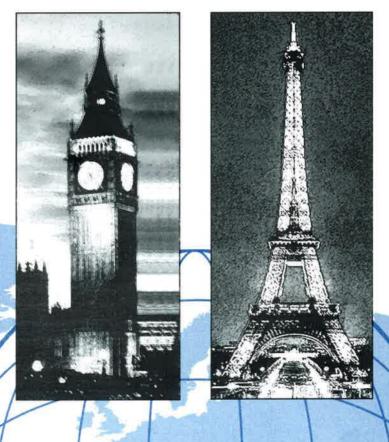


# WORLD FEDERATION OF ENGINEERING ORGANIZATIONS



BIENNIAL REPORT 1995-97



### OFFICERS AND EXECUTIVE COUNCIL MEMBERS

President	C.E. Bauer	(Argentina)
Past President	W.J. Carroll	(USA)
Treasurer	J. Ramon Irisarri	(Spain)
Secretary General	J.C. McKenzie	(UK)
Vice President	I. Akintunde	(Nigeria)
	D.G. Laplante	(Canada)
	J. Roret	(France)
	M. Abdelhamid	(Palestine)
	W.J. Rourke	(Australia)
	Y. Gulyaev	(Russia)
	D. Thom	(New Zealand)
	Tu Shanchen	(China)
Members	H. Hugi	(Switzerland)
	W. M. Sangster	(USA)
	G.P. Lal	(India)
	J. Ramon Irisarri	(Spain)
	L. Romeiro Silva	(Brazil)
	G. Naray-Szabo	(Hungary)
	F. Echeagaray Moreno	(Mexico)
	F. Nishino	(Japan)
	Quian Yi	(China)
	S. Ioakimidis	(Greece)
	R. Duffell	(UK)
	J. Dvorak	(Czeh Republic)

<b>International Members</b>		
	Lee Yee Cheong	[CEC]
	G.A. Radwan	[FAE]
	O. Awoyinfa	[FAOE]
	J. Cullen	[FEANI]
	D. Thom	[FEISEAP]
	M.A. Azad	[FEISCA]
	or I.R. Onta	
	G. Naray-Szabo	[RCC]
	E. Ruiz	[UPADI]
	V. Sitsev	[SNIO]



### WFEO, FROM BUDAPEST TO HONG KONG GENERAL ASSEMBLIES (1995/97)

Biennial Report from WFEO President, Conrado E Bauer

### **Foreword**

When I assumed office as President of WFEO, on 6 October 1995 in Budapest, some of my main purposes were:

- To consolidate the process of renewal and improvement of our organization initiated by the Past President W Carroll, accomplishing and executing the policy and programmes approved by the General Assembly and the Executive Council.
- 2. To communicate better with our Members, promoting their increased involvement and participation in WFEO's affairs.
- 3. To expand the engineering profession and technical activities of WFEO.
- 4. To improve WFEO's presence on the global scene, intensifying our cooperation and relationships with the organizations and agencies of the UN system and with those non-governmental international organizations which are of interest to engineers.

Now, in July 1997, preparing this report for the WFEO XVI General Assembly to be held in Hong Kong next November, I intend to deliver a brief description of facts and aims. More information will be provided by the reports to be submitted to the General Assembly by other WFEO Officers, or is included in my previous "Presidential Reports" No.1 and 2 of June and December 1996 respectively. Minutes of institutional meetings, proceedings of technical seminars and congress, newsletters and other documents also offer different written expressions of the performance of our Federation for the last twenty one months.

### 1. Internal Organization and General Activities

a) Consolidating the efforts developed mainly by President Carroll, Secretary General McKenzie and Vice-President Rourke, during the Budapest General Assembly and subsequent months, WFEO updated, approved and published basic documents such as the Constitution and Rules of Procedure and the first Strategic Plan adopted since our foundation in 1968. The Plan of Action 1995-97 was also completed, it included many programmes to be executed in this period which will be evaluated during our meetings in Hong Kong. This was WFEO's first attempt to organize a complete Plan of Activities. I consider it as a very positive move. We will certainly profit from this experience when preparing the new Plan of Action 1997-99 in order to move forward to a renewed design of proposals and programmes.

b) The first meeting of the Executive Council (7 October 1997) which took place immediately after the Budapest General Assembly, with the new membership decided in the latest election, started with a different organization: the two main working Committees (Engineering Affairs - EAC -, and Finance and Administration - FAC -) formed three "internal commissions" each, all of them chaired by Vice-Presidents or Officers of the Federation. The purpose was (and I hope it will be intensified in the future) to obtain better internal functioning by discriminating among the different areas of interest established by WFEO's Constitution and Plans, and offering to each Member of the Executive council the possibility of being incorporated to any of these "Internal Commissions" and so maintaining a continuous contribution, by using different means of communication, to WFEO structural activities between and beyond the annual formal and personal meeting of the Executive Council.

The booklet issued to communicate the Strategic and Action Plans shows details of this organization. During the last period, the activity developed by the Chairmen of the EAC, Vice-President Rourke, and the FAC, Vice-President Laplant, and the leaders of the "Internal Commissions", was relevant. Other Members of the Executive Council could not develop the potential of their cooperation, these possibilities will surely receive further contributions, which merit special recognition as honorary and voluntary tasks.

It is also worth mentioning the excellent work carried out by two special committees that are very significant for WFEO: the Elections committee, chaired by Dr H Hugi, and the Awards Committee, chaired by Vice-President Tu.

The 1996 Meeting of the Executive Council held in Rio de Janeiro last October, showed the outstanding function of all its very efficient and profitable committees and plenary sessions.

c) The Executive Board met twice during the period under consideration: in March 1996 and in March 1997; both took place in London. As in the case of the Executive Council Members, the Executive Board Members attending the meetings paid their own expenses, thus causing no expenditure on the Federation. Besides the President, Past-President or President-Elect, Secretary General and Treasurer, as it is established by the Constitution, the chairmen of FAC and EAC were also invited to attend the Board Meetings. In March 1996,

we had the last opportunity to count on the always outstanding presence, active participation and wise advice of Hamed Kaddah at WFEO meetings; his death deprives our Federation of one of its highest leaders. He was involved with our institution since its foundation. Dr José Ramón Irisarri, the Deputy Treasurer, took his place and contributes to our decisions with his, intelligent, sensible and dedicated efforts.

