



**INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND FOUNDATION  
ENGINEERING — MINUTES OF THE COUNCIL MEETING HELD IN ASHOK HOTEL,  
NEW DELHI, INDIA**

**SOCIETE INTERNATIONALE DE MECANIQUE DES SOLS ET DE TRAVAUX DE  
FONDATIONS — PROCES-VERBAL DE LA REUNION DU CONSEIL TENUE A  
L'HOTEL ASHOK, NEW DELHI, INDE**

January 4, 1994 0830–1230 hrs  
1400–1800 hrs

**PRESENT:**

Prof N R Morgenstern  
Mr G Donaldson  
Prof K Ishihara  
Prof H G Poulos  
Prof U Smolczyk  
Prof J K Mitchell  
Prof L Décourt  
Prof V A Ilyichev  
Prof M Jamiolkowski  
Dr R H G Parry

President ISSMFE  
Vice-President Africa  
Vice-President Asia  
Vice-President Australasia  
Vice-President Europe  
Vice-President North America  
Vice-President South America  
Board Member  
Board Member  
Secretary General ISSMFE

Prof M K El-Ghamrawy  
Mr M C Ervin  
Mr V Milligan  
Prof L Valenzuela  
Prof V F B de Mello  
Dr E Maranas das Neves  
Dr J Troncoso  
Mr R D Woods  
Dr R K Bhandari  
Prof Masao Satake  
Prof Ilan Juran  
Dr G E Blight  
Mr M Gambin

ISSMFE Vice-President Elect Africa  
ISSMFE Vice-President Elect Australasia  
ISSMFE Vice-President Elect North America  
ISSMFE Vice-President Elect South America  
Past President ISSMFE  
Representative ISRM  
Chairman TC7 Tailings Dams  
Chairman TC10 – Geophysical Site Characterization  
Representative TC11 – Landslides  
Chairman TC13 – Mechanics of Granular Materials  
Chairman TC17 – Ground Improvement  
Chairman TC25 – Tropical and Residual Soils  
Chairman TC27 – Pressuremeter and  
Dilatometer Testing

## APOLOGIES:

Prof B B Broms  
 Prof J Kerisel  
 Prof M Fukuoka  
 Dr Za-Chieh Moh  
 Prof W F van Impe  
 Prof A S Balasubramaniam  
 Prof E Lousberg  
 Mr R Oliveira  
 Mr Z Eisenstein  
 Dr M Cruden  
 Dr H Meissner  
 Prof R Jappelli  
 Prof K Fujita

ISSMFE Immediate Past President  
 ISSMFE Past President  
 ISSMFE Past President  
 ISSMFE Board Member  
 ISSMFE VP Elect Europe  
 ISSMFE VP Elect Asia  
 Secretary PCS  
 Secretary General IAEG  
 Representative ITA  
 Chairman TC11 – Landslides  
 Chairman TC12 – Validation Computer Simulations  
 Chairman TC19 – Preservation of Historic Sites  
 Chairman TC28 – Underground  
 Construction in Soft Ground

Member Society	Voting Member	Non-Voting Member
Argentina	—	
Australia	Mr Max Ervin	Prof Mark Randolph
Austria	Mr L Maertens*	
Bangladesh	—	
Belgium	Mr L Maertens	Mr J de Jaeger
Bolivia	—	
Brazil	Dr Susumu Niyama	Mr Francis Bogossian
Bulgaria	Dr Dimitar Alexiew	
Canada	Mr John L Seychuk	Mr Murty S Devata
Chile	Mr Eugenio Retamal	Mr Issa Kort
China	Prof Can Wen Yang	Prof Xue-Yuan Hou
Colombia	Mr Eugenio Retamal*	M Adolfo Alarcon
Costa Rica	—	
Croatia	Prof U Smolczyk*	
Czech & Slovak Rs	Prof I Vanicek	Dr J Fedá
Denmark	Prof Jørgen Steenfelt	Mr Hans Denver
Ecuador	—	
Egypt	Prof M K El-Ghamrawy	Prof M M Hamza
Estonia	Mr H Rathmayer*	
Finland	Mr H Rathmayer	
France	Mr F Schlosser	Mr M Londez
Germany	—	
Ghana	—	
Greece	Dr Andrew Lord*	
Hungary	Mr Jozsef Mecsi	
Iceland	—	
India	Shri H C Verma	Prof Gopal Ranjan
Indonesia	—	
Iran	Dr Gatmiri	Mr Rezvan
Ireland	Apologies	
Israel	Prof Gdalyah Wiseman	
Italy	Eng S Martinetti	Eng G Baldi
Japan	Prof Koichi Akai	Prof Fumio Tatsuoaka
Kenya	—	
Korea R	Prof Hyung-Shik Chung	Dr Sun-Wan Hong
Latvia	—	
Lithuania	Prof U Smolczyk*	
Mexico	Ing Guillermo Springall	Dr Eulalio J Badillo
Morocco	Mr Ejjaouani	
Netherlands	Ir G W Beetstra	Prof F B J Barends
New Zealand	Mr L D Wesley	
Nigeria	—	
Norway	Mr Tore Valstad	
Pakistan	—	
Paraguay	—	
Peru	—	
Poland	Prof E Dembicki	Prof W Wolski
Portugal	Mr R Correia	

Romania  
Slovenia  
South Africa  
S E Asia  
Spain  
Sudan  
Sweden  
Switzerland  
Syria  
Tunisia  
Turkey  
UK  
USA  
Russia  
Venezuela  
Vietnam  
Yugoslavia  
Zimbabwe

Prof Iacint Manoliu  
Prof Ivan Sovine  
Dr G Blight  
Dr Ooi Teik Aun  
Dr V Escario  
—  
Dr Eskil Sellgren  
Dr K E Suter  
—  
—  
Dr Ergün Togrol  
Dr J A Lord  
Dr Charles C Ladd  
Prof V A Ilyichev\*  
—  
—  
—  
—

Prof M Popescu  
  
Mr P Day  
Dr Chin-Der Ou

Dr Markus Caprez

Dr R J Mair  
Mr Harvey E Wahls

\*denotes Proxy Vote

## INTRODUCTION

1. The President opened the meeting at 8.45 am and welcomed Member Society delegates and invited participants. He reminded the delegates that they had the authority for everything that ISSMFE did and thus they carried the responsibility for the future directions and actions of the society. The Society had moved from a somewhat passive role, concerned mostly with quadrennial International and Regional Conferences, to a much more active and creative, and consequently exciting, role, reflecting the wide diversity of interests embraced by its members. The future Board, which had a guiding role in the Society's affairs, would pay close attention to the discussions at today's meeting.

## QUORUM

2. A roll call at 10.30 am showed 34 voting delegates to be present plus 6 proxy votes. As 60 Member Societies were entitled to vote the requirement under Statute 12F that one-third, that is 20 voting delegates, should be present for general business was met. Statute 12F requires that at least two-thirds of Member Societies entitled to vote should have delegates present for voting on changes of statutes. As proxy votes do not count towards this number, the meeting was not quorate for voting on changes of statutes. Although the number of voting delegates changed slightly during the meeting, the meeting did not become quorate for changing statutes, and Item 9 on the agenda, concerned with an amendment to Statute 12J and the addition of a related by-law 14B3, could not be considered by the meeting.

## MEMBERSHIP

3. The Secretary General presented his report (Appendix 1) confirming that on 30th September 1993 ISSMFE comprised 65 Member Societies representing 16,743 individual members, an increase of five Member Societies, but a decrease of 1322 individual members since the last reported figures to Council on 31st December 1990. In addition to the Member Societies mentioned in his report which had shown an encouraging increase in membership he cited Hungary, which showed an increase from 25 to 84. The Member Societies badly in arrears were Bolivia, Ecuador, Ghana, Kenya, Nigeria.
4. Expressing some concern at the drop in individual membership the President voiced the need to market ISSMFE, and the publicity leaflet to be discussed later was one effort towards this end.
5. Professor Sovinc introduced the new Slovenian Geotechnical Society which had recently become a Member Society of ISSMFE.
6. In reply to a query by Dr Rathmayer whether or not all countries permitted to vote at the meeting had paid their ISSMFE membership for 1993, the Secretary General replied that a small number had not paid, but because of their special circumstances and excellent past records the Board had recommended that they should be allowed to vote. Dr Rathmayer advised that Finland was opposed to this.

## TECHNICAL COMMITTEE ACTIVITY

7. Expressing his satisfaction at the level of activity of ISSMFE Technical Committees during his term of office, the President said that the TC structure was still evolving and the Society was still learning to make full use

of it. On taking office he had sought advice from the Past President, Member Societies, the Board and Council, which had led to the 27 International TCs now working. He had set out terms of reference for each TC, and asked each host Member Society to select a chair and a core of people for each TC, and had then sought names from all Member Societies to make up the membership of the TC. This TC structure had led to 3 or 4 focused meetings each year. Other deliverables included active participation in sessions of the XIII ICSMFE and the publication of several independent reports. These activities and products were summarised in the tabulation included with the Council papers (Appendix 2). The various TCs had reached different stages of maturity and some were exploring new activities, notably TC 17 which was promoting a new journal on Ground Improvement and was setting up an International Technology Transfer Centre in this subject area. It had already obtained substantial UN funding. Over 400 ISSMFE members were involved in TC activities. There were already a number of offers from Member Societies for both existing and new TCs.

8. In addition to the international TCs there were also some 10 Regional Technical Committees in Europe, Asia and North America.
9. In reply to a question by Dr Lord the Secretary General advised that the Secretariat did not have full details of European TCs.
10. The President agreed with Dr Togrol that the membership of TCs should be regenerated from time to time, and that this in fact already occurred with each incoming President.
11. Dr Steenfelt pointed out that only a relatively small number of people in any country could participate in ISSMFE activity and thus duplication in membership of International and Regional TCs should be avoided.
12. Referring to the tabulation, Dr Barends advised that administration reports for TC 16 and TC 18 would be submitted soon. Professor Woods confirmed that TC 10 had prepared an administrative report and, in addition, had produced a publication, which was now available, entitled Geophysical Site Characterisation, consisting of 12 tutorials. Professor Krebs Ovesen reported that the 700 page Proceedings of the Limit State Symposium held in 1993 was available. Professor Troncoso recommended that TC 7 on Tailings Dams should continue with Chile as the host Member Society. Professor Juran suggested that the International Technology Transfer Centre set up by TC 17 might provide an example for ISSMFE to follow in seeking United Nations or other international funding.

## TASK FORCES

13. In introducing this item the President explained that at the outset of his period of office a number of non-technical issues important to ISSMFE had been identified by the Board and himself. He had formed Five Task Forces, made up only of Board members, to look into these issues, namely Communications, Corporate Membership, Publishing, Technology Transfer and Education. He asked one member from each Task Force to describe its work.

## COMMUNICATIONS TF G DONALDSON, H G POULOS

14. Mr Donaldson described the interactions which had taken place with the Asian Geotechnical Engineering Information Center (AGE) which had resulted in proposals to set up:

- (a) a database of databases
- (b) a comprehensive information retrieval system.

It was envisaged that ISRM and IAEG as well as ISSMFE might contribute

to the initiatives.

15. The Board had viewed favourably the setting up of a database of databases, the cost of which would be modest, and this was likely to go ahead.
16. It was, however, felt by the Board that the proposal on Information Retrieval submitted to it at its meeting in Athens on 19th September 1993 could not be recommended to Council, because it needed 2000 subscriber members to be self supporting. A revised proposal requiring only 600 members had now been received and, with some minor clarification and changes, could be submitted to Council by the next Board. Dr Poulos would be visiting Bangkok shortly to discuss with AGE minor clarifications of the document. Some starting finance would be needed from ISSMFE (and possibly ISRM and IAEG), but contributions could also be sought from international funding agencies. All that was required from the present Council meeting was support to proceed with finalising the proposal for submission to the next Council meeting.
17. Explaining that the membership of 600 was envisaged to build over 5 years, Dr Poulos also confirmed that the service would be available to ISSMFE and other Society members. Membership would probably cost about \$50 to \$60 per year which would give beneficial access to the database, as well as other benefits such as a journal 4 times per year. He had tested the present AGE system himself to obtain information on base grouted piles. Within 24 hours of sending his fax he had received 50 references and 25 abstracts at modest cost.
18. The President anticipated that the next Board would be likely to finalise the proposal for the next Council meeting with a budget and implementation plan. He saw that the Council meeting was giving its encouragement to continue with this initiative. He also said the Board felt that ISSMFE News was a suitable means of communicating with members, but it was a frustrating task trying to obtain suitable material for it.

