Commissions
80 %

BALANCE SHEET AS AT 31 DECEMBER 2000
BILAN AU 31 DÉCEMBRE 2000

	2000 US \$	2000 FF	1999 US \$
CURRENT ASSETS/ACTIF			
Deposits/ <i>Dépôts</i>	61	400	447
Debtors/ <i>Créances</i>	8 976	58 344	4 331
Investments/ <i>Titres</i>	62 666	407 330	45 594
Bank/ <i>Banque</i>	24 381	158 476	22 910
Prepayments/ <i>Charges d'avance</i>	1 077	7 000	1 097
TOTAL	97 161	631 550	74 379
CURRENT LIABILITIES/PASSIF			
Creditors/ <i>Dettes</i>	15 960	103 737	15 897
Deferred income/ <i>Produits d'avance</i>			
TOTAL	15 960	103 737	15 897
Difference/ <i>Différence</i>	81 201	527 813	58 482
Financed by/ <i>Financé par :</i>			
Balance at Jan 1st/ <i>Report à nouveau</i>	53 982	350 883	32 000
Profit of the year/ <i>Gain de l'exercice</i>	27 219	176 930	26 482

STATEMENT OF INCOME AND EXPENDITURES 1999 – 2000
COMPTE D'EXPLOITATION 1999 – 2000

	2000 US \$	2000 FF	1999 US \$
RESSOURCES/INCOME			
Subscriptions/ <i>Cotisations</i>	176 371	1 146 412	183 519
Associates/ <i>Associés</i>	4 912	31 928	17 194
Subventions		0	513
IDNDR Recovery/ <i>Remboursements</i>	1 107	7 196	1 249
Interests and miscellaneous/ <i>Intérêts et divers</i>	16 214	105 391	3 880
TOTAL	198 604	1 290 926	206 355
EXPENSES/DÉPENSES			
Administration	102 155	664 008	108 651
General Activities/ <i>Activités générales</i>	16 696	108 524	25 906
Standing committees/ <i>Comités permanents</i>	45 600	296 400	39 556
Virtual Library/ <i>Bibliothèque Virtuelle</i>	5 000	32 500	
Promotion	1 424	9 256	2 955
IDNDR	510	3 315	2 805
Rounding up/ <i>Arrondis</i>		-7	
TOTAL	171 385	1 113 996	179 873
Profit of the year/<i>Gain de l'exercice</i>	27 219	176 931	26 482
Average exchange rate/ <i>Taux de change moyen</i>	6,5		6

STRATEGIC PLAN 2000-2001
LE PLAN STRATEGIQUE 2000-2001

VISION

WFEO is the world wide leader of the engineering profession and cooperates with other national and international institutions in developing and applying engineering for the benefit of humanity.

MISSION

- Promote the advancement of the world engineering profession and expand the interaction and the mutual understanding and cooperation among engineers of different countries.
- Provide information and leadership to the engineering profession on issues of concern to the public or the profession.
- Serve society and be recognized by national and international, public and private sector organizations and the public at large, as a respected and valuable source of advice and guidance on the policies, interests and concerns that relate science, engineering and technology (S.E.T) to the human and natural environment.
- Make information on engineering available to the countries and peoples of the world.
- Facilitate relationships between government, business and people by contributing an engineering dimension to discussions on policies and investments.
- Foster peace, socio-economic security and sustainable development among all countries of the world, through the proper application of engineering knowledge.

LONG-TERM OBJECTIVES

- Develop through appropriate engineering activities and education, a world-wide understanding and commitment to sustainable development.
- Pursue those programs and activities within Agenda 21 of the UNCED World Summit that are applicable to engineering.
- Encourage the formation and strengthening of national and regional associations of engineers.
- Promote societal benefits through the dissemination of information and the communication and cooperation among engineering organizations around the world, and with institutions of science, industry, universities, and other organizations and agencies of the United Nations Organization.
- Foster the assessment, sharing and transfer of technology.
- Support programs to improve the quality of engineering education and training, and the formulation and harmonization of procedures for the accreditation of engineering courses.
- Contribute to facilitate freer trade in engineering services, and regional and international recognition of engineering qualifications.
- Enhance protection, security and health of the public by developing guidelines for the management of risk and the prevention, reduction and mitigation of damages due to technological and natural disasters.
- Provide equal opportunities for all to enter the engineering profession.