- d) The position of Executive Director was created by the latest amendments and updating of the WFEO Constitution. It introduces the paid post of "Chief Executive Officer" to run the Secretariat and manage the Federation activities according to the decisions of the Executive Council and the President. This appointment was delayed in recent years for two main reasons:
- (i) Since 1987, the present Secretary General Dr J McKenzie, with his well-known talent and experience, was and is efficiently covering the post of "Secretary General" and is simultaneously taking the responsibility for the activities corresponding to those of an effective "Executive Director", receiving very little payment and only partially compensated for his full-time working for the Federation, thus reducing WFEO's expenditure.
- (ii) The uncertainty as regards the future permanent location for our Secretariat. This situation has changed due to three reasons: the announcement by Mr McKenzie that he planning to retire after finishing his period as Secretary General in 1999; the decision to move the Secretariat to the UNESCO Headquarters in Paris; and the finding of an outstanding candidate to take on the post of WFEO Executive Director. This last opportunity emerged when FEANI decided to move its offices from Paris to Brussels and its Executive Director Pierre-Edouard de Boigne was not able to leave Paris on a permanent basis. He will therefore be completely free from FEANI activities after the next General Assembly of FEANI to be held in September 1997.

Interviewed by WFEO's representatives, Mr de Boigne has accepted to be the new WFEO Executive Director, under reasonable financial conditions. This decision should be confirmed at our Hong Kong meetings. After having considered many other excellent candidates, Members of the WFEO Executive Board are convinced that the election of Mr de Boigne, who is endowed with a dynamic, young and experienced personality, will be a very positive move for the future development of our Federation.

As it was proposed by the then President Carroll some years ago, the Federation should consider if it is suitable to maintain the post of Secretary General after the appointment of an effective Executive Director.

The Presidential change of 1999 may be the occasion to make a decision in this respect.

e) The Secretariat move to UNESCO Headquarters in Paris was finally agreed upon by the Executive Board last March 1997, after many years of evaluation of different alternatives.

As it is well-known, for many years now, several WFEO governing bodies and Officers have been considering and discussing the best place for the establishment of the Secretariat. Many WFEO Members had already offered very interesting possibilities for this location when, in 1994, the UNESCO Secretary General, Dr Federico Mayor Zaragoza, proposed to the Federation the establishment of our Secretariat, free of charge, at the Headquarters' building of UNESCO, in Paris. Our General Assembly accepted this invitation, but required certain conditions to be achieved; these were mainly related to the quality and cost of functioning of the staff to be taken on in Paris, the supportive attitude of our French National Member and the prospect of future cooperative partnerships with UNESCO. To our Federation, the attraction of this move was, and is, linked to the convenience of being under an international roof, accomplishing a general strategy to expand and emphasize our condition of a world-wide association, strengthening and intensifying our relationships and interactions with UNESCO, with UATI and ICET, with ICSU, with UNEP/IEO and with other governmental and non-governmental international organizations. The new location favours these possibilities.

In addition, UNESCO's invitation to our Federation is understood as an intention of stressing the presence of engineering in its permanent activities, as part of a general UNESCO policy oriented to become deeply involved with the global implementation of Agenda 21 and sustainable development.

Many WFEO personalities have worked hard to obtain support for these intentions, especially Vice-President Jean Roret and Prof. J Michel.

Finally, the Executive Board considered, during last March's meeting in London, that the conditions

established by our General Assembly in Budapest and the decisions agreed upon by the Executive Council in Rio de Janeiro have been "substantially" accomplished, and the functioning of our Secretariat office at UNESCO building will be effective at that location, with a transitional period from September to November, with a parallel reduction in activity in our London office. All this will be carried out under the supervision of Messrs McKenzie and P-E de Boigne.

A new era of expansion and globalisation is beginning for our World Federation.

Once again we should thank everyone who collaborated in arriving at this solution, and we should be particularly grateful to our London staff and the traditional Institutions of Civil and Mechanical Engineers which have so kindly hosted our Secretariat during the ten-year London residence.

f) Traditionally, the annual contributions of the National Members have formed the main income of the Federation. This situation has established a low limit to the budget which is directly managed by our organization; extreme care in the authorization of expenditure is required, reducing the effective action and presence of the Federation in many activities. There is no possibility of paying more than seeding money to support our technical committees; and it is impossible to contribute to the costs of travelling expenses of our Officers to attend meetings.

There is an urgent need to overcome this situation. Many National Members are contributing to maintain the headquarters and some management costs of our Standing Technical committees which also receive grants of other institutions for financing special projects, technical meetings and publications. Many Officers and Committee Chairmen of WFEO spend a substantial part of their time raising funds.

In recent years, after creating the category of "Associate" to enlarge the support base of participation and funding, the situation has been offering new possibilities. I have personally obtained the incorporation of an important industrial company from Argentina which contributes a US\$20,000 yearly payment; many other Associates are needed to expand these possibilities.

Our Secretary General and his staff made every possible effort to maintain the continuity of our activities at a high level in recent years. The problems arising from the uncertainties regarding the permanent location

of the Secretariat will disappear soon. We should hope that renewed efforts will be made to develop financial opportunities to reinforce and enhance the global activities of our Federation.

g) As usual, the next General Assembly will include the biennial elections which renew partially the Members of our Executive Council. The nominations received allow us to be optimistic for the future. From now on, we are welcoming the new President-Elect, a new Treasurer, four Vice-Presidents and five representatives from National Members. We wish them every success in their future work in increasing the most effective and efficient development of WFEO. We heartily thank the Past President, Vice-Presidents and other Executive Council Members who are finishing their terms of office. We wish them all the best in the future and we would like to count on their cooperation with WFEO from new positions.

### 2. Participation, Communication and Cooperation

Engineers and their local, national and international organizations constitute an enormous force for the encouragement of progress and positive changes all over the world. The implementation of sustainable development adds a new dimension to our traditional aptitudes to contribute to the safety and comfort of people, the generation of wealth and the increase of the living standards everywhere.

But we need to strengthen our institutions and their representation to back up their internal and external existence, their influence on the improvement in the quality of engineering practice and their contribution to the planning and decision-making processes.

WFEO offers a unique arena for the meeting of engineers of developed and developing countries to understand better their different problems and their "common future", and to work together to improve their contributions to this shared future by creating better working opportunities and living conditions all over the world.