#### **CORPORATE MEMBERSHIP TF M B JAMIOLKOWSKI, N R MORGENSTERN, ZA-CHIEH MOH**

19. Having received encouragement from the 1991 Council meeting held in Florence to proceed with attracting Corporate Membership, the President advised that he had, with the help of Board members, compiled a list of possible Corporate Member Organisations with international profiles. He had sent invitations to between 100 and 200 of these very recently and there had already been some positive responses. The names would be acknowledged in ISSMFE News. Corporate Member funds would be used in non-administrative activities of the Society. Further invitations would be sent out by the new Board.
20. In reply to a question by Dr Lord, the President agreed that members had the right to ask the Secretariat for names of companies which had been approached. Replying to a question by Professor Ladd, he said that the Corporate Member fee was \$400 for one year or \$1600 for 5 years. Professor Togrol felt the fee should be fixed by Council. Some delegates expressed concern at the effect of Corporate Membership on Member Society Corporate and Individual membership. There were also queries with respect to the rights of individuals employed by Corporate Members.
21. In concluding this item the President admitted that this was a sensitive matter, but it was also evolutionary, and he was confident that the International Society, and consequently all its members, would benefit from Corporate membership.

#### **PUBLISHING. TF J K MITCHELL, L DECOURT**

22. Following a brief summary of the Task Force report on publishing

(Appendix 3) by Professor Mitchell, the Chairman put the following motion to the meeting:

"Agreements between ISSMFE Sponsored Conference Organizing Committees and the Publisher of Conference Proceedings shall include a provision that the Publisher will pay a royalty to ISSMFE of 10 per cent of net receipts in excess of the amount required to pay the direct production and handling costs of copies provided to registered Conference delegates. When organizations in addition to ISSMFE are acting as co-sponsors, a mutually acceptable agreement should be negotiated concerning the division of royalties among the participating organizations."

Professor Mitchell also explained that no further action was being called for at this stage on the "Bitech" cost sharing proposal, but that the incoming Board should consider this further. It was being applied in a somewhat different form at the 1st ICEG (where the risk sharing by ISSMFE in fact extended to all aspects of the conference).

23. After some brief discussion, mainly concerned with elucidation of points in the motion, it was carried as follows:

For	24 votes
Against	4 votes
Abstentions	14 votes

#### **TECHNOLOGY TRANSFER TF K ISHIHARA, U SMOLTCHYK**

24. Referring to his report (Appendix 4) Professor Smolczyk said that this represented a start to build up a framework of information on International Donor Agencies, procedures for accessing such funds and examples of funded projects. ISSMFE was instituting a series of information circulars and this information would be presented as Circular No. 1.
25. In discussion Professor Juran said that TC 17 would like to participate in the Technology Transfer programme through its International Technology Transfer Center. Professor Manoliu cited Tempus as a successful programme, through which his own University in Romania had established links with eight Western European Universities.

#### **EDUCATION TF H G POULOS, ASSISTED BY ALL VICE-PRESIDENTS**

26. Professor Poulos advised that a substantial amount of information had been accumulated in three of the four originally targeted areas listed in his report (Appendix 5). These three areas covered model undergraduate curricula, experiments and demonstrations and audio-visual material. As yet no attempt had been made to establish annotated lists of suitable texts, but ISRM had a Commission which had made considerable progress in this area, which included soil mechanics texts. A paper by Professor Poulos in the Proceedings of the XIII ICSMFE summarised the work to date.
27. Anticipating that the new Board would wish to continue with this initiative, Professor Poulos said particular attention might be paid to establishing annotated lists of texts in English and other languages, curricula for post-graduate courses, and computer software. He also suggested that an educational resource centre should be set up as a repository for the material collected.
28. In reply to a question by Professor Steenfelt, Professor Poulos confirmed that the Vice Presidents had approached selected Universities in their regions to obtain material.

## REGIONAL REPORTS BY VICE-PRESIDENTS

29. The six Regional reports (Appendix 6a–6f) were summarised briefly by the Vice-Presidents.
30. Some points in the reports were particularly highlighted. Mr Donaldson welcomed the rejuvenation of the Egyptian Member Society, and their hosting of the next African Regional Conference. Professor Poulos assured the meeting that despite the reduction in membership numbers there was no reduction in enthusiasm or activities in the Australian Geomechanics Society. Professor Smoltczyk advised that Romania had postponed the next Danube European Conference by one year to September 1995. He cited the Czech and Slovak Geotechnical Society as a good example of a Group Member Society and informed the meeting that there was no lack of hosts for future European Young Geotechnical Engineers Conferences. Professor Mitchell advised the meeting that the next Panam Conference would be held in Guadalajara on the revised dates of October 29–November 3, 1995 and the draft of Bulletin No. 1 would be discussed at a meeting of Panam delegates to be held on the next day.
31. In reply to a question by Dr Escario how he obtained the information for his report, Professor Smoltczyk replied by visits and correspondence. Spain had not responded to correspondence and had not sent participants to the Young Geotechnical Engineers Conference. Dr Escario said he had not received a letter from Professor Smoltczyk asking about the activities of the Spanish Society. Assuring the meeting that in fact the Spanish Member Society was very active, Dr Escario cited their holding of a major symposium with 300 participants every 4 years, colloquia with invited lecturers, and two meetings with contractors each year. He said that Spain were doubtful about the usefulness of YGECS.

## PERMANENT COORDINATING SECRETARIAT

32. In the absence of the PCS Secretary from the meeting, the Secretary General presented his own report (Appendix 7) on the PCS meeting in Lisbon on 21st June 1993, which had been prepared for presentation to the Board. After concluding their meeting, the Secretaries General met with the three Presidents, primarily to discuss the possibility of establishing a combined database for the three sister Societies, to include details of individual members, statutes, details of technical committees/commissions, publications etc which could be accessed as desired by each of the three International Societies and their Member Societies. The combined meeting agreed that this possibility should be pursued.

## AMENDMENT TO STATUTE 12J AND ADDITION OF BY-LAW 14B.3

33. The President explained that this item had been included in the Agenda for the meeting because voting at the 1991 Council Meeting in Florence on the venue of the 1997 XIV ICSMFE had resulted in a tie. He had resolved this by tossing a coin. The Board felt the geographical location of the 1991 Council Meeting might have influenced which Member Societies were able to have delegates present in the meeting and participating in the vote and that a postal vote would be preferable. Consequently, two motions to effect this by amending Statute 12J and adding a By-law 14.B.3 had been formulated by the Board and put on the agenda for this Council Meeting. In the event however, despite deferring this item until later in the meeting, a quorum of two-thirds of Member Societies entitled to vote was not met and this item was abandoned. (Note: Proxy votes do not count in establishing quorum).

## REGIONAL VICE-PRESIDENTS 1994–7

34. Elected ISSMFE Vice-Presidents for the period 1994–7 were announced by the President:

Africa	N. K El Ghamrawy
Asia	A S Balasubramaniam
Australasia	M C Ervin
Europe	W van Impe
North America	V Milligan
South America	L A P Valenzuela

The announcement received acclamation from the meeting.

## REPORT ON XIV ICSMFE, HAMBURG 1997

35. A report prepared by the German Conference Organising Committee (Appendix 8) was presented to the meeting by Professor U. Smoltczyk, confirming that planning for the XIV ICSMFE to be held in Hamburg 6–12 September 1997 was well in hand.

## ELECTION OF ISSMFE PRESIDENT 1994–7

36. A secret ballot to elect the ISSMFE President for the period 1994–7, taken immediately after lunch, gave the following result.

K Ishihara	7 votes
M B Jamiolkowski	34 votes
S Prakash	1 vote

As Professor Jamiolkowski had a majority on this first vote he was declared elected. This was greeted with acclamation by the meeting.

## VENUE FOR 1995 ISSMFE BOARD AND COUNCIL MEETING

37. Invitations were received from the Organising Committees of all four ISSMFE Regional Conferences to be held in 1995, to host the 1995 Board and Council Meetings. It was announced that voting would be by secret ballot. If on the first ballot there was no overall majority for any venue the venue with the lowest number of votes would be deleted and a second ballot taken. This would be repeated until one venue had an overall majority. The result of the ballots was as follows:

Venue	Ballot		
	1	2	3
Cairo – XI African Regional Conference 11–15 December	15	17	21
Copenhagen – 11th European Regional Conference 28 May–1 June	15	19	21
Guadalajara – 10th Panam Conference 30 October–4 November	7	6	
Beijing 10th Asian Regional Conference 29 August–2 September	6		

As this resulted in a tied vote, the Chairman consulted with the representatives from the Organising Committees for the Cairo and Copenhagen conferences, Professor Steenfelt and Professor El Ghamrawy respectively,

which resulted in an offer by Professor Steenfelt to withdraw the invitation to hold the meetings in Copenhagen in favour of Cairo. Announcing this to the meeting, the Chairman thanked the Danish Organising Committee for their generosity and announced Cairo as the venue for the 1995 Board and Council Meetings, to be held immediately before the XI African Regional Conference. This announcement was received with acclamation.

## REPORT ON XIII ICSMFE, NEW DELHI 1994

38. The Secretary General of the Indian Organising Committee, Dr S Gulhati, reported that everything was in place for the holding of the XIII ICSMFE. Up to a few days before 700 delegates had registered and more registrations were still being received.

## XV ICSMFE 2001

39. Brief statements of intent offering to host the XV ICSMFE to be held in 2001 were made on behalf of Osaka (Japan), Perth (Australia) and Turkey. Observing that it was encouraging that three Member Societies were already offering to host the XV ICSMFE, the President confirmed that other Member Societies could still offer to host the conference if they wished. The venue would be decided by a vote taken at the next Council meeting to be held in Cairo in 1995.

## 1ST INTERNATIONAL CONGRESS ON ENVIRONMENTAL GEOTECHNICS (1ST ICEG) EDMONTON 11-15 JULY 1994

40. The President emphasised the special nature of the 1st ICEG, both in respect to the importance of the subject matter and the equal sharing of responsibility by the Canadian Geotechnical Society and ISSMFE, through TC5 on Environmental Control and TC7 on Tailings Dams. It was also necessarily a fast track operation. The second progress report recently submitted to the Steering Committee showed planning to be well on track. Most speakers had been selected, including an address on policy matters by the Vice Director of Environment for the World Bank. About 100 to 125 of the submitted papers would be selected, in addition to invited papers. Expressions of interest in attending had been received from 1300 potential delegates from 50 countries. Bulletin No. 2, containing the registration forms, would be distributed before 30 January. The registration fee would be CDN \$700 for early registrants. Bitech would publish the Proceedings and would market post-conference sales in a joint arrangement with Thomas Telford Limited.
41. In reply to a comment by Professor Jamiolkowski that a Second Congress should be held at an early date to consolidate the series, the President said he thought the new Board should combine TC5 and TC7 into one Technical Committee with a suitable host Member Society and Chairman charged with the task of organising the 2nd ICEG, possibly in two years time. There was also some discussion on the relationship between this Congress and sessions on environmental topics at International and Regional Conferences. The latter were seen by Professor Jamiolkowski as being more specific in topic. Finally the President emphasised that the broad concern of ISSMFE should be with the geotechnics of waste management.

## INTERNATIONAL AFFILIATIONS

42. In stressing that one of his main objectives on becoming President of ISSMFE was to regularise the position of ISSMFE with respect to the international community of science and technical organisations, Dr

Morgenstern said that this had been achieved by ISSMFE being granted Affiliated Membership of the International Union of Geological Sciences (IUGS) and by ISSMFE rejoining the International Union of Technical Associations (UATI). IUGS was a member of the International Council of Scientific Unions which was recognised by the United Nations. UATI was also recognised by the UN. It was up to ISSMFE now to make use of these linkages.

43. Summarising his report on this item (Appendix 9) the Secretary General emphasised in particular the proposal that ISSMFE had put to UATI to initiate a Civil Engineering Library Distribution Scheme to developing countries. It was proposed that ISSMFE could take a lead role in this in view of its experience with the Model Library scheme. This proposal had been received favourably in principle by the UATI and discussions were proceeding on how the scheme could be implemented.

## INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION (IDNDR)

44. The Secretary General said there appeared to be very little geotechnical activity which had been generated by the International Decade. An IDNDR World Conference to be held in Yokohama 23-27 May 1994 appeared to have little geotechnical content. ISSMFE TC4 had produced a manual on Seismic Zoning Methodologies which would be useful in implementing IDNDR earthquake-hazard mitigation programmes. TC11 participated in a UNESCO Working Party which had produced a Multilingual Landslide Glossary, although this was not specifically an IDNDR initiative. In addition, a proposal for landslide hazard mitigation had been forwarded to the ICSU Technical Committee for IDNDR, through IUGS. A letter from the Secretary General to all Member Societies, dated 28 May 1993, requested information on IDNDR sponsored geotechnical activities in their countries indicated many activities related to the aims of IDNDR, but not generated by IDNDR. The joint WFEU/UATI Task Committee for IDNDR had delegated responsibility for one of its five allocated projects, that on "Megacities", to the Institution of Civil Engineers in London. Geotechnical aspects will be included in this study. Some geotechnical contributions had been made to an IDNDR Conference on Natural Disasters - Protecting Vulnerable Communities held in London in October 1993 and sponsored by the Institution of Civil Engineers, The Royal Society and The Royal Academy of Engineering.

## 1993 ISSMFE LIST OF MEMBERS

45. The Secretary General confirmed that 4500 copies of the 1993 ISSMFE list of members had been printed by Balkema and distributed in bulk to Member Societies, each receiving a number equal to about 20% of their membership.
46. A number of criticisms of the List were made by Mr Rathmayer, who observed that individual Member Societies had interpreted the rules differently and some essential information had not been included. He thought all entries should be in the English language only.

## MODEL LIBRARY

47. Reminding the meeting that the Model Library scheme had been initiated by his predecessor Dr Broms, the President asked the Secretary General to review the present position. In response the Secretary General confirmed that 24 sets of UK collected books had now been distributed, and all recipients had also received, through Professor Holtz of the University of Washington, a copy of Taylor, Fundamentals of Soil Mechanics; Holtz and Kovacs, An Introduction to Geotechnical Engineering; and the Boston

Society of Civil Engineers Contributions to Soil Mechanics 1925–40, 1941–53, 1954–62. Sets of Spanish books, offered by the Spanish Member Society through Dr Escario, had been sent to each of the South American Member Societies. Dr I. J. Nuyens, Chairman of the Belgian Member Society had submitted a suggested list of French language books for the Model Library scheme. This list had been circulated to French speaking Member Societies asking if they wished to take any action on this.

48. Mr Gambin advised that the Comité Français de la Mécanique des Sols had prepared a proposed list of books (Appendix 10) and circulated this to the Member Societies of Belgium, Canada and Switzerland to obtain their agreement. The agreed list, together with a budget for distribution to recipients in countries such as Morocco, Tunisia, Egypt, Romania, Algeria and Iran, would shortly be submitted to ISSMFE for its approval to proceed with this enterprise. Mr Gambin also said that a newsletter in French was planned for distribution to French speaking Member Societies – he would keep the President and Secretary General informed of progress on this. Finally Mr Gambin asked for a list of the Spanish books which had been sent to the South American Societies.
49. The President confirmed that the list of Spanish books would be included with the minutes of the meeting (Appendix 11). He also said that the Board had recommended that there should be a pause with respect to further implementation or extension of the Model Library Scheme.

## ISSMFE NEWS

50. After an introduction by the President, emphasising the importance of ISSMFE News in maintaining communication with members, the Secretary General summarised his report (Appendix 12), drawing particular attention to the need for full cooperation from Member Societies to provide items for inclusion in the News. He had written twice to all Member Societies asking them to each appoint a correspondent to send items to the Secretariat for inclusion in ISSMFE News. The response to date had been rather poor, but he intended to persist with this. He highlighted the article on the Tower of Pisa, in the May 1993 issue, as an excellent example of the type of article which could be obtained by direct request.

## SLIDES AND VIDEOS

51. The Secretary General reported that 42 sets of Expansive Soils Slides (40 slides per set collected by TC6) had been sold by the Secretariat at GBP 30 + GBP 3 for post and packing, and 9 sets of Offshore Geotechnical Engineering Slides (35 slides per set) collected by TC14, at GBP 27 + GBP 3. The Japanese Society for Soil Mechanics and Foundation Engineering had generously donated to ISSMFE 40 sets of slides (30 slides per set) on Soil Improvement, with particular reference to the construction of Kansai Airport. These were being sold by the Secretariat at GBP 27 + GBP 4. A set of 28 slides of cartoons prepared by TC11, illustrating the Multilingual Landslide Glossary, had just been received by the Secretariat and further slides showing examples of the various types of landslides were being collected. Professor Jamiolkowski had also advised him that he had collected a set of 28 slides on the Pisa Tower, together with full descriptions, which he would be forwarding to the Secretariat shortly.
52. Revenue from the Ralph Peck videos sold up to 31 December 1992 had totalled CND 15,088, of which CND 3923 had accrued to ISSMFE. This compared with an outlay of US\$ 8000 by ISSMFE. No further copies of these videos had been sold in 1993, and a proposal by Bitech to reduce the price of each video to CND\$ 195 was supported by the Board. Despite the small number of Peck videos sold, Bitech was proposing to go ahead with making a video with Dr Evert Hoek on "Acceptable and Practical Design in Rock Engineering". The present Board had recommended that partici-

pation by ISSMFE in producing this video should be considered by the incoming Board. It was anticipated that the cost of this video would be considerably less than the Peck videos, as Dr Hoek was resident in Vancouver. The required investment from ISSMFE would be US\$ 4000.

53. Mr Gambin advised that TC27 had nearly finalised a collection of 36 slides on Pressuremeter Testing, with descriptions in English and French, which would shortly be sent to the Secretariat.

## MERCER LECTURE

54. It was confirmed by the Secretary General that the 1994 Mercer Lecturer, chosen by ISSMFE, IGS and Netlon, was Professor J. P. Gourc of the University of Grenoble, France. His first delivery of the lecture, entitled "Geosynthetics and the Environment" would be on Sunday 9th January as part of the programme of the XIII ICSMFE in New Delhi. Other venues for the lecture were likely to be at a Geosynthetics Conference at Drexel University, Philadelphia in December and at a Polytechnic Exhibition in Lyon in France in November.

## PUBLICITY LEAFLET

55. Drawing the attention of the meeting to the publicity leaflet prepared by the Secretariat under the guidance of the Board, the President said its purpose was to demonstrate to geotechnical engineers worldwide why they should be members of ISSMFE. The Secretary General confirmed that the leaflet would be updated by including the name of the new President and then distributed to Member Societies, each receiving a number equal to about 1.5 times their ISSMFE membership, unless otherwise requested.

## ISSMFE ACCOUNTS FOR 1991, 1992

56. Reviewing his report on the ISSMFE accounts for 1991, 1992 (Appendix 13) the Secretary General said that substantial surpluses in each of the two years had been achieved mainly because of higher interest rates than expected on investments, and lower than budgeted expenditure on emoluments, travel and office costs, and no expenditure on YGECs or videos. The audited accounts for 1993 would not be available for three of four months; these accounts would show a surplus, but smaller than in 1991 and 1992.
57. In reply to a question by Professor Togrol, the Secretary General said that the big difference in actual and budgeted corporation tax arose because interest rates in 1991 and 1992 had been much higher than expected. ISSMFE paid corporation tax at the rate of 25% on interest earned.
58. Acceptance of the accounts was proposed by Mr Seychuk, seconded by Professor Martinetti and carried unanimously.

## ISSMFE BUDGET

59. The ISSMFE Budget for 1993–7 (Appendix 14), prepared by the Finance and Budget Committee consisting of Professor Jamiolkowski, Dr Smolczyk and the Secretary General, was presented by Professor Jamiolkowski, who explained that it had been divided into an Ordinary Budget and Extraordinary Budget, the former embodying receipts and expenditures concerned with the administration of the Society and the latter embodying receipts and expenditures associated with all other activities. Receipts in the Ordinary Budget came from Member Society subscriptions and interest on investments, and expenditures covered staff

emoluments, travel and office expenses. Receipts in the Extraordinary Budget included conference income, corporate member subscriptions and sales, while expenditures covered items such as conference support, model library, ISSMFE News, UATI subscription, production and distribution of sale items and the Kevin Nash gold Medal. He described it as an essentially conservative budget and despite some overall fall in accumulated surplus up to 1997, he foresaw no need to increase Member Society subscriptions. In fact some slight increase in Member Society income was anticipated arising from increased membership. It was assumed that interest rates would stabilise at about 5%.

60. In drawing up the budget a conservative approach had been adopted, assuming receipts towards the lower limit of possible amounts and expenditures towards the upper limit. This had resulted in a budgeted surplus in 1993 on the Ordinary Budget of GBP 2560, declining to a deficit in 1997 of GBP 10,300. On the other hand, in the Extraordinary Budget, while a deficit of GBP 20,500 was anticipated in 1993, thereafter a surplus was anticipated each year, rising to GBP 10,600 in 1997. Overall, the accumulated consolidated surplus declined from GBP 253160 at the end of 1992 to GBP 209820. Emphasising again the conservative nature of this budget., Professor Jamiolkowski expressed the view that this decline should not cause any concern as the accumulated surplus in 1997 still amounted to 2.5 times the annual income from Member Society subscriptions, which was high for a learned society.
61. The President confirmed that he thought it was, quite rightly, a conservative budget. The present accumulated surplus, more than 3 times the annual income from Member Society subscriptions, was high. However he saw the need to seek additional sources of revenue to fund expanding activities.
62. Dr Rathmayer said he was pleased to see conference surcharges in the Extraordinary Budget and asked if revenue from Regional Conferences was included. Professor Jamiolkowski replied that only revenue from the XIII ICSMFE, 1st ICEG and XIV ICSMFE was included in this budget. Dr Rathmayer asked if this conformed with the resolution of the 1983 Council Meeting and the Secretary General assured him that the 1985 resolution specifically excluded any revenue from Regional Conferences accruing to ISSMFE.
63. In reply to Dr Lord, who asked if the additional activities would increase the work of the Secretariat, the President said he envisaged no expansion of the Secretariat in the next four years, but sometime after that some expansion may be necessary.
64. There was unanimous acceptance of the budget by the meeting.

## CLOSING REMARKS

65. Professor Steenfelt proposed a vote of thanks to the President for his conduct of the 1991 and 1994 Council Meetings, to which the meeting responded enthusiastically. He also urged the President-elect and Secretary General to encourage the use of overheads to summarise presentations to Council, as a service to the many delegates for whom English was not their mother tongue.
66. The President thanked the Secretary General and Mrs Cobb for making the arrangements for the Council Meeting and he also expressed his appreciation to the Indian Geotechnical Society for the arrangements they had made to ensure a successful meeting. Thanking the delegates for their attendance he then closed the meeting.

## Appendix 1

### MEMBERSHIP OF ISSMFE

#### Report by Secretary General

### MEMBERSHIP NUMBERS

Membership numbers on September 30, 1993 are given below, together with corresponding figures on December 31, 1990, reported to the Council Meeting in Florence on May 26, 1991.

	Member Societies	Individual Members
December 31, 1990	60	18065
September 30, 1993	65	16743

Thus, there has been a drop in individual membership of 1322 since December 1990, mainly as a result of a drop from 4730 to 3400 in USA membership. Other countries to show significant drops are Australia (500/420), Canada (1088/969) and Italy (660/488). Member Societies showing a significant increase in membership include Japan (1013/1142), Korea R (24/84) and UK (650/963). The increase in the number of Member Societies reflects the acceptance into membership of the new Societies of Estonia, Lithuania, Romania, Croatia and Slovenia. The old USSR Society is now replaced by the Russian Member Society.

### MEMBER SOCIETIES BADLY IN ARREARS

Member Societies which on September 30, 1993, had not paid their ISSMFE membership subscriptions for 3 years or more are listed below:

Member Societies	Last Payment
Bolivia	1985
Costa Rica	1989
Ecuador	No payment since reinstatement in 1990
Ghana	1990
Israel	1990
Kenya	1988
Nigeria	1989

### VOTING RIGHTS AT JAN 4, 1994, COUNCIL MEETING

Statute 4.1 states:

"A Member Society which has failed to pay its annual subscription and other dues within the prescribed period shall automatically cease to receive the benefits of membership of the International Society and its membership shall be deemed to be suspended."

Bye-law 4H.1 states:

"Subscriptions are due annually in advance on 1st January each year and must be paid within nine months of that date."

Thus, voting rights at the Council Meeting on January 4, 1994 will be accorded only to those Member Societies which are fully paid up to and including 1993, unless otherwise granted voting rights by the meeting. The President may request such rights for a small number of countries which have recently experienced great upheavals, both politically and economically.