Afghanistan	<i>Islamic Association of Afghan Architects and Engineers</i>
Argentina	<i>Union Argentina de Asociaciones de Ingenieros</i>
Australia	<i>The Institution of Engineers (Australia)</i>
Austria	<i>Österr. Ingenieur und Architekten-Verein</i>
Bahrain	<i>Bahrain Society of Engineers</i>
Bangladesh	<i>The Institution of Engineers, Bangladesh</i>
Bolivia	<i>Sociedad de Ingenieros de Bolivia</i>
Brazil	<i>Federacao Brasileira de Associaoes de Engenheiros (FEBRAE)</i>
Bulgaria	<i>Fédération des Unions Scientifiques et Techniques de Bulgarie (FNTS)</i>
Chile	<i>Instituto de Ingenieros de Chile</i>
China	<i>China Association for Science and Technology (CAST)</i>
Colombia	<i>Sociedad Colombiana de Ingenieros</i>
Cuba	<i>Union de Arquitectos y Ingenieros de la Construccion de Cuba</i>
Cyprus	<i>Cyprus Professional Engineers' Association</i>
Czechia	<i>Cesky Svaz Vedeckotechnických Společnosti (CSVTS)</i>
Ecuador	<i>Sociedad de Ingenieros del Ecuador</i>
Egypt	<i>Egyptian Engineering Association</i>
El Salvador	<i>Asociacion Salvadoreña de Ingenieros y Arquitectos</i>
France	<i>Conseil National des Ingénieurs et Scientifiques de France (CNISF)</i>
Germany	<i>Verein Deutscher Ingenieure (VDI)</i>
Ghana	<i>Ghana Institution of Engineers</i>
Greece	<i>Chambre Technique de Grèce</i>
Hungary	<i>Fédération des Sociétés Scientifiques et Techniques (MTESZ)</i>
India	<i>The Institution of Engineers, India</i>
Indonesia	<i>Peresatuan Insinyur Indonesia</i>
Iraq	<i>The Iraqi Engineers' Union</i>
Ireland	<i>The Institution of Engineers, Ireland</i>
Israel	<i>Association of Engineers and Architects in Israel</i>
Italy	<i>Consiglio Nazionale degli Ingegneri</i>
Japan	<i>Science Council of Japan</i>
Jordan	<i>Jordan Engineers' Association</i>
Kenya	<i>Institution of Engineers</i>
Korea	<i>The Korean Federation of Science and Technology Societies (KOFST)</i>
Kuwait	<i>Kuwait Society of Engineers</i>
Lebanon	<i>Ordre des Ingénieurs et Architectes du Liban</i>
Libya	<i>Libyan Syndicate of Engineers</i>
Malaysia	<i>The Institution of Engineers, Malaysia</i>
Mauritius	<i>The Institution of Engineers, Mauritius</i>
Mexico	<i>Union Mexicana de Asociaciones de Ingenieros (UMAI)</i>
Morocco	<i>Union Nationale des Ingénieurs Marocains</i>
Nepal	<i>Nepal Engineers' Association</i>
New Zealand	<i>The Institution of Professional Engineers</i>
Nigeria	<i>The Nigerian Society of Engineers</i>
Pakistan	<i>Institution of Engineers, Pakistan</i>
Palestine	<i>General Union of Palestinian Engineers</i>
Peru	<i>Sociedad de Ingenieros del Peru</i>
Philippines	<i>Philippine Technological Council</i>
Poland	<i>Naczelna Organizacja Techniczna</i>
Portugal	<i>Ordem dos Engenheiros</i>
Puerto Rico	<i>Colegio de Ingenieros y Agrimensores de Puerto Rico</i>
Romania	<i>General Association of Engineers in Romania (AGIR)</i>
Russia	<i>Union of Scientific and Engineering Associations, Russia (USEA)</i>
Slovakia	<i>Association of Slovak Scientific and Technological Societies (ZSVTS)</i>

Spain	<i>Instituto de la Ingeniería de España</i>
Sri Lanka	<i>The Institution of Engineers, Sri Lanka</i>
Switzerland	<i>Comité National Suisse de FEANI/FMOI</i>
Syria	<i>Order of Syrian Engineers and Architects</i>
Tanzania	<i>The Institution of Engineers, Tanzania</i>
Tunisia	<i>Conseil de l'Ordre des Ingénieurs de Tunisie</i>
Turkey	<i>Union of Chambers of Turkish Engineers and Architects (TMMOB)</i>
Uganda	<i>Uganda Institution of Professional Engineers</i>
UAE	<i>Society of Engineers</i>
USA	<i>American Association of Engineering Societies (AAES)</i>
Uruguay	<i>Asociacion de Ingenieros del Uruguay</i>
Venezuela	<i>Colegio de Ingenieros</i>
Yemen	<i>Syndicate of Yemeni Engineers</i>
Yugoslavia	<i>Union of Engineers and Technicians of Yugoslavia</i>
Zimbabwe	<i>The Zimbabwe Institution of Engineers</i>

Regional Member / Membre Régional

West Indies Council of Caribbean Engineering Organizations

Affiliated Members / Membres Affiliés

Hong Kong (China) *The Hong Kong Institution of Engineers*

Taiwan (China) *Chinese Institute of Engineers*

International Members / Membres Internationaux

Commonwealth Engineers' Council (CEC)

European Federation of National Engineering Associations (FEANI)

Federation of African Organizations of Engineers (FAOE)

Federation of Arab Engineers (FAE)

Federation of Engineering Institutions of Southeast Asia and Pacific (FEISEAP)

Federation of Engineering Institutions of South and Central Asia (FEISCA)

Pan American Federation of Engineering Associations (UPADI)

Regional Council of Co-ordination (RCC)

Union of Scientific and Engineering Associations (USEA)

Associates / Associés

Patron Associate / Associé mécène :

Associates / Associés :

The Arab Contractors (Egypt)

Sinotech Engineering Consultants Ltd (Taiwan, China)

Non-profit Making Associates / Associés à but non lucratif :

Institution of Civil Engineers (UK)

European Council of Civil Engineers (ECCE)

Société Européenne pour la Formation de l'Ingénieur (SEFI)

Latin American Engineering Association for Labour Security (ALAIST)

Federal Council of Engineering, Architecture and Agronomics (CONFEA)

Internat. Gesellschaft für Ingenieurpädagogik (IGIP)

Individual Associates / Associé individuel :

Eng. Md. Shamsul Haque Bhuiyan (Bangladesh)

Eng. Sh. Yogendra Prasad (India)

Dipl. Eng. Hermann Sturm (Germany)



WFEO/FMOI

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

Secrétariat :

Maison de l'UNESCO – 1, rue Miollis – 75015 Paris (France)

Tél. : +33(0)1 45 68 31 92 – Fax : +33(0)1 45 68 31 14 – Mél : pdeboigne@fmoi.org

Site web : <http://www.unesco.org/fmoi>