In order to stimulate internal participation and communication which are essential for the accomplishment of our mission and objectives, I will refer to the international implications of these aims in Section 4 of this report. In this Section 2, I will particularly mention some of the actions carried out and the decisions made during the last twenty one months.

WFEQ is eager to improve its aid to the international engineering community. To this end, it is necessary to clarify its unique role with our own International/Regional and National Members in order to avoid a waste of energy and an overlap of activities, and to be effective in the accomplishment of its tasks.

I have worked from the very beginning of my presidential term to make this situation clear. I invited representatives from our Regional/International Members to a first meeting in Budapest (October 1995), and then to a second one in London (March 1996), obtaining very profitable discussions and responses.

After interpreting these meetings and in search of a further step to coordinate and complement more effectively the engineering organizations' activity, I prepared a first draft of a document which was discussed in a third meeting held in Rio de Janeiro. With the cooperation of Vice-Presidents Rourke and Laplant, the second draft emerging from the discussion was prepared. The final provisional document, accompanied by a questionnaire, was sent to all our Members asking for comments. We are receiving many answers and we are eager to have a broad participation in the debate in order to allow WFEO to set the context of "The Roles of National and Regional/International Members and the World Federation" to be approved in Hong Kong. This document aims at encouraging the search for the best functioning and interaction of our engineering organizations.

In this era of globalisation of communication, professional practice, finance and commerce, and of international technology transfer and sharing, the presence of a world engineering organization seems to be increasingly necessary. Therefore, it should be backed up and led by the participation and commitment of all the national engineering organizations. As a result, the resignation announced by two European National Members of WFEO has filled us with alarm, menacing the core concept of the existence of our World Federation.

Should WFEO be transformed in a World Federation of regional organizations, coordinated and funded by them?

Should WFEO lose the direct contact transmitted in a lively fashion by its National Members?

Should national organizations abandon their world-wide interests?

As President of WFEO, I have visited the leaders of many national organizations and discussed ideas and proposals with them, inviting them to reinforce their participation in WFEO institutional meetings and technical activities. Japan, Italy, Germany, France, the United Kingdom, the United States, Costa Rica, Brazil, Uruguay are among many which have received me after the meetings held in Budapest.

At the same time, WFEO is making great efforts to communicate more effectively with its Members, sending them information and comments while offering the possibility of distributing news and proposals.

Besides the printed and virtual magazines and bulletins prepared by our Standing Technical Committees, the WFEO Newsletter should be increasingly expanded so as to reach a greater number of readers. We have devoted energy and a particular interest to improve WFEO Newsletter, to publish periodic issues, to make the graphics identifiable and to standardize its presentation. Professor Roger Duffell, an outstanding Member of WFEO Executive Council, has accepted to be the honorary Editor of the Newsletter, organizing also the permanent cooperation of a selected group of engineers from different regions. This new status, with the support of the WFEO Secretariat, is showing promising progress. Last March, the first issue of this new era appeared, and the second issue will be printed and distributed next September 1997 on a half-yearly basis which is being complemented by the presidential December and June reports, so maintaining a quarterly communication.

In order to expand these methods with more ambitious possibilities in the future, the last Executive council meeting in Rio de Janeiro has approved a proposal of Prof. Jean Michel to prepare a WFEO Web-site in Internet. This kind of initiative is already being developed by some of our WFEO Committees and other engineering organizations in several countries. To be continually updated and useful, if it is adopted by WFEO, it will require additional financial support, and regular communication with our Secretariat, with our Newsletter Editor, committees and other information suppliers.

The implementation of this WFEO Web-site in Internet as well as the functioning of the "Regional Engineering Centres for Sustainable Development" and the design of a long-range plan to involve, train and mobilize engineers in favour of sustainable development are real challenges for WFEO which will be discussed in the Hong Kong meetings next November.

### 3. Engineering Activities

One of the strongest points of WFEO is the Standing Technical Committees and the action that is being carried out in the technical field. It is a pleasure for me to mention the high personal level of the people in charge of this area and their particular dedication to the international activities they are conducting.

The Chairmen of WFEO STCs:

Messrs D Thom on "Engineering and Environment",

J Michel on "Information and Communication",

M Yadarola on "Education and Training",

and J Poirot on "Technology"

are all distinguished representatives of the World

Engineering. The same should be said about EA Chairman

W Rourke and of J McKenzie who coordinate WFEO

contributions to IDNDR projects. Last but not least,

A Nolasco is the chairman of the "Food Engineering"

Committee.

All These committees and groups are developing very important programmes which will be summarized in the EAC report for Hong Kong.

As I consider them very important for engineers' future development, I would like to mention some of the events scheduled by WFEO Committees for the coming months: the third "Regional Seminar on Communication" to be held in China next November, with the cooperation of UNESCO, UNIDO and CAST; the joint Conference on "Engineering Education and Training for Sustainable Development: Towards Improved Performance" which will take place in Paris next September, sponsored by WFEO, United Nations Environment Programme (UNEP/IEO), World Business Council for Sustainable Development (WBCSD) and the Ecole Nationale de Ponts et Chaussées (ENPC, the first Engineering School, founded in Paris in 1747); and the 4th World Congress on Engineering Education and Training whose theme is "Professional Development for Global Engineering Practice" which will be held in Sydney next October, organized by the Institution of Engineers, Australia with the sponsorship of WFEO and FEISEAP.

### 4. The Position of WFEO's International Representation and Relationships

It is clear that one of the main responsibilities of our Federation is to represent engineering world-wide and to interact and cooperate with other international organizations, governmental and non-governmental, which are of interest to engineers. All this on the one hand has the purpose of transmitting the ideas, realization and proposals of engineers and their institutions globally; and to participate in the international dialogue that orientates policies and influences the decision-making processes.

On the other hand, these relationships are tending to develop among engineering organizations a sensible awareness about international programmes and plans, trying to cooperate with or participate in them in one way or other and to be in condition to transmit them and make them known and to cooperate with their success and usefulness through the contributions of our member organizations.

Our Plan of Action also suggests that some relationships should be expressed and guided by "Memorandums of Understanding". Partnership-building with appropriate funding from special agencies, financial institutions and foundations constitute an objective to be developed within this policy, to prepare and execute plans of engineering interest and support.

We, as WFEO, have a long way to go in the above mentioned direction and we should be very open-minded, self-confident and cooperative so as to obtain significant results from our relationships with governments and international organizations.