**ISSMFE MEMBERSHIP 30 SEPTEMBER 1993**

Societies	Members	Africa	Asia	Australasia	Europe	N. America	S. S. America
Argentina	93						93
Australia	420			420			
Austria	74				74		
Bangladesh	55		55				
Belgium	62				62		
Bolivia	13						13
Brazil	272						272
Bulgaria	92				92		
Canada	969					969	
Chile	35						35
China	106		106				
Colombia	30						30
Costa Rica	58						58
Croatia	43				43		
Czech Republic	43				43		
Denmark	275				275		
Ecuador	57						57
Egypt	20	20					
Estonia	30				30		
Finland	350				350		
France	746				746		
Germany	1345				1345		
Ghana	33	33					
Greece	139				139		
Hungary	25				25		
Iceland	28				28		
India	430		430				
Indonesia	70		70				
Iran	37		37				
Ireland	73				73		
Israel	74		74				
Italy	488				488		
Japan	1142		1142				
Kenya	21	21					
Korean R	84		84				
Lithuania	40				40		
Mexico	463					463	
Morocco	12	12					
Netherlands	325				325		
New Zealand	240			240			
Nigeria	58	58					
Norway	335				335		
Pakistan	80		80				
Paraguay	12						12
Peru	25						25
Poland	128				128		
Portugal	133				133		
Romania	27				27		
Slovenia	31				31		
South Africa	660	660					
S. E. Asia	330		330				
Spain	230				230		
Sudan	25	25					
Sweden	517				517		
Switzerland	264				264		
Syria	12		12				
Tunisia	30	30					
Turkey	57				57		
UK	963				963		
USA	3400					3400	
Russia	356				356		
Venezuela	37						37
Vietnam	18		18				
Yugoslavia							
Zimbabwe	103	103					
Total	16743	962	2438	660	7219	4832	632

## Appendix 2

### Summary of Technical Committee Activity 1989–93

- TC1 Instrumentation, Telemetry and Data Processing. *Host Member Society: Norway / Chairman: E Di Biagio*. No Activity reported.
- TC2 Centrifuge Testing. USA / Hon-Yim Ko. Centrifuge '91 Conference, Boulder USA, June 1991. Published Proceedings. Planning Centrifuge '94 Singapore, September 1994.
- TC3 Arid Soils. Russia / V Petrukhin. 1st International Symposium on Engineering Characteristics of Arid Soils, London, July 1993. Publ. Proc.
- TC4 Earthquake Geotechnical Engineering. Japan / K Ishihara. Workshop on Seismic Zoning, Lisbon, July 1992. Publ. Proc. Collected volume of papers: "Performance of Ground and Soil Structures during Earthquakes".
- TC5 Environmental Control. USA / J Nelson. Planning 1st ICEG.
- TC6 Expansive Soils. Canada / D Fredlund. 7th Int. Conf. of Expansive Soils, Dallas, August 1992. Publ. Proc. Slide set collected.
- TC7 Tailings Dams. Chile / J Troncoso. Planning 1st ICEG. One-day Seminar at IX Panam Conference, Viña del Mar 1991. Publ. Proc. 1992.
- TC8 Frost. Finland / E. Slunga. 2nd International Symposium on Frost, Anchorage, June/July 1993. Publ. Proc.
- TC9 Geotextiles and Geosynthetics. UK / A McGown. Mercer Lecture. Publ. Vol. of Case Histories.
- TC10 Geophysical Site Characterisation. USA / R Woods. Publ. Vol. of Selected Papers.
- TC11 Landslides. Canada / D Cruden. 6th Int. Symp. on Landslides, Christchurch NZ, Feb 1992. 7th Int. Symp. planned Trondheim, June 1996. UNESCO Working Party – World Landslide Inventory. Publ. Multilingual Landslide Glossary. Collected slide set.
- TC12 Validation of Computer Simulations. Germany / H. Meissner. No activity reported.
- TC13 Mechanics of Granular Materials. Japan / M. Satake. Tech. Rpt. for XIII ICSMFE.
- TC14 Offshore Geotechnical Engineering. USA / D. Murff. Collaboration on 4th Int. Stress Wave Conf., The Hague, September 1992. Slide set collected. Tech. Rpt. for XII ICSMFE.
- TC15 Peat. Russia / P. Konavalov. Workshop, Delft, June 1993. Publ. "Advances in Understanding and Modelling the Mechanical Behaviour of Peat".
- TC16 Penetration Testing. Netherlands / W. Heijnen. Liaison with CEN and ISO established. Workshop in Piezocone planned, late 1994.
- TC17 Ground Improvement, Reinforcement and Grouting. USA / I. Juran and J. Walsh. Setting up International Centre for Technology Transfer – Ground Improvement Geo-Systems. Developing International Knowledge Database. Promoting new Journal on Ground Improvement (Publ. by Thomas Telford). Planning Symposium, Japan 1996.

- TC18 Pile Driving. Netherlands / A van Weele. Collaboration on 4th Int. Stress Wave Conf., The Hague, September 1992.
- TC19 Preservation of Historic Sites. Italy / R Jappelli. Spec. Publ. on Italian Historic Sites 1991. Int. Rpt. with bibliography for XIII ICSMFE.
- TC20 Professional Practice. UK / P Green. Publ. Vol. of Country Reports.
- TC22 Indurated Soils and Soft Rocks. Japan / K Akai. Collaboration on Int. Symp. on Hard Soils–Soft Rocks, Athens, September 1993. Preparing Rpt. on Testing Methods.
- TC23 Limit State Design in Geotechnical Engineering. Denmark / K Mortensen and N Krebs Ovesen. Spec. Symp. on Limit State Design, Copenhagen, May 1993. Publ. Proc. Liaison with Eurocode 7.
- TC24 Soil Sampling. Italy / M B Jamiolkowski. Three National Reports presented at XIII ICSMFE.
- TC25 Tropical and Residual Soils. South Africa / G Blight. 3rd ICOTRS at 10th African Regional Conference, Lesotho, September 1991. Publ. Proc. Design Guidelines in preparation.
- TC26 Calcareous Sediments. Australia / R Jewell. No activity reported.
- TC27 Pressuremeter and Dilatometer. France / M Gambin. Seminar at LNEC, Lisbon, May 1992. State-of-the-Art Rpt. prepared. Set of slides collected.
- TC28 Underground Construction in Soft Ground. Japan / K Fujita. One-day Int. Symp., New Delhi, January 1994. Publ. Proc.

## Appendix 3

### REPORT TO COUNCIL OF THE TASK FORCE ON PUBLISHING (J K Mitchell and L Décourt)

October 15, 1993

### INTRODUCTION AND BACKGROUND

The Task Force on Publishing was appointed by President Morgenstern in August 1989 to study possibilities for the ISSMFE to undertake its own publishing activities in cooperation with a suitable publishing company that would be responsible for publication, management, production, and marketing. The motivation was primarily financial, so that increased revenues would be available for support of ISSMFE activities, especially those in our less developed member countries. Other advantages that might accrue include improved coordination and quality control of the diverse publications of the Society, expanded publications output, improved marketing, and better technology transfer among members. Undertaking such an activity would require a very substantial commitment of time, skills, and resources by some members of ISSMFE. With these pros and cons in mind, and at the request of the President and the Board at its meeting in Taipei in April 1990, proposals were solicited from five publishing companies: ASCE, New York; Balkema, Rotterdam; BiTech Publishers, Vancouver; Ernst & Sohn, Berlin; and Thomas Telford, London. The proposers were asked to consider both royalty and co-publishing arrangements. The results of these solicitations were summarized and presented to the Council at its meeting on 26 May 1991 in Florence.

Council was reminded also that in 1983 the ISSMFE Executive Committee had approved a resolution that a portion of revenues from sales of ICSMFE

Conference Proceedings and Technical Committee reports should accrue to ISSMFE.

Considerable discussion ensued at the Council meeting, but no clear consensus emerged on whether to establish a formal publishing agreement with one of the proposers. The President indicated that the Board would consider the matter further with the view to preparing a suitable proposal for consideration by the Council at its meeting in January 1994. It was also agreed in Florence that three (Balkema, BiTech, and Telford) of the five publishers who had submitted proposals be requested to submit a second round proposal to undertake ISSMFE publishing on a royalty basis.

Rather detailed responses were received from BiTech and Telford in which somewhat different bases for pricing publications were set forth. Telford proposed to supply copies of proceedings for conference registrants at a low cost and pay ISSMFE royalties based on post-conference sales. This pricing scheme is similar to that used by Balkema for recent ICSMFE proceedings. BiTech's proposal was based on the concept that conference delegates should be charged a "fair market value" for their proceedings and that the post-conference cost should be higher only by the ISSMFE royalty and marketing costs. In this proposal the delegate price would include the cost of producing both the conference and post-conference sales volumes.

## THE NEW BITECH PROPOSAL

A somewhat different publishing arrangement has also been suggested by BiTech Publishers. In this arrangement, which need not necessarily be with BiTech, ISSMFE would put up "seed money" to cover the cost of producing all the proceedings volumes. This seed money would then be recovered from conference registration fees. The publisher would then take a percentage of the post-conference sales income, with the remainder shared between ISSMFE and the Conference Organizing Committee. Initially, this scheme could be tried for some Regional Conferences and Specialist Conferences generated by Technical Committees. If successful, then the concept might be applied to International Conferences as well. It was considered that the income could enhance the financial resources of Technical Committees and/or host Member Societies. The scheme could also ensure quality control of published material.

Both Balkema and Telford were requested to provide their views on this type of arrangement. Balkema has no interest beyond a standard royalty agreement. Owing to a change in editors at Telford, no definitive response has been received.

## RECOMMENDATIONS

After consideration of the many issues and discussion by the Board at its meeting in Athens on September 19, 1993, the Publishing Task Force submits the following recommendations for endorsement by the Board and adoption by the Council at their meetings in New Delhi on January 3 and 4, 1994. Although more elaborate arrangements might provide greater financial returns to ISSMFE than those recommended here, their implementation would require much greater effort and resources than presently available through the Secretariat, and the overall risk to ISSMFE would be greater as well.

**Royalty Clause:** Based on the principle that Conference registration fees should be kept as low as possible, but that each delegate should be assessed an amount sufficient to cover the production and distribution of his/her set of proceedings, the following policy is adopted.

*Agreements between ISSMFE Sponsored Conference Organizing Committees and the Publisher of Conference Proceedings shall include a provision that the Publisher will pay a royalty to ISSMFE of 10 percent of net receipts in excess of the amount required to pay the direct production and handling costs of copies provided to registered*

*Conference delegates. When organizations in addition to ISSMFE are acting as co-sponsors, a mutually acceptable agreement should be negotiated concerning the division of royalties among the participating organizations.*

*Royalty payments will be made by the Publisher to the ISSMFE Secretariat annually. The royalty income will then be divided equally, or according to other mutually acceptable proportion, among the Conference Organizing Committee's Member Society and the ISSMFE Secretariat.*

**The BiTech Type Arrangement:** Although no immediate further action is required, it is recommended that the incoming Board consider the BiTech proposal in more detail.

*The new ISSMFE Board should give further consideration to a cooperative publishing arrangement similar to that proposed by BiTech, with a view towards encouraging a carefully selected Conference Organizing Committee to adopt it on a trial basis.*

## Appendix 4

Report by Task Force on Technology Transfer (U Smolczyk, K Ishihara, V Ilyichev), Technology Transfer Schemes which may be applied to support geotechnical projects

## INTRODUCTION

Out of a large amount of aid programmes which are underway throughout the world, tens of billions of dollars per year appear going from developed to developing countries to assist in reinforcing infrastructures and enhancing technology transfer. World organisations such as UNESCO and UNDP are implementing many projects as well, aimed at upgrading technical levels in developing countries. A substantial portion of these projects is associated with the technology transfer in the expertise of geotechnical engineering.

In order to encourage members of ISSMFE to take advantage of such project schemes, ISSMFE has commenced to build up a framework of information about agencies and organisations which can be addressed

- 1. to get a donation of specified professional literature of equipment;
- 2. to invite a geotechnical lecturer without travel expense;
- 3. to get a scholarship for a post-graduate to be sent to a university;
- 4. to get financial help for attending a scientific conference;
- 5. to get financial help to start a trainee programme or a post-graduate geotechnical course.

The listing of donors with brief remarks is given in **Part 1** of this report.

In **Part 2**, typical demands are collected.

In **Part 3**, examples about current projects are reported.