Knowing that this is not an easy task, especially in the global process of increasing competitiveness and limited multilateral cooperation in which the World is immersed at present, I began my presidential period trying to establish or reinforce the new and the traditional international relations of our Federation.

Therefore, immediately after leaving Budapest, in October 1995, I visited the Headquarters of UNIDO in Vienna and of the World Business Council for Sustainable Development (WBCSD) in Geneva, discussing future possibilities of cooperation, which nowadays are generating common actions with them; other Officers, Chairmen of WFEO Committees and Vice-Presidents of WFEO have also made contacts and have participated in technical meetings and ceremonies organized by different international groups.

It is not possible to mention in detail all the relations set up with agencies and organizations of the United Nations system such as UNESCO, UIDO, UNEP and its Paris office UNEP/IEO, FAO, UNDP, the World Bank, etc., and with non-governmental organizations grouping particular activities: of engineers (FIDIC and UATI); of scientists (ICSU); and of business leaders (WBSCD and ICC). We also have

relationships with non-profit private foundations and organizations (grouped at the Earth Council); and with Engineering Schools (the French Ecole Nationale des Ponts et Chaussèe and the American MIT and Georgia Tech).

To mention some of the latest special cases of engineering international presences, it is worth commenting on:

- 1) The invitation of the Earth Council to WEPSD and WFEO to be represented at "Rio + 5", a very important meeting held in Rio de Janeiro last March 1997 to evaluate the accomplishment of Agenda 21 five years after Rio '92; the voice of Engineering was expressed by Jim Poirot who presented a comprehensive report entitled "The Engineers' Response to Sustainable Development" by the World Federation of Engineering Organizations.
- 2) The participation of David Thom presenting a substantial document on "The Role of Engineers to Promote Cleaner Production" at the 4th Biannual Revision of UNEP/UNIDO Cleaner Production Programme (Oxford, September 1996).
- 3) The invitation of the World Bank to the President of WFEO to be a presenter on the sessions on "Global Cooperation for Knowledge Dissemination" sponsored by philanthropic foundations, as part of a conference on "Global Knowledge '97" hosted by the World Bank and the Government of Canada with the cooperation of many governments and international agencies to "explore the vital role that knowledge, information and technology will play in broad-based economic growth and social development in the next century". (Toronto, June 1997). For this presentation in a specialized panel, through an invitation from WEPSD, I prepared a "supporting paper" on "Engineers' Cooperation for Knowledge Dissemination to Promote Sustainable Development".

All the above mentioned documents expressed different aspects of the engineering current affairs. Copies are available to everyone interested in reading them.

To enhance, back up and coordinate the engineering representation and engineers' proposals at the international scenarios, WFEO has founded two top global engineering organizations: in 1992 WEPSD, the World Engineering Partnership for Sustainable Development, in association with FIDIC and UATI, with Headquarters in Washington DC; and in 1995: ICET, the International Council for Engineering and Technology, with UATI, to unify world

engineering representation as the NGO "associated" with UNESCO. Both alternatives, WEPSD and ICET, offer WFEO promising partnerships and open up new possibilities of actions and relations. We are trying to encourage and develop their potential.

### Corollary

I invite all WFEO Members and Associates, and everyone interested in engineering activities, to consult and discuss any particular aspect of this report by mail, or personally in Hong Kong.

I thank all who have contributed to WFEO activities for the last two years. The Officers, the Executive Council, the Technical Committees and the Staff Members whose efforts and dedication have allowed WFEO to step forward to a higher level of activity.

On behalf of myself and also interpreting the feelings of the leaders of the host Hong Kong Institution of Engineers and of all persons who carry out activities for WFEO, I invite all WFEO Member organizations, other friendly organizations and each WFEO stakeholder to be with us in Hong Kong during the last week of November 1997. All attendees can participate in many institutional and technical meetings which are of great interest to engineers and to our WFEO General Assembly. We welcome contributions by all participants to assess what we have done since the last General Assembly in Budapest and to propose or discuss policies, strategies and venues for future activities of WFEO.

Buenos Aires, July 1997

Conrado E Bauer, President of WFEO

### REPORT FROM THE PAST-PRESIDENT

by William Carroll

### REPORT BY THE SECRETARY GENERAL

by John C McKenzie 28.05.1997

Basically this is a farewell message to all of my friends in WFEO. My two year term as Past President is now over, and my place on the Executive Council will be taken by the President-Elect.

My 17 years (1980-97) involvement with WFEO have been both challenging and enjoyable. The major benefits are the friendships that a person develops with his professional peers around the world, and I feel greatly honored to have been associated with all of you.

I hope that I have been of some benefit to WFEO. We all realize how difficult it is to remain a successful world-wide umbrella-type engineering organization when there is so much competition for one's volunteer efforts and for financial contributions. I am both discouraged and encouraged about the future of organizations such as ours. I see an increasing attitude among some engineering leaders to look mainly inward to their own organizations. They generally want to know "how will it benefit my organization", rather than how will it benefit the profession as a whole. It can be argued, of course, that this is not all bad, as it is sometimes necessary in a capitalistic system that one needs to be competitive, needs to win[most of the time], and needs to be profitable so that one can stay involved.

I am encouraged, however, by the recognition of many in the profession, and many outside the profession such as social scientists, that our profession is becoming increasingly global, that technology can move around the world much easier, and many barriers are becoming obsolete. An engineering organization such as WFEO, is necessary to help in this globalization, especially in the fields that we are concentrating on - education, environment, technology sharing, and communication. We must believe that WFEO has a unique role to play and it has to be our mandate that the leaders of WFEO convey this to the rest of our profession and to the public, and to garner their support. We have to be proud of being engineers. An outstanding example of being proud of being an engineer is provided by the recent exploration of the planet Mars with the Pathfinder and the small rover called Sojourner. The Mars Program Manager from the NASA Jet Propulsion Laboratory, Donna Shirley, is an engineer and she has made sure that everyone knew that it was an engineer who sent the Pathfinder vehicle on its seven month trip to Mars. She was quoted as saying "These aren't rocket scientists. These are engineers. Scientists learn about nature .....Scientists need information. The engineers build the things that go get them the information"

In leaving WFEO, I am confident that the present and future leadership will carry WFEO to greater success. It will not be easy, and will require the care and concern of all of you.

The period covered by this biennial report commences at the W.F.E.O. Congress and General Assembly held in Budapest, Hungary, at the beginning of October 1995. It therefore covers the last main events of the Presidency of Mr W J Carroll and the first two years of the Presidency of Mr C E Bauer.

The Budapest Congress ran well, although the attendance was not as good as we had all hoped. The General Assembly and the associated meetings were lively and very active and produced a lot of interesting results.

Amongst the most significant results of the General Assembly was the endorsing of the Strategic Plan and Action Plan 1995-1997 which codified the aspirations and intentions of W.F.E.O. Also agreed was a specific resolution which set practical terms for the possible transfer of the W.F.E.O. Secretariat to Paris from London. The very significant achievements of W.F.E.O. in collaboration with U.A.T.I. in the United Nations' I.D.N.D.R. projects were given publicity and wide acclaim. (It reflected well on the whole Membership of W.F.E.O.).

In the Engineering Affairs Committee, the rationalization of the committee structure was executed effectively. The Transfer of Appropriate Technology Committee was renamed the 'Technology Committee' with a new secretariat in Washington D.C., U.S.A. The Value-Added Committee and the Promotion of Engineering Organizations in Developing Countries Committee were dissolved, and the remaining Committees strengthened. The tasks of the Promotion Committee were placed with the Secretariat.

It was a pleasure to have Uruguay readmitted as a Member of W.F.E.O. and Turkey admitted as a new Member. Five former Soviet Union Republics were readmitted as Members in their own right. These were Azerbaidjan, Belarus, Kazakhstan, Moldova and Ukraine.

At the General Assembly, the W.F.E.O. Gold Medal of Engineering Excellence was presented to the representative of Professor Charles Kuen Kao, C.B.E., F.Eng., Vice-Chancellor of the Chinese University of Hong Kong. He is known as 'the Father of Fibre-Optics' and was prevented from attending personally by a typhoon in Hong Kong.

Three Distinguished Service Medals were awarded by the General Assembly. These went to Past President Sadok Ben Jammaa, Treasurer Hamed Kaddah and Past Treasurer Michael Leonard. Messrs Sadok Ben Jamaa and Hamed Kaddah attended the ceremony in person but Mr Michael Leonard was prevented from doing so by ill health.

In a very busy General Assembly, 33 Resolutions were passed. One resolution which failed to carry was concerned with the potential pollution of the environment from nuclear explosion. A heated debate had indicated the desirability of having a Resolution Committee to ensure that all resolutions placed before the General Assembly have been received with adequate notice and are in order; also to allow Delegates to consult their colleagues.

Quite a number of conferences have been held during the period covered by this report. Of particular significance were the International Congress of Engineering Deans and Industry Leaders held in Melbourne, Australia, during 3-6 July 1995 and the World Congress of Engineering Educators and Industry Leaders, held at UNESCO, Paris, France, during 2-5 July 1996. The attendance at the latter numbered 480 and came from 64 countries. 300 selected papers were presented from amongst those submitted. This Congress was sponsored by UNESCO, UNIDO, U.A.T.I. and W.F.E.O. There was also the Conference on Engineering and Construction for Sustainable Development in the 21st Century held in Washington D.C. during 4-8 February 1996. W.F.E.O. was also heavily involved in the 5th UNESCO/NGO Collective Consultation on Higher Education held in Paris during 10-12 February 1997 under the title 'Higher Education: The Consequences of Change for Graduate Employment'.

### **FINANCES**

In 1995 the finances showed larger swings than in the majority of years. The income was US\$ 10,000 down on the budgeted figure and we had US\$ 16,000 of authorized but unbudgeted expenditure. This included such items as the Internal Audit, which cost US\$ 1,143, US\$ 10,922 on a Liaison Office and Officer at UNESCO to try to win UNESCO contracts for W.F.E.O.; and also some underwriting of the World Congress held in July 1996. By strenuous efforts, the administration costs were brought down to US\$ 16,000 below budget. The General Assembly costs were much higher than expected due in part to our having to pay the expenses of several invited attendees. The deficit on the year was US\$ 13,000 which, while regrettable, represented a considerable effort in all the circumstances. Reserves at the end of 1995 were US\$ 38,000.

As a result of the 1995 position, the 1996 finances were tighter than the previous year. Inspite of this, all the Standing Technical Committees were very active. Subscription income was down US\$ 9,500 on 1995 but Associate subscription came to our rescue with a boost to our income of US\$ 25,500 over 1995. A further US\$ 7,600 was spent on the UNESCO Liaison Office. Fortunately this was budgeted in this year. However, our total US\$ 18,500 expenditure on this item did not produce any UNESCO contracts.

Strenuous efforts such as a reduction of staff time were introduced to reduce the administrative expenses. This does not show up in the year-end results because costs such as printing and postage associated with the Executive Council meeting in Rio de Janeiro had been moved back into Administration on instructions from the Internal Auditors. The relative weakness of the US\$ Dollar in this year had a further damping effect. It caused an apparent reduction of income of 7% to 8%. Further underwriting of the Paris UNESCO Congress brought this figure to US\$ 10,000, but the year still finished with a surplus of US\$ 9,254 in place of the US\$ 13,000 deficit in the previous year. The reserves at the close of 1996 were US\$ 42,336.

The resignations early in 1997 of Germany and Finland were received with deep regret. We are in discussions with the Executive Committees of Switzerland and the United Kingdom to forestall similar action in their cases.

### CO-OPERATION WITH UNESCO

Working with the staff of UNESCO has been close, especially for the World Congress in July 1996 and the UNESCO/NGO Consultation on Higher Education in February 1997. Mr Charles Gottschalk, our Liaison Officer for twelve months, did a lot of work on UNESCO programmes. He and the Secretary General discussed many projects in which W.F.E.O. could be of assistance to UNESCO Managers dealing with some projects in great detail. So far no work has been offered to W.F.E.O. The situation is disappointing. Contact with UNESCO has been maintained also by Monsieur Pierre Pécoux and Monsieur Pierre-Edouard de Boigne.

### CO-OPERATION THROUGH I.C.E.T. WITH U.A.T.I.

Nearly all the approaches to UNESCO to seek ways in which W.F.E.O. could assist them in their programmes have been done in collaboration with U.A.T.I. as an I.C.E.T. matter.