The information collected here should be considered as a first guide to improve the communication between those who want to start such projects and possible sponsoring agencies. The lists were accomplished until 1993 and are certainly incomplete. Users are kindly asked to report about their own experiences and to send in additional informations.

## 1.1 INTERNATIONAL SCHEMES

### UNITED NATIONS

The United Nations established a special agency on technology transfer. For details, address to:

Professor Ilan Juran, Polytechnic University, Dept. of Civil and Environmental Engineering

6 Metrotech Center, Brooklyn NY 11201, USA. Fax: 718 260 3433.

### EUROPEAN COMMUNITY

The Commission of the EC has started various international scientific and technological cooperation schemes based on agreements with the governments of countries in Eastern Europe, Asia, South America and the Mediterranean. Scientists from those countries who want to cooperate with scientists in EC countries can apply for either – Post-Doctoral Fellowships,

- Joint Scientific Ventures,
- European Doctorates.

Project proposals shall be defined by the eligible country. For example, topical workshops can be sponsored with about 60000 ECU for groups of maximum 24 scientists, half of them coming from the applying country. Fellowship schemes are supported by a grant of 2000 ECU/month. Detailed advice can be obtained by contacting Commission of the European Communities, GD XII/G-3, Rue de la Loi, 200, B-10449 Brussels.

The programmes are:

TEMPUS (Trans-European Mobility Scheme for University Studies\_ which was started in 1990. It forms part of the overall programme of Community aid for the economic restructuring of the countries of Central/Eastern Europe. Its main goals are:

- to promote the quality and support the development of the higher education systems in the eligible countries;
- to encourage their growing interaction with partners in the EC, through joint activities and relevant mobility. This scheme exists alongside programmes as

COMETT, ERASMUS etc, but having distinct identity of its own, with specific aims, grant conditions and priorities;

- mobility programmes enabling a significant number of students, teachers or staff from eligible countries to undertake a period of study, a placement in industry, or a teaching or training assignment in the EC, or vice versa;
- curriculum development activities including review, overhaul and restructuring of curricula, large scale development of teaching material, development of multimedia education/training packages;
- continuing education and retraining schemes for higher education teachers and other trainers;
- short intensive courses on specialised topics in priority subject areas and language courses, bringing together students and teachers from the Community and from the eligible countries;
- support with regard to the creation of new or restructuring of existing higher education centres or institutions, where appropriate, to cater for particular education/training needs in the eligible countries;
- upgrading of facilities such as university libraries, teaching laboratories etc;
- development of universities' capacities to cooperate with industry e.g. through technology transfer.

The financial assistance awarded may be up to a maximum of ECU 200.000/year, with additional funding for mobility grants, and for a period up to three years.

Coordination is ensured with actions in the same field as TEMPUS which are developed by countries which are not members of the EC as well as with national programmes initiated by the EC Member States. These 24 countries,

apart from the EC Member States, comprise the 6 EFTA countries and Turkey, USA, Canada, Japan, Australia and New Zealand.

Detailed information may be obtained from the relevant national TEMPUS Offices or by addressing EC TEMPUS Office Brussels, 45, rue de Treves, B-1040 Brussels, Fax: 32-2-238-77-33.

### CORDIS

Community Research and Development Information Service (DG XIII). Aim: Structuring of Data Bases.

### COST

European Cooperation in Science and Technology (DG XII). Aim: Research in the fundamentals of technology in Europe.

### EARN

European Academic and Research Network. Aim: Computer-aided research networks.

### ECLAIR

European Collaborative Linkage of Agriculture and Industry through Research (DG XII). Aim: Biotechnological and agrotechnological research programmes.

### EPOCH

European Programme on Climatology and Natural Hazards (DG XII).

### MAST

Marine Science and Technology. Aim: Support both to innovative technologies and environmental protection of marine surroundings.

### SPRINT II

Strategic Programme for Innovation and Technology Transfer (DG XIII).

### STEP

Science and Technology for the Environmental Protection (DG XI).

## 1.2 NATIONAL SCHEMES

### AUSTRALIA

The main sources of funding are:

1. AIDAB, The Director General, att.: Business Co-operation Section, POB 778, Canberra ACT 2601.  
They fund a very broad range of projects, but generally larger projects (in excess of A\$2 million). They prefer to generate opportunities themselves.
2. ACIAR (Australian Committee for International Agricultural Research), Canberra, ACT, 2600.  
They are specifically set up to fund agricultural technology and research with possibly some linkage with soil mechanics and soil physics.

### BELGIUM

All assistance to developing countries is centralised by A.G.C.D., Place du Champ de Mars, 5, B-1050 Brussels.

### CANADA

1. Donation of specified professional literature:

The requester should write to:

The Canadian Geotechnical Society (170 Attwell Drive, Suite 602, Rexdale, Ontario, M9W 5Z5).

Assistance may also be asked from the following agencies:

- Canadian International Development Agency (CIDA)  
200 Promenade du Portage, Hull, Quebec, Canada, K1A 0G4
- International Development Research Centre (IDRC)  
250 Albert Street, POB 8500, Ottawa, Ontario, Canada, K1G 3H9
- National Research Council of Canada (NRCC), Bureau of International Relations  
Bldg. M-58, Ottawa, Ontario, Canada, K1A 0R6.

Librarians in developing countries may also directly address university libraries for books and publications superfluous to their needs.

## 2. Invitation of geotechnical lecturer by a developing country:

The requester should write to the chosen lecturer directly and invite him/her but should emphasize that travelling expenses could not be paid. The lecturer can seek financial support in Canada, based on the written invitation from the requester. The invitation should emphasize the need for and benefits to be derived from the lectures and courses.

It should be noted that many Canadian geotechnical experts often visit such countries as consultants. This provides excellent opportunities for organizing courses and lectures at no or minimal expense.

## 3. Scholarship for a post-graduate:

The candidate should write to the chosen university and request information on registration for post graduate studies and the availability of scholarships. Addresses of the universities can be obtained from the Canadian Embassies or Consulates.

There are also a number of on-going collaborative projects in geotechnical engineering since 1983. Projects have been supported by the International Development Research Centre (IDRC) in nearly 20 countries. Current funding allows three to five projects to be initiated each year.

Approximately 20 scholarships leading to a master's degree are awarded annually by the International Centre for Ocean Development (ICOD), 5670 Spring Garden Road, 9th floor, Halifax, Nova Scotia, Canada B3J 1H6, to students of high academic calibre who demonstrate a commitment to contribute to the development of ocean resources in their region. Applicants must be nominated by a government agency or regional intergovernmental organisation.

Commonwealth scholarships are offered by the Association of Universities and Colleges in Canada through the governments of the various commonwealth countries. Applications are to be made to the education ministry in the country of the candidate's origin. See also the "Scholarship Guide for Commonwealth Post Graduate Students", John Foster House, 36 Gordon Square, London WC1H 0PF.

## Francophonic addresses:

- Conseil de recherches en sciences naturelles et en génie du Canada (CRSNG),  
Personne Ressource: Nicole Michaud, chemin Montreal, Edifice M-50, Ottawa, Ontario K1A 0R6.
- Agence Canadienne de Développement International (ACDI)  
Personne Ressource: Jean Bienvenue, Place du Centre, 200 Prom. du Portage, Hull, Quebec K1G 0G4.
- L'association des universités partiellement ou entièrement de langue française (AUPELF),  
Fons international de coopération universitaire, (FICU), Personne Ressource:  
Jean Goyer, B.P. 6128, 3032 rue Edouard-Montpetit, Montreal, Quebec.
- Ministère de l'Enseignement Supérieur et de la science du Québec,  
Direction générale de l'Enseignement et de la recherche universitaires,  
39, rue Saint-Louis, 3e étage, Quebec, Canada, G1R 3Z2.

## 4. Financial help for attending a scientific conference in Canada:

For conferences organized by the CGS, this society should be contacted directly. In certain instances CGS will apply for financial assistance on behalf of the individual. If the individual wishes to proceed on his/her own the agencies to contact are:

- Canadian International Development Agency (CIDA),
- International Development Research Centre (IDRC) (for addresses, see above).

## 5. Funds to start a post-graduate geotechnical course in an eligible country:

The applicant should write to the agencies CIDA, IDRC or, for applicants from commonwealth countries, the Association of Commonwealth Universities (ACU), John Foster House, 36 Gordon Square, London. It is suggested that, before writing, the applicant contact the Canadian Embassy and request information, guidance and assistance.

## FINLAND

No specific agency or institution but requests are managed by FINNIDA, Mannerheimintie 15C, SF-00260 Helsinki. The countries which are getting support are Nicaragua, Peru, Egypt, Sudan, Kenya, Zambia, Namibia, Mozambique, Tanzania, Somalia, Ethiopia, Bangladesh, Burma, Sri Lanka, Nepal and Vietnam.

## GREAT BRITAIN

There are various sources of technical assistance to developing countries. These are focussed mainly on governmental agencies which should be approached directly by the requesting body. These are:

- (a) Overseas Development Administration  
94 Victoria Street, London SW1E 5JL, tel.: +(44)-71-917-7000.
- (b) The British Council  
10 Spring Gardens, London SW1A 2BN, tel.: +(44)-71-903-8466.

Assistance may be available under each of the five headings listed in the introduction of this report.

Post-graduate MSc Courses in geotechnics, and studentships for suitably qualified candidates from developing countries are provided by:

- Birmingham University (Foundation Engineering)
- Bolton Institute (Geotechnical Engineering)
- Camborne School of Mines (Mining Engineering – Geotechnics)
- Durham University (Engineering Geology)
- Hatfield Polytechnic and Middlesex Polytechnic (Geotechnics)
- Heriot-Watt University (Soil Mechanics)
- Imperial College, London University (Soil Mechanics, Engineering Geology, Soil Mechanics and Engineering Seismology, Soil Mechanics and Environmental Geotechnics)
- Leeds University (Engineering Geology)
- Newcastle upon Tyne University (Engineering Geology, Soil Mechanics and Foundation Engineering)
- Surrey University (Geotechnical Engineering)
- University of Wales, College of Cardiff (Geotechnical Engineering).

## ISRAEL

Various foundations exist which have funds for financing visiting scientists and academics. Applications for these funds are made through the universities. Geotechnical applicants should address to the Technion – Israel Institute of Technology, Department of Civil Engineering, Technion City, Haifa 32000. Fax: 972-4-220133.

## ITALY

Consiglio Nazionale delle Ricerche can offer assistance to professors of Italian

universities who want to invite foreign professors or postgraduate students to deliver a lecture or a seminar in an Italian university. For the purposes indicated in this manual there is no private or public organisation that can provide financial support to either postgraduate students or researchers.

## JAPAN

### 1. Donation of specified geotechnical literature:

From the Japanese Society SMFE, the following publications may be donated, depending on each condition:

- Soils and Foundations (Quarterly of Japanese Society SMFE),
- Reports of ISSMFE Technical Committees sponsored by the Japanese Society,
- Proceedings of international conferences organized by the Japanese Society,
- geotechnical publications in Japanese.

### 2. Invitation of geotechnical lecturers:

The Japanese Society SMFE has a programme for the international cooperation in the field of geotechnical engineering, including seminars in SE Asia, China and Korea.

### 3. Scholarships for post-graduates:

Many universities have their own programmes and should, therefore, be contacted directly. The Japanese Embassies should be asked for their addresses. Applications may also be sent to the following agencies:

- Japan International Cooperation Agency (JAICA),  
One of the major undertakings being conducted by JAICA is the technology transfer covering a wide variety of fields including civil engineering, agriculture, medicine, etc. The projects are implemented through JAICA in the form of bilateral grants, loans or by contributions or subscriptions to multi-lateral organizations. For materializing a project, JAICA makes it a basic rule to carry out its cooperation in response to specific requests from recipient governments. To obtain an assistance, a request for a technology transfer should first be submitted to the recipient government. It is then transferred, with a list of priority, to the JAICA office in Japan, and after being reviewed and discussed, final decision is made. Address:  
Shinjuku Mitsui Bldg. 1-1, 2 chome, Nishi-Shinjuku, Shinjuku-ku, Tokyo, 163,  
Fax: 03-346-5018.
- Japan Society for the Promotion of Science,  
5-3-1, Kojimachi, Chiyoda-k, Tokyo, 102, Fax: 03-222-1986.
- Japanese Society of Civil Engineers,  
1 chome, Mubanchi, Yotsuya, Shinjuku-ku, Tokyo, 140, Fax: 03-355-3446.
- Japan Cultural Association,  
Minamizuka Bldg. 2-17-3 Shibuya, Shibuya-ku, Tokyo, 150, Fax: 03-407-4588.
- Kajima Foundation, 6-5-30, Akasaka, Minato-ku, Tokyo.