Separately, the work on the United Nations' I.D.N.D.R. projects was continued in harmony with U.A.T.I. and close working on the World Engineering Partnership for Sustainable Development was maintained.

Now that the National Research Council of the U.S.A. is no longer giving any funding for W.F.E.O., work on I.D.N.D.R. projects and the U.K. Government has ceased to supply any finance also, this work will be much reduced in the future. The projects are by no means complete and will be slowed down or stopped merely by lack of funds.

### **SECRETARIAT**

At the meeting of the Executive Board held in London on 21-22 March 1997, the conditions for the transfer of the Secretariat from London to Paris were reviewed. These conditions were to have been substantially fulfiled by the end of 1996 but slippage had occurred. The Board, acting on the Resolution of the Executive Council in Rio de Janeiro and under the authority of the General Assembly, decided, on the assurance of Monsieur Jean Roret, that the outstanding conditions had been 'substantially' met. Verbal confirmation had been received that UNESCO would provide the necessary accommodation. This is still in some doubt. Also the French Ministry of Foreign Affairs had indicated that it would provide an annual subvention to cover the higher costs in France. The office of the Mayor of Paris had indicated that it would give a further small subvention.

We now have a Letter of Intent from the French Government that FF 120,000 - or US\$ 19,000 - will be the subvention but no date has been set and we do not know if the payment will be made in one tranche or several. Further, the subvention is a one-off payment and not an annual payment.

Arrangements are being made so that we can hopefully open an office in Paris in July 1997. The London office will complete the first (end June) and the second (August) mailing for the meetings in Hong Kong. It will almost certainly be dispersed before the meetings in Hong Kong and the London office will be finally closed on 31st December 1997. No mail will be dealt with or receivable after 19th December 1997. All administration in Hong Kong will be under the management of the Paris office.

Progress has been made since the report given above was written.

- 1. We were advised at the end of July that the subvention from the Ministry of Foreign Affairs of the French Government had been received at the W.F.E.O. French bank account. There is no news on the subvention from the office of the Mayor of Paris.
- 2. It is likely that W.F.E.O. will have possession of three rooms at UNESCO very shortly. Two of these are the rooms used by the former W.F.E.O. Liaison Officer at UNESCO, Mr Charles M Gottschalk (Chuck). They give less space than is needed but it is a start.
- 3. The first and second mailings for the General Assembly and associated meetings, together with all the associated work, will be carried out by the London Secretariat and will occupy the period until late September 1997.

  The Paris Secretariat will start work on or just after 1st September. All of this makes the budgeting for 1997 more practical.
- 4. David Dacam, Jacqueline Stone and Louise McKenzie have been given notice of redundancy, as required by law, which will expire on 30th September 1997. After that, they may work on a purely consultancy basis, provided they agree, up to late in 1997.
- 5. The offices of the London Secretariat will be closed and cleared between 15th and 20th December 1997. No post, E-Mails, faxes, or telephone calls, will be able to be dealt with after 12th December 1997; and all matters must be referred to the Paris Secretariat thereafter. All financial matters will be Paris based after 30th November 1997.
- 6. The draft Budgets for 1998 and 1999 are being worked on by Messrs Pierre-Edouard de Boigne and John McKenzie for presentation at the Hong Kong Assembly. They need even more careful thought than in previous years due to resignations reducing potential income. The financial restrictions may be considerable.

John C McKenzie, Secretary General, W.F.E.O. 11.08.1997

### INTERNAL AUDIT REPORT

for the period 1 January 1996 to 31 December 1996

In accordance with the decision of the General Assembly and the Executive Council the task of carrying out the Internal Audit was assigned to me. In this I have been assisted by the Chairman of the Finance and Administration Committee Vice President Donald Laplante. We have carried out the audit on the procedure agreed by Eng Hamed Kaddah and Prof Dr Gerhard Becker in the past. This was done on Thursday 20 March 1997, when we visited both the premises of the Auditors in Beaconsfield and the WFEO Secretariat offices in London. The resulting audit was discussed with my colleagues on the Executive Board on 21 March 1997.

Jose Ramon Irisarri

### **WFEO**

Internal Audit Report for the Period 1 January 1996 to 31 December 1996

I received in March the Management Accounts to 31/12/96 and the report of the Auditors, Whittenbury and Co of Beaconsfield for the year 1996, and I have discussed these with my colleague Vice President Donald Laplante.

The sole source of finance of WFEO with the minor exception of a small recovery on IDNDR expenditure from the National Research Council of USA is the subscriptions of Members and Associates. Members subscriptions amounted to US\$176,955 and Associate subscriptions amounted to US\$26,427. This gives a total of US\$203,382. It has to be remembered that 25% of Associate subscriptions may be set against future Members subscriptions. The effective figure then becomes US\$196,775. Thus we have a figure of US\$195,618 in 1994, US\$187,552 in 1995 and US\$196,775 in 1996. This is a small but very welcome improvement brought about by the Associate income. Another satisfactory feature of the year was the small surplus of US\$4,012 in place of the deficit of US\$13,099 in 1995.

Subscriptions from Members in 1996 amounted to US\$176,955 which was US\$9,612 less than in 1995. It was the Associate Programme which rescued WFEO in this year and allowed the favourable outcome.

As requested in the Internal Audit Report last year, all printing, postage and other administrative charges concerned with the Executive Council and associated meetings are placed against the items in administration and have not been charged to the Executive Council. The amount of translation carried out has been cut so that all charges appear in one relevant item. In order to curb the administration charges some reduction of staff time has been achieved. This only had a small result in 1996 but will show an improved result in 1997. The Executive Board members paid their own travel and accommodation charges. This offset about half the expenditure extra to Budget. A further reduction in this figure will arise but too late for inclusion in the figures we are using for the Audit. This is because about FF30,000 of the money used to launch the Paris World Congress on Education in July 1996 will be repaid. The profound financial difficulties of UNIDO have delayed this repayment.

Subject to the approval of the General Assembly in Hong Kong the proposal on limiting the initial distribution of the Summary Records and the Minutes will be put into effect.

In spite of inflation the Salaries and Social Charges figures are nearly \$6000 less than the budget. This is a considerable achievement following on the saving made here in 1995, but it is unlikely that much more can be achieved in this area of expenditure.

I have found that the books held at the WFEO Secretariat and at the Auditors' Office show correct and proper expenditure. They were presented in a way which I could understand and I was able to examine the details of the figures in my checking as I wished. The reserves have improved somewhat at the end of 1996 but are still a long way short of the reserve of six months income which we have set as our goal.

Finally, I wish to record my appreciation of the total cooperation which I received in this Audit from everyone involved.

Jose Ramon Irisarri

Donald Laplante

# REPORT OF THE AUDITORS TO THE MEMBERS OF WORLD FEDERATION OF ENGINEERING ORGANIZATIONS

We have audited the financial statements set out on pages 2 to 6 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 1996 and of its excess of income over expenditure for the year then ended.

Whittenbury & Co., Chartered Accountants, 9 Burkes Parade, Beaconsfield, Bucks, HP9 1NN

Dated: 28th February 1997

# WORLD FEDERATION OF ENGINEERING ORGANIZATIONS BALANCE SHEET AS AT 31 DECEMBER 1996

	NOTE	1996 US\$	1995 US\$
CURRENT ASSETS		•	
Cash at bank and in hand	2	45,396	44,239
Debtors	3	3,513	5,843
		48,909	50,082
CURRENT LIABILITIES			
Creditors	4	6,573	11,758
TOTAL ASSETS LESS CURRE	NT LIABILITIES	42,336	38,324
Financed by:		1	
ACCUMULATED FUND			
Balance at 1 January		38,324	51,423
Surplus/(Deficit) for the year		4,012	(13,099)
		42,336	38,324

## STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER 1996

	NOTE	1996 US\$	1995 US\$
INCOME			
Subscriptions		176,955	186,567
Associate Membership		26,427	985
Interest received		1,163	2,835
Publications		109	-
IDNDR Recovery		9,694	7,435
TOTAL INCOME		214,348	197,822
EXPENDITURE			
General administration	5	104,324	95,807
General activity	6	43,400	56,793
Standing committees	7	47,937	46,000
Promotional activity	8	518	835
IDNDR		14,157	11,486
Total expenditure		210,336	210,921
Surplus/(Deficit) for the year	ear	4,012	(13,099)

### NOTES TO THE FINANCIAL STATEMENTS

### 1. ACCOUNTING POLICIES

### a) Accounting basis

The financial statements have been prepared on the historical cost basis.

The financial statements have been prepared in conformity with generally accepted accounting practice in the United Kingdom, and amounts are shown in US dollars.

### b) Subscriptions

Subscription income comprises membership subscriptions received. Subscriptions due at the year end but not received at the time of preparing the accounts are not accrued for, since subscription billings are not legally binding and WFEO relies on the goodwill of members for payment.

### c) Donations and contributions

Donations and contributions are accounted for on a cash received basis. Donations and contributions relating to the year have been accrued where they have been received at the time of preparing accounts.

### d) Foreign currency translation

Assets and liabilities expressed in currencies other than US dollars have been translated into US dollars at the rate ruling at the year end, and gains and losses thereon are dealt with through the income and expenditure account.

Transactions denominated in currencies other than US dollars have been translated at the rates of exchange ruling at the time of settlement.

### 2. Cash at bank and in hand

	1996 US\$	1995
	US#	US\$
US dollar balances	42,700	41,184
Sterling balance & cash in hand	2,696	3,055
	45,396	44,239

### NOTES TO THE FINANCIAL STATEMENTS

3. Debtors			
	IDNDR Recovery	3,513	
	Prepayments	-	5,843
4. Creditors			
		1996	1995
		US\$	US\$
	Audit fee	3,392	3,538
	Other creditors	1,181	6,220
	Pension provision	2,000	2,000
		6,573	11,758
<b>5 General adminis</b> Expenditure on gener	al administration was allocated as follows:		4.
	Salaries and fees	60,205	59,046
	Employer's social security	3,952	3,371
	Employee's pension	4,000	2,000
	Rent and related charges	10,872	10,550
	Office expenses	6,106	4,415
	Bank charges and interest	1,564	1,128
	Postage, telephone and other	9,804	4,791
	Audit & Accountancy	7,224	7,390
	Exchange losses/(gains)	597	(903)
	Additional translation costs	<del>-</del>	4,019
		104,324	95,807

### NOTES TO THE FINANCIAL STATEMENTS

6. General activi	ty		
Expenditure on gen	eral activity was allocated as follows:		
	Permanent Secretariat	1,428	-
	Newsletter	5,241	4,349
	Secretary General, Panel and other meetings	340	11,804
	Executive Council	10,778	920
	Contingency	1,061	1,178
	General Assembly	1,260	22,483
	UNESCO Liaison Office	7,598	-
		27,706	40,734
Extra to budget app	roved by the Executive Board		
		1996 US\$	1995 US\$
	Computer Equipment	4,384	-
	World Congress	11,310	3,352
	Internal Audit	-	1,143
	UNESCO Liaison Post	-	10,922
	Permanent Secretariat Search	-	642
		43,400	56,793
7. Standing com	mittee expenditure		
	UNESCO NGO	160	
	Energy	100	3,000
	Food Engineering	3,000	3,000
	Engineering and the Environment	14,000	15,000
	The Information and Communication	11,000	10,500
	ICET	1,390	-
	UATI	2,000	_
	Education and Training	11,000	11,500
	Technology	5,387	6,000
	67	47,937	46,000
8. Promotional ac	ctivity		
The Federation made	e the following expenditure in respect of promotion	nal activity:	
	Cost	518	835

### **VISION**

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

### MISSION

- To provide information and leadership to the engineering profession on issues of concern to the public or the profession.
- 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 foster peace and socio-economic security among all countries of the world, through the proper application of technology.
- To facilitate relationships between governments, business and people by contributing an engineering dimension to discussions on policies and investment.

### LONG TERM OBJECTIVES

- Develop through appropriate engineering activities and education, a world-wide understanding and commitment to sustainable development.
- Pursue those programmes and activities within Agenda 21 of the UNCED World Summit that are applicable to engineering.
- Foster and encourage the formation and strengthening of national and international associations of engineers.
- Promote social benefits through cooperation among engineering organizations around the world, and with institutions of science and industry, universities, and other organizations.
- Disseminate engineering information and promote global access to this information.