## NETHERLANDS

The central agency for general assistance to developing countries is  
The Directorate General for International Co-operation, POB 20061, NL 2500  
Ed The Hague, attn: Bureau Opleidingen in Nederland.

Specific requests for assistance to promote, support and improve the co-operation between the Dutch and foreign institutions for education can be addressed to:

The Netherlands Organization for International Co-operation (NUFFIC),

POB 90734, NL 2509 LS The Hague

Requests and invitations for geotechnical lecturers can be addressed to the Netherlands Society for Soil Mechanics and Foundation Engineering, POB 69, NL 2600 Ab Delft, or directly to the chosen lecturer.

Information on post-graduate scholarships can be asked for directly at the Embassy of the Netherlands, or by addressing to the International Institute for Hydraulic and Environmental Engineering (IHE), POB 3015, NL 2601 DA Delft.

## NORWAY

Requests are managed by

Norwegian Agency for International Development, POB 8142 Oslo Dep., N-0033 Oslo 1.

## SOUTH AFRICA

The South African Institution of Civil Engineers has a programme entitled "Ex Africa pro Africa" which was established to facilitate the flow of technical information between S.A. and countries to the north. Requests for assistance should be addressed to:

South African Institution of Civil Engineers

Ex Africa pro Africa Programme, POB 93495, Yeoville 2143, South Africa.

## SWITZERLAND

There is no central agency to deal with the indicated activity. Therefore, requests of this kind would have to be addressed directly to Swiss universities.

## GERMANY

There are various institutions and foundations engaged in aid programmes for students (S), graduates (G), post-graduates (PG), scientists and professors (P):

Alexander von Humboldt Foundation:

480 research grants for highly qualified scientists, age less than 40, from foreign countries into FRG and from FRG to foreign countries. Applications via German embassies.

Carl Duisberg Gesellschaft e.V., POB 190325 D-5000 Cologne 1

Medium level study programmes for engineers from developing countries.

Deutscher Akademischer Austauschdienst, Kennedyallee 50, D-5300 Bonn 2  
University exchange programmes of any kind (S,G,PG,P) for short research stays (3 months, P only), short grants (6 months for S, summer campus courses for S, G, PG), annual grants (PG), subsidies for individual and group study trips (P).

Promotion of training programmes in developing countries.

Friedrich Ebert Stiftung (Foundation), Godesberger Allee 149, D-5300 Bonn 2

6 months' and annual grants for study stays (S, G) at German universities.

Friedrich-Naumann-Stiftung (Foundation), POB 4027, D-5330 Königswinter 41

Annual grants (S,G,PG) for post-graduate studies at German universities, age less than 35.

Heinrich-Hertz-Stiftung (Foundation), POB 1103, D-4000 Düsseldorf  
Same conditions as with Friedrich Ebert Stiftung.

Hanns-Seidel-Stiftung (Foundation), POB 190846, D-8000 München 19.  
Biennial grants for practice-aimed postgraduate studies at universities and other scientific institutions in the FRG.

International Association for the Exchange of Students for Technical Experience (IAESTE),  
Deutsches Komitee der IAESTE, Kennedyallee 50, D-5300 Bonn 2  
Practice stays for S in Germany. Application via the national committee of IAESTE in the home country.

Katholischer Akademischer Ausländer-Dienst, Reuterstr. 39, D-5300 Bonn 1  
Annual grants for junior scientist from Asia, Latin America and Africa in professions, which are of special importance to the sending country.

Otto Benecke Stiftung (Foundation), POB 170160, D-5300 Bonn 17  
Annual grants (S,G,PG) for university and highschool level students from developing countries.  
Promotion of sur-place-studies at universities or highschools in those countries.

Ökumenisches Studienwerk e.V., Gironde 80, D-4630 Bochum  
Annual study grants for PG of developing countries at a German or home university.

#### UNITED STATES OF AMERICA

Apart from the large global agencies as the Agency for International Development or the World Bank in Washington, DC, requests may be addressed to universities, or

- Federal Laboratory Consortium:  
National Institute for Standards and Technology (NIST), Washington DC  
The chairman: Dr. Loren C. Schmid, Pacific NW Laboratory, POB 999 MSKI-34, Richland, WA 99352, or (representation in Washington, DC): Ms. Beverly Bergen, 1550 M St. NW, Washington, DC 20005.
- US Bureau of Reclamation, Denver, Colorado.
- US Army Corps of Engineers, Washington, DC
- People to People International: an educational and cultural exchange organization dedicated to enhanced international understanding through the exchange of ideas and experiences directly among peoples of different countries and cultures. May be addressed for purposes like exchange of leading specialists.

## **PART 2. DEMANDS**

### **2.1 Outcome of questionnaires**

A list of questionnaires was distributed among national societies in developing countries, asking several questions as to what kinds of technology transfer and aid are needed in the respective national societies. The answers to these questionnaires are summarized as follows.

#### CHINA

The Chinese member society expressed a desire to hold a seminar on landslides and mud-stone-flow inviting specialists from abroad. The society also wants to host the International Symposium on Landslides in 1996. For these

two gatherings, the Chinese society wants to apply for financial aid.

#### ECUADOR

The Ecuadorian member society is keen to implement a programme for producing a National Inventory of Landslides. It also wants to organize a seminar on dynamic behaviour of soil masses during landslides.

#### BRAZIL

Keen interest is expressed by the Brazilian Society in implementing several programmes such as holding seminars and symposia, technical cooperation and equipment supply. The topics of interest are landslides, waste disposal, seismic effects of soils, and rock mechanics.

#### BANGLADESH

Upon entry into the membership of ISSMFE, the Bangladesh member society is very keen to maintain linkage with advanced geotechnical groups in the world. Basically, their wishes are education and upgrading of geotechnology in general in Bangladesh. To this end, they want to materialize a series of undertakings such as news bulletin publication, monthly lectures, seminars, workshops, training programmes etc. The topic of their special interest is the geotechnology associated with mitigation of natural disasters such as earthquake and flooding.

#### BULGARIA

Bulgaria has several kinds of geotechnical problems associated with the construction of deep foundations, landslides and slope stability in the seismically active region. To conduct an integrated programme of investigations, they are requesting some financial support from UNESCO and UNDRD.

#### IRAN

The Iranian member society has successfully carried out the 1st International Symposium on SMFE held in Teheran in November, 1990. They may no longer need financial assistance to implement this kind of activities. Instead, they are very much interested to obtain up-to-date information on the recent developments of geotechnical engineering particularly in the areas of earthquake engineering and landslides.

#### PHILIPPINES

Central Philippine University, Iloilo City, has been undertaking a series of workshops about soil mechanics laboratories for training more than 150 engineers from all over the Philippines. However, the items of the laboratory tests are restricted to conventional types of physical and mechanical soil testing.

The organizer of the workshop, Professor Waldem S Rio, now wants to expand the programme so as to include somewhat advanced soil testing such as direct shear and triaxial shear test techniques, for which he wants to obtain support from ISSMFE.

## 2.2 Recommendations

Although the number of responses to the questionnaire is limited there appear to be strong demands among developing countries for any financial assistance in order to approach the goal of upgrading and proliferation of geotechnology in those countries through technology transfer and aid motivated by ISSMFE.

On the other hand, most of the funding agencies in developed countries have two principles upon which they base their support activities:

(1) The funding is operated on request-led basis. Thus, there should always be some groups in recipient countries to draft a proposal and to take over the responsibility for fulfilling the intended goal.

(2) The funding is made available for those projects which are operated on a bilateral basis. Therefore, it is generally difficult to cover the financial burden of participants from third countries for attending meetings or courses in those countries.

Considering the constraints indicated above, the following recommendations may be made at present to make the maximum use of available financial sources for the benefit of ISSMFE-constituent countries:

(1) ISSMFE Board should nominate two or three member societies having a strong willingness to organize technology transfer seminars or symposia in their country, and back up the implementation of their programmes. For this purpose, the President ISSMFE should write a letter of request to the government of the nominated member society as well as to the office of a funding agency stating the importance and appropriateness of such undertakings for the benefit of the nation as a whole.

(2) ISSMFE should allocate some amount of money from its annual budget to foster the participation of someone from the third country. Participation of even one lecturer, for example, from that country will add to an international flavour and emphasize the multi-lateral nature of the programme. The partial financial support given by ISSMFE should be clearly referred to in the President's letter suggested above.

(3) For the financial aid provided by the international organization, the cooperation with other international societies such as ISRM and IAEG will be necessary to implement any type of programme.

(4) Joint efforts should be made in future to link the ISSMFE technology transfer initiative to those other ISSMFE actions which are dedicated to assist developing countries: the model library action, the educational scheme action.

## PART 3: PROJECT EXAMPLES

### 3.1 Japan

Every year the Japanese Agency for International Cooperation (JAICA) holds a training course in Tokyo in the area of geotechnical engineering, inviting about 15 engineers from developing countries. They stay in Japan for about three months attending courses on soil mechanics and foundation engineering and visiting several research institutes and construction sites. The Japanese Society of Soil Mechanics and Foundation Engineering has been acting as an advisory body providing curriculum of the course and recommending names of tutors. Those wishing to take part are encouraged to address a local agency of JAICA.

### 3.2 Guatemala

The Center of Coordination for the Prevention of Natural Disaster in Central America (CEPRENAC) was initiated in 1988 under the sponsorship of the Swedish Government. This project aims at mitigating disaster by natural hazards such as earthquakes, volcano eruption, flood and landslides. The first phase of this project was finished in 1991 but continuation of its activities is partly underway through financial aid from other agencies such as the Danish International Development Assistance (DANIDA). The Executive Secretariat is: CEPREDENAC, 7 Avenida 14-57 Zona 13 01013, Guatemala.

### 3.3 Chile

After the 1985 earthquake in Chile, JAICA started a three-year programme upon request from the Catholic University of Chile in which test equipments on structural dynamics, soil dynamics and seismic survey were provided, together with the know-how to use these machines for the assessment of seismic hazards and risks. As part of this project, two seminars were held in Santiago for training local engineers. Professor H Kishida of the Tokyo Institute of Technology and Professor Y Yamada of Tsukuba University participated in this project as geotechnical experts from Japan and cooperated with Professor J Troncoso of Catholic University of Chile in organizing the seminars.

### 3.4 Peru

The Peru-Japan Center for Earthquake Engineering Research and Disaster Mitigation (CISMID) was established in 1987 in the National University of Engineering, Lima, with funds of JAICA. In addition to its routine works, seminars have been organized several times with the aim to inform about technology and know-how related to earthquake hazards and their effects of local societies. In one of the seminars dealing with microzonation and safety of public lifeline, Professor Ishihara was invited to act as lecturer in August 1990. About 50 people not only from Peru but also from neighbouring countries attended the seminar.

### 3.5 South Africa

Ground engineering training courses are annually organized by the national member society of ISSMFE in different locations. Until now there were courses in Johannesburg and Cape Town which were offered to engineers from other African countries. See also Part 1 – South Africa.

## Appendix 5

### REPORT BY TASK FORCE ON EDUCATION IN GEOTECHNICS (H G POULOS ASSISTED BY VICE-PRESIDENTS)

#### 1. INTRODUCTION

Four broad areas of activity were targeted by the ISSMFE Task Force on Education in Geotechnics:

1. the establishment of model curricula for basic undergraduate courses in geotechnics
2. the development and dissemination of information on suitable experiments and demonstrations for these courses

3. the collection and dissemination of suitable audio-visual material for these courses
4. the development of annotated lists of suitable texts.

Attention to date has been concentrated on the first three of these objectives.

## 2. REPORT

A paper has been prepared which summarizes the work carried out to date. This will appear in the Proceedings of the 1993 New Delhi Conference. This paper summarizes suggested undergraduate curricula, and focuses on courses in civil, mining and environmental engineering in which students are taking geotechnical engineering as a major component.

Unfortunately, there is still relatively little information to hand concerning experiments and demonstrations.

Four sets of slides are now available:

1. expansive soils
2. landslides
3. offshore geotechnics
4. soil improvement

The Japanese Member Society has generously donated a number of sets of the last-named slides for sale by ISSMFE.

## 3. LIAISON WITH ISRM

The ISRM Commission on Education is very active, and is in the process of preparing detailed syllabus lists for various courses, including courses on soil mechanics and geotechnical engineering. The ISSMFE Task Force convenor has been involved in the development of the syllabus for appropriate courses. ISRM are also developing a series of annotated text book lists, which should be of assistance to ISSMFE in its future work.

## 4. RECOMMENDATIONS FOR THE FUTURE

It is recommended that the ISSMFE continue its activities related to geotechnical education. Positive responses from several countries in Asia, Africa and Eastern Europe suggest that there is scope for guidance by the Society in the development of both traditional and newer courses in our discipline.

Specifically, it is recommended that the following issues should be addressed:

1. continuing the efforts to collect details of suitable demonstrations and experiments which illustrate the fundamentals of soil and foundation behaviour
2. the development of annotated lists of text books (possibly in conjunction with ISRM)
3. the development of typical curricula and syllabus lists for *post-graduate* courses
4. the collection of appropriate computer software related to the teaching of soil mechanics and foundation engineering
5. the continued collation of instructive slide sets with accompanying descriptive text.
6. the development of a central repository of educational resource material (notes, tutorial questions, examination papers, etc) which may be assessed by educational institutions. Ideally this should reside with the Secretariat, but if this is not feasible, an alternative venue will be required. The Geotechnical Centre at the University of Sydney is willing to provide a service for such a repository, if required, provided that the Society provides the relevant expenses of reproduction, postage, etc.

## **Appendix 6a**

### **REPORT ON THE AFRICAN REGION FOR THE PERIOD MAY 1991 TO DECEMBER 1993 G W DONALDSON**

(For Presentation to the ISSMFE Council Meeting in New Delhi: 4/1/1994)

The problems of Africa: poor communications, long distances with high costs, small number of technological personnel and shortage of funds continue to hamper the activities of ISSMFE in the region. At least the political problems of the past twenty years are being removed rapidly.

The membership in the Region has been given a fillip by the rejuvenation of the Egyptian Member Society during the past year, culminating in the election of Prof El Ghamrawy as the next Vice-President for Africa, and the Egyptian Member Society also undertaking to host the X1 African Regional Conference in Cairo late in 1995. The other side of the coin is that several countries in the Region have fallen into arrears with their payments to ISSMFE and therefore cannot participate fully in the benefits of the Society.

The Regional Conference is the major event in the Region and the Xth African Regional Conference which was held in Maseru, Lesotho in September 1991 could be regarded as a success in the number of attendees present, the papers submitted and the financial viability as well as good keynote addresses and lively debate. Yet it is most disappointing to report that no official representatives were present and it was therefore not possible to hold a meeting of regional representatives. However, there were visitors from Europe, Canada, Australia and New Zealand.

The 2nd Southern African Young Geotechnical Engineers Conference was held at Stellenbosch University in April 1993. Among the seventy participants, under 35 years of age, were one each from Ethiopia, Zimbabwe, Pakistan and Bulgaria. The conference was organised entirely by the young engineers and 32 of the delegates delivered papers, many for the first time. Sponsorships from consulting firms, geotechnical contractors, suppliers and the Geotechnical Division of the S.A. Institution of Civil Engineers kept the costs within the reach of young engineers, who further received enthusiastic support from their employers in meeting transport, accommodation and other costs related to their participation. The topics under discussion covered the whole range of geotechnical projects, with perhaps too strong an emphasis on numerical methods – not unnatural in young engineers.

## **Appendix 6b**

### **ACTIVITIES IN ASIAN REGION 1991–1993 (K Ishihara)**

Since the last meeting of the Council in Florence in May in 1991, the activities in the Asian region have been extensive as outlined below.

The highlight of the activities in Asian region was holding of the 9th Asian Regional Conference on Soil Mechanics and Foundation Engineering in Bangkok, Thailand on December 9–13, 1991. The Conference was particularly memorable and exhilarating because of its long-awaited return to Bangkok after a kaleidoscopic period of 20 years. More than 400 people attended the Conference and participated enthusiastically in the technical sessions and other events which were beautifully organized by members of the Southeast Asian Committee headed by Professor Balasburmanian.

It was for the first time that representatives from as many as 10 national societies got together in the special meeting where issues of regional concern were discussed. In this meeting, three national societies expressed the willingness to host the 10th Asian Regional Conference. As a result of voting, China was

selected to be the host of the next Conference which will be held in Beijing in 1995.

Indian National Society has been hard at work for preparing for the 13 ICSMFE which is expected for sure to be the most successful event in the calendar of ISSMFE.

The Chinese National Society has been active recently. One of its major undertakings is to have sponsored the International Symposium on Soil Improvement and Pile Foundation which was held in Nanjing, China on March 25–27, 1992. The conference sessions offered a unique opportunity for local geotechnical engineers for exchange of views and opinions in the issues of mutual interest relevant to the development of infrastructures in that region.

Eleventh Southeast Asian Geotechnical Conference was held in Singapore on 4–8 May 1993, attracting about 500 people in attendance. The highlight of the Conference was the Chin Fung Kee memorial lecture delivered by Professor S L Lee. The vitality of geotechnical engineering in the Southeast region was witnessed through the brisk atmosphere in the technical as well as discussion session.

Japanese National Society hosted International Symposium in Earth Reinforcement Practice (IS Kyushu '92) which was held on 11–13 November 1992 in Fukuoka. About 400 persons participated in the Conference. The highlight of the Conference was a special lecture delivered by Professor T Yamanouchi. Five technical sessions were conducted with a great success, preceded by keynote lectures by international experts in respective area.

The fourth National Conference on Ground Improvement was held on January 18–19, 1993 in Lahore under the sponsorship of Pakistan National Society for Soil Mechanics and Foundation Engineering (PNSSMFE). The president, Amjad Agha and Secretary, Dr Izhar Ul Haq were the organizers of the Conference. Particular feature of this conference was the co-sponsorship of JSSMFE which cooperated by sending four prominent specialists. They were Professor H Aboshi, Dr T Tsuchida, Professor F Tatsuoka and Dr A Onoue.

Bangladesh Society for Geotechnical Engineering (BSGE) was also active in organizing the first Bangladesh-Japan Joint Geotechnical Seminar on Ground Improvement on January 23–24, 1993. JSSMFE helped organize the Seminar by sending four prominent experts in the expertise of the ground improvement. It was very fitting and timely to have had such a seminar in Bangladesh where the national society had been newly formed just 4 years ago.

Vietnamese National Society was active as well by organizing International Geotechnical Conference – new Technology for Foundation Engineering, which was held in Hanoi on October 1–3, 1992. This was the first international gathering held in Hanoi since the birth of Vietnamese National Society. The Conference was organized by the efforts of Dr Nguyen Truong Tien under the assistance of the Swedish Agency of Research Cooperation and Swedish Geotechnical Institute. About 200 engineers participated in the Seminar and listened enthusiastically to the lectures by prominent experts. It was a valuable and rewarding undertaking in view of the condition in Vietnam being still in its infancy in the development of geotechnical engineering.

Korean National Society organized the International Symposium on the Construction Technology for Underground Space in Seoul on October 8th, 1993 in cooperation with the Scandinavian countries. The symposium was well attended and ended up with a great success.

Iranian National Society hosted the Second International Seminar “Soil Mechanics and Foundation Engineering of Iran” under the sponsorship of the Iranian Government in October 25–27 in Tehran. The Conference was fruitful and rewarding for local engineers.

Israel National Society launched a project of holding bilateral joint symposia in cooperation with Russian National Society. Following the first one held in 1991, the second Israel-Russia Conference on Soil Engineering was held in 1992 in Haifa with 60 Israeli and 19 Russian delegates in attendance. The two

conferences met with great success in establishing close links amongst engineers and scientists in the two countries.

Although no gathering was undertaken on international scale, several symposia and national meetings were held in Syrian and Indonesian national societies to exchange views and discuss issues of geotechnical importance in respective countries.

## Appendix 6c

### ACTIVITIES IN AUSTRALASIAN REGION 1991–2 (H G Poulos)

#### 1. MEMBERSHIP

Membership has continued to increase in the Australasian region over the past year. In Australia, as at April 1992, there were 903 members of the Australian Geomechanics Society (AGS) of whom 469 were members of ISSMFE. There were also 31 supporting members (ie companies or organisations).

In New Zealand, the current total membership of the New Zealand Geomechanics Society (NZGS) is 368 of whom about 224 are members of ISSMFE.

#### 2. CONFERENCES

The Sixth Australia-New Zealand Conference in Geomechanics was held in Christchurch New Zealand, from 3rd to 7th February 1992. The Conference theme was “Geotechnical Risk – Identification, Evaluation and Solutions”. A considerable number of the papers published at the Conference addressed this theme. A total of 171 people attended the Conference, and enjoyed a well-organised, well-run and technically stimulating Conference. Features of the Conference were the Keynote Address by Professor J K Mitchell on “Mitigation of Ground Failure Risk – Some Lessons from the Loma Prieta Earthquake”, the John Jaeger Memorial Lecture by Dr Brian Richards on “Modelling Interactive Load Deformation and Flow Processes in Soils”, and the New Zealand Geomechanics Lecture by Professor G R Martin, entitled “Geomechanics – the Art and the Science”.

During the following week, the 6th International Symposium on Landslides was held in Christchurch. Many of the 264 registrants also attended a Field Symposium in Queenstown on the weekend between the two conferences. Theme addresses were delivered on:

Investigation; Seismicity; Landslides in Australasia; Analysis; Open Pits; Tropical Areas; Remedial Measures; Reservoirs. Again, the Conference was well run and proved to be successful from both the technical and social point of view.

The next (7th) Australia-New Zealand Conference on Geomechanics is to be held in Adelaide in July 1996.

A Conference will be held in Sydney in March 1993 on Geotechnical Management of Waste and Contamination, and is being organised by the Sydney Group of the AGS.

#### 3. TECHNICAL WORKING GROUPS

The Groups currently active within the Australian Society are:

- i) litigation
- ii) footings and foundations
- iii) bored pier inspection
- iv) slope stability assessment.

#### 4. HONOURS AND AWARDS

The 1991 E H Davis Memorial Lecturer was Associate Professor Ian W Johnston of Monash University, whose lecture was entitled "Geomechanics and the Emergence of Soft Rock Technology".

As reported above, the 1992 Jaeger Memorial Medal of the AGS was awarded to Dr Brian G Richards, while the New Zealand Geomechanics Lecture was delivered by Professor Geoffrey W Martin.

A new award, the "Joint Societies Award" is being developed jointly by AGS and NZGA, and will be awarded to the author(s) of the paper presented to each Australia-New Zealand Geomechanics Conference which makes the most significant contribution to the advancement of geomechanics.

#### 5. YOUNG GEOTECHNICAL ENGINEERS CONFERENCE (YGEC)

Both AGS and NZGS have agreed in principle to the establishment of a YGEC for the Australasian Region. Arrangements are being formulated at present and it is hoped to hold the first such Conference in 1994.

#### 6. FIVE YEAR PLAN

The AGS had developed a Five-Year Plan for the development of the Society. This is providing direction for the activities of the Society, and is reviewed at each National Committee Meeting.

#### 7. MEMBERSHIP BOOKLET

The Secretariat of the AGS has produced a valuable 58-page Membership booklet which contains information on the objectives of the Society, details of the State Groups, and names and addresses of all members. It also contains the Society's Five Year Plan.

#### 8. COMMUNICATIONS

Both the NZGS and AGS continue to produce news journals twice yearly for their members. "New Zealand Geomechanics News" and "Australian Geomechanics" are produced by volunteer members, and contain technical papers, news items, and geodiary information.

#### **ACTIVITIES IN THE AUSTRALASIAN REGION JUNE 1992–OCTOBER 1993** (H G Poulos)

##### 1. MEMBERSHIP

Current membership of ISSMFE in Australia is 440, out of a total paid membership of the Australian Geomechanics Society of 685. There are also 28 supporting members (i.e. companies or organizations). In New Zealand, the total

membership of the New Zealand Geomechanics Society is about 370.

#### 2. CONFERENCES

The major activity was a Conference on "Geotechnical Management of Waste and Contamination" which was held in Sydney in March. This attracted about 120 registrants and was very successful technically. The proceedings have been published by Balkema.

Planning of the 7th ANZ Geomechanics Conference in Adelaide is proceeding. It will be held in the Adelaide Convention Centre from 1–7 July 1996.

The Perth group of the Australian Society has foreshadowed that it will put forward a bid for the 2001 International Conference.

The New Zealand Geomechanics Society is planning to develop a series of biannual conferences, commencing in May 1994. This conference will be held in Wellington and will be on the subject of Geotechnical Aspects of Waste Management.

#### 3. TECHNICAL WORKING GROUPS

Within the Australian Geomechanics Society, the following groups are active:

- i) litigation
- ii) footings and foundation
- iii) bored pier inspection
- iv) slope stability assessment
- v) limit state design

The New Zealand Society is setting up a study group on urban development, and also has a group studying limit state design.

#### 4. HONOURS AND AWARDS

The Australian Geomechanics Society has selected Mr Philip Pells to be the 1993 E H Davis Memorial Lecturer.

The next New Zealand Geomechanics Lecture will be presented in 1994 by Dr J Berrill.

#### 5. YOUNG GEOTECHNICAL ENGINEERS CONFERENCE (YGEC)

The first Australian YGEC will be held in Sydney in February 1994. Participants will be invited from both Australia and New Zealand. Response to the call for participation has been excellent. The New Zealand Earthquake Commission and the New Zealand Geomechanics Society are sponsoring 5 participants from New Zealand.

#### 6. STRATEGIC PLANNING

Both the Australian and New Zealand Societies have developed strategic plans for their future development. The AGS has a five-year rolling plan which is reviewed at each meeting of the National Committee (twice yearly). The NZGS has also prepared a strategic plan which is being implemented.

## 7. COMMUNICATIONS

Both the NZGS and the AGS continue to produce news journals twice yearly for their members. "New Zealand Geomechanics News" and "Australian Geomechanics" are produced by volunteer effort, and contain technical papers, news items, and geodiary information.

The last issue of "Australian Geomechanics" featured Piling and Deep Foundations as its technical theme, and the next issue will feature Retaining Systems and Geosynthetics.

## 8. RESEARCH PRIORITIES

A working group of the AGS has prepared a report on Research Priorities in Geomechanics Australia. Three broad areas have been defined.

1. problematic soils of the Australasia – Pacific region.
2. mining geomechanics.
3. environmental geotechnics.

## 9. INCOMING VICE-PRESIDENT

Mr M C Ervin of Australia has been elected to be the next Australasian Vice-President.

## **Appendix 6d**

### **REPORT ON ACTIVITIES IN THE EUROPEAN REGION 1989–94 (U Smolczyk)**

The period which is subject of this report, was earmarked by the great political changes in Europe. With regard to ISSMFE this meant fresh activities in many of the Eastern European countries, but also considerable outcomes due to the economical difficulties raised by the change to an open market economy in many of those countries.

In terms of the ISSMFE structure, the following changes occurred:

1. The German Democratic Republic committee ceased to be an independent member of ISSMFE. Since autumn 1990 most of its members joined the FRG member society and there is now one German Geotechnical Society with a membership of about 1,700.
2. The Romanian member society was re-established and could already attend the Danube-European Congress in Budapest in autumn 1990. It is now again a member society to the ISSMFE. They took on the responsibility of hosting the 10th Danube-European CSMFE to be held in September 1994.
3. Following an invitation by the Albanian Ministry of Building, I visited Tirana in August 1990 and found a group of soil engineers, engineering geologists and surveyors strongly interested in founding an Albanian SSMFE. The political upheavals in this country, however, prohibited further attempts to proceed with this.
4. The soil engineers in the Baltic republics have founded separate member societies. In Lithuania, a society was founded in 1990, in Estonia in 1991, getting very valuable support from the Finnish Society of SMFE. Latvia is about to apply for ISSMFE membership. There is a good cooperation between these three societies and discussions are aimed at later joining their external status towards ISSMFE.

5. The civil war in Yugoslavia resulted in independent geotechnical societies in Slovenia and Croatia (both founded in July 1992). The remaining part of the Yugoslav Society is about to apply for membership on behalf of geotechnical engineers in Serbia and Montenegro.

6. When the former Soviet-Union ceased to exist, similar problems to those in Yugoslavia arose. 1992 the Russian Society of SMFE was established on the base of the former national committee (219 members, 181 in the ISSMFE list of members). Geotechnical engineers of the other republics were invited to join. During an international congress on numerical methods in geomechanics in St Petersburg in June 1993, a first membership meeting took place, where the membership-situation was discussed. Separate member societies seem to be planned in Belorussia and Ukraina, but the well-known serious economic drawbacks prohibit any further development for now.

7. In Poland, in 1992 the organisational structure was reviewed since – as in all former Eastern bloc countries – the representation was realized by national committees associated to national academies of science. The 3rd International Seminar on Renovation and Improvements to Existing Quay Structures in May 1993 in Gdansk demonstrated the sound activity of the Polish National Committee on Geotechnics with its now independent status.

8. Following the well-organized and informative 9th Danube-European CSMFE in October 1991, our Hungarian colleagues have also succeeded in re-arranging their organisational structure by transforming the national committee into an independent union. A recent highlight of their activity was the symposium in memory of Jaky's 100th birthday, held in September 1993 in Budapest.

9. The splitting of Czechoslovakia into two separate republics changed the situation of that member society, too. There are now a Czech and a Slovakian member society, but they have decided to act externally as still one member of ISSMFE, which was a very reasonable and hopefully exemplary action.

The main event was the X. ECSMFE held in Florence in May 1991. It was hosted by Italy in a most impressive way and run on a high level by exchanging experiences on soil deformation in geotechnical research and practice. In connection with this event, a European delegates' meeting was held with 28 attendants. Two offers to host the 11th ECSMFE by the Dutch and the Danish societies were gratefully considered. Following their presentations, voting yielded a 10:7 priority for Copenhagen in 1995.

In Northern Europe, there is a well established cooperation between Finland, Sweden, Norway, Denmark and Iceland. Regional conventions with unspecified topics and open discussions are held in a four years' cycle. Their 10th meeting (X NGM 92) was held in Aalborg, Denmark, in May 1992. 40 years' anniversaries were celebrated by the Finnish Member Society and the Danish Geotechnical Institute.

Since continuity of regional conferences should be proven in terms of their necessity, it was decided to stop the sequence of Baltic Conferences on SMFE in its earlier form – all the more, when it was revealed that this title had already been used since 1968 by the Baltic Societies. Regional workshops with selected topics and reduced scope rather than large congresses seem to be more adequate in the light of economic conditions.

Several occasions in Western Europe gave opportunities to have official contact visits to member societies in the Netherlands (40th anniversary; 4th Int. Conference on Geotextiles and Geomembranes; 4th Young Geotechnical Engineers' Conference), in Belgium, France (5th Young GEC) and Switzerland. In September 1993, the Hellenic Society of SMFE together with the French Committee of SMFE organised a brilliant symposium "Hard Soil – Soft Rock" in Athens, Greece.

A most encouraging type of conference is the Young Geotechnical Engineers' Conference. It is a gratifying sign that there is no lack of hosts. They were run

annually 1989 in Raubichi (Belorussia), 1990 in Delft, 1991 in Grenoble, 1992 in Lisbon and 1993 in Boeblingen (Germany). Having attended all of them, I was deeply impressed each time by the concern and enthusiasm of those young scientists and, above all, by the in most cases high level of their research. It may be mentioned, too, that sponsors in Western host countries enabled a free of charge attendance for the participants coming from Eastern countries.

A notable international cooperation has been developed in Europe by means of eight "European Technical Committees" on matters of:

ETC1 – Stabilization of Landslides (chairman: Togrol);  
ETC2 – Earthquake Engineering Problems in Europe (Viggiani);  
ETC3 – Piles (Franke/van Impe);  
ETC4 – Pressuremeter Testing (Gambin), now changed into an International TC;  
ETC5 – Laboratory Testing (De Quelerij);  
ETC6 – Reinforced Soil (McGown);  
ETC7 – Numerical Methods in Geotechnical Engineering (Sagaseta);  
ETC8 – Geotechnics of Landfill Design and Remedial Works (Jessberger).

Reports were given by the chairmen to the delegates of the European member societies at their meeting in Florence:

ETC1 presented a third volume on the state of its work and asked for two more years to collect the still incoming contributions for the final report. This was agreed upon.

ETC2 presented a final report to the 10th ECSMFE and asked to be disbanded, which was accepted.

ETC3 Its chairman, Prof van Impe, organized a 2nd International Geotechnical Seminar on Bored and Auger Piles in June 1993, which strengthened the interaction between practising geotechnical engineers and researchers.

ETC4 held an international symposium in April 1990 in Oxford and presented its final report. The topic will be followed up by activities of the existing international TC.

ETC5 had to be re-activated in October 1990 under the hand of a new chairman. It is at work in close contact to two other groups, who work within the framework of CEN and ISO on laboratory testing to be codified in Europe. Some of its members are equally involved in the SPRINT programme of the European Community.

ETC6 had an international conference in Glasgow in September 1990, the proceedings of which could be presented to the 10th ECSMFE. Since the chairman Prof McGown had asked for a change in the chairmanship of the committee, Prof Schlosser, France, took over and organised an international symposium "Soil Reinforcement: Full Scale Experiments of the 80's" in Paris in November 1993 as a supported project of COMETT.

ETC7 also held an international symposium in Santander, Spain, in September 1990. The proceedings of this were available at the congress in Florence. Since it is intended to achieve a documentation (manuals or recommendations or standard drafts) which may be taken over into international committees later on, the working life of this committee was extended until the end of this international congress period in early 1994.

ETC8 started its activity in 1990 by translating German recommendations into English. The first edition was published in 1991, the second is available at this congress.

Although not being an ISSMFE institution, the draft committee of CEN working on Eurocode 7 Part 1 "Geotechnical Design, General Rules" under chairmanship of N Krebs Ovesen may be added to this list as this special task took much energy, money and time from the European members who were involved. A working document containing a 5th version was finished in June 1993 to be published as a European Pre-Standard in 1994.

Bilateral cooperations are also observed to develop in geotechnics and will hopefully yield to Europe-wide activities in both joint research and education. The geotechnical engineering practice is already in the forefront here, designing and constructing the large works to improve the infrastructure in terms of transportation, environment and modernized production.

## Appendix 6c

### NORTH AMERICAN ACTIVITIES 1991-93 (J K Mitchell)

Geotechnical activities in the North American Region of ISSMFE have been extensive since the last meeting of the Council in May 1991. Some of the highlights are given in this report.

### PANAMERICAN ISSUES

At meetings of delegates from the North and South American Regions of ISSMFE in Rio de Janeiro, Brazil in 1989 and in Viña Del Mar, Chile in 1991 it was agreed that a Panamerican Committee for Soil Mechanics and Foundation Engineering should be formed. The purposes of the Committee will be to provide improved communication, coordination, and cooperation among the Member Societies of the North and South American Regions of ISSMFE; to provide consistent procedures for sponsorship and organization of Panamerican Conferences; and to develop policies and guidelines that will assist in conducting administrative work efficiently and effectively. After review and comment by the Member Societies on initial drafts of the proposed organization and operating procedures, a final draft has been prepared and distributed for adoption and implementation at the XIII ICSMFE in New Delhi in January 1994.

The IX Panamerican Conference on Soil Mechanics and Foundation Engineering was held in Viña Del Mar, Chile from August 26-30, 1991. There were approximately 300 delegates. A major topic, both in the main sessions and on the technical field trips, was tailings dams. The X Panamerican Conference will be hosted by Mexico and held in Guadalajara in the summer of 1995.

### REGIONAL ACTIVITIES

Detailed reports on most of the many geotechnical conferences held throughout the Region, special events, awards, new publications, and other activities in Canada and the USA are contained in the Canadian Geotechnical Society and US National Society News sections of *Geotechnical News*, published quarterly and distributed to all Canadian and US members of ISSMFE by BiTech Publishers Ltd. Regrettably, it has not yet been possible to establish a consistent and comparable flow of news and information to and from ISSMFE colleagues in Mexico, which comprises the third Member Society of the North American Region.

In keeping with the established policy of rotating the office of ISSMFE Vice President for North America among the three member societies, Victor Milligan will assume the office commencing January 1994 in New Delhi.

### CONFERENCES

The First International conference on Calibration Chamber Testing was held at Clarkson University, Potsdam, New York on June 28-19, 1991. There have

been several successful and well-attended conferences in the USA sponsored by the US National Society and the American Society of Civil Engineers, including a Geotechnical Engineering Congress in Boulder, Colorado in June 1991; an International Conference on Centrifuge Testing, also at Boulder in June 1991; the ASCE Specialty Conference on Grouting, Soil Improvement and Geosynthetics in New Orleans, February, 1992; and the ASCE Specialty Conference on Stability and Performance of Slopes-II in Berkeley, California in June 1992, which attracted