- Foster the transfer, sharing and assessment of technology.
- Initiate programmes to improve the quality of engineering education and training, and to that end provide assistance for the establishment in all member nations of procedures for the accreditation of engineering courses that provide assurance of the quality of engineering education and training of engineering graduates to meet international standards.
- Develop guidelines to facilitate free trade in engineering services, and regional and international recognition of engineering qualifications.
- Provide for the protection, security and health of the public by developing guidelines for the control of risk and the prevention and reduction of damage due to man-made and natural disasters.
- Sponsor congresses and other technical meetings of significance to the profession, and disseminate their conclusions and recommendations.
- Provide equal opportunity for all to enter the engineering profession, and to pursue their engineering activities freely throughout the world.

Syria Order of Syrian Engineers and Architects Afghanistan Islamic Association of Afghan Architects and Engineers Tanzania Argentina The Institution of Engineers, Tanzania Union Argentina de Asociaciones de Ingenieros Australia Tunisia Union Nationale des Ingenieurs de Tunisie The Institution of Engineers (Australia) Austria **Turkey** Union of Chambers of Turkish Engineers and Architects Osterr Ingenieur und Architekten-Verein Uganda Institution of Professional Engineers The Union of Scientific and Technical Societies Uganda Azerbaidjan of Azerbaidjan Ukraine Union Scientific and Engineering Associations **Bahrain** Bahrain Society of Engineers of Ukraine Bangladesh The Institution of Engineers Bangladesh **UAE** Society of Engineers Union of Scientific and Engineering Associations **Belarus** UK Board for Engineers' Regulation International Committee of Belarus (SEA Union of Belarus) **USA** American Association of Engineering Societies (A.A.E.S.) Uruguay **Bolivia** Sociedad de Ingenieros de Bolivia Asociacion de Ingenieros del Uruguay **Brazil** Febrae Venezuela Colegio de Ingenieros Bulgaria Federation des Organisations Scientifiques Yemen (Peoples' Democratic Republic of) et Techniques de Bulgarie Syndicate of Yemeni Engineers Yugoslavia Canada Canadian Council of Professional Engineers Federation des Ingenieurs et Techniciens de Yugoslavia Zimbabwe Chile Instituto de Ingenieros de Chile The Zimbabwe Institution of Engineers China Association for Science and Technology (C.A.S.T.) China Colombia Sociedad Colombiana de Ingenieros Cuba Union de Arquitectos e Ingenieros de la Construccion de Cuba W F. E. O. REGIONAL MEMBER Cyprus Professional Engineers' Association **Cyprus** Czech Rep. Cesky Svaz Vedecktotechnickych Spolecnosti (C.S.V.T.S.) West Indies Council of Caribbean Engineering Organizations **Ecuador** Sociedad de Ingenieros del Ecuador Egyptian Syndicate of Engineers **Egypt** El Salvador Asociacion Salvadorena de Ingenieros y Arquitechos W.F.E.O. AFFILIATED MEMBERS The Finnish National Committee for W.F.E.O. **Finland** Conseil National des Ingenieurs et Scientifiques **Hong Kong** The Hong Kong Institution of Engineers France **Taiwan** de France (C.N.I.S.F.) Chinese Institute of Engineers Deutscher Verband Technischwissenschaftlicher Vereine (D.V.T.) Germany Ghana Ghana Institution of Engineers Greece Chambre Technique de Grece W.F.E.O. INTERNATIONAL MEMBERS Federation des Societes Scientifiques et Techniques (M.T.E.S.Z.) Hungary India Commonwealth Engineers' Council (C.E.C) The Institution of Engineers, India Peresatuan Insinyur Indonesia European Federation of National Engineering Associations (F.E.A.N.I.) Indonesia Federation of Engineering Institutions of South and Central Assoc. (F.E.I.S.C.A.) The Iraqi Engineers' Union Iraq Association of Engineers and Architects in Israel Federation of Engineering Institutions South East Asia and Pacific (F.E.I.S.E.A.P.) **Israel** Federation of Arab Engineers (F.A.E) Consiglio Nazionale Degli Ingegneri Italy Union Panamericana de Asociaciones de Ingenieros (U.P.A.D.I.) Japan Science Council of Japan Jordan Jordan Engineers' Association Federation of African Organizations of Engineers (F.A.O.E.) Kazakhstan Union of Scientific and Engineering Associations Union of Scientific and Engineering Associations (USEA) (SEA Union of Republic of Kazakhstan) Kenya Institution of Engineers Когеа The Korean Federation of Science and Technology Societies LIST OF WFEO ASSOCIATES (K.O.F.S.T.) PATRON ASSOCIATE Kuwait Kuwait Society of Engineers Lebanon Ordre des Ingenieurs et Architectes du Liban Libya Libyan Syndicate of Engineers Argentina YPF Sociedad Anonima Malaysia The Institution of Engineers, Malaysia **ASSOCIATE Mauritius** The Institution of Engineers, Mauritius Union Mexicana de Asociaciones de Ingenieros (U.M.A.I.) Mexico The Arab Contractors Moldova The Engineers' Association of Moldova **Egypt BES Engineering Corporation** Morocco Union Nationale des Ingenieurs Marocains **Taiwan** Nepal Engineers' Association UK Hyder Consulting Limited Nepal New Zealand The Institution of Professional Engineers Taiwan Ret-Ser Engineering Agency The Nigerian Society of Engineering Sinotech Engineering Consultants Ltd Nigeria Taiwan **Pakistan** Institution of Engineers, Pakistan **Palestine** General Union of Palestinian Engineers NON-PROFIT MAKING ASSOCIATE Sociedad de Ingenieros del Peru Peru **Philippines** Philippine Technological Council **Poland** Taiwan China Engineering Consultants Inc Naczelna Organizacja Techniczna Taiwan Industrial Technology Research Institute **Portugal** Ordem dos Engenheiros Taiwan Provisional Engineering Office of High speed Rail Romania General Association of the Engineers of Romania Russia Union of Scientific and Engineering Associations Russia Taiwan Taiwan Area National Freeway Bureau (U.S.E.A.) South Africa The Society for Professional Engineers Spain Institute de la Ingenieria de Espana

### INDIVIDUAL ASSOCIATE

Slovak Rep.

Sri Lanka

Switzerland

(Z.S.V.T.S.)

Association of Slovak Scientific & Technological Societies

The Institution of Engineers, Sri Lanka

Comite National Suisse de FEANI/FMOI

Dr Galal El Abd Egypt **Taiwan** Mr Tseng Chi Lin Nepal B K Darshan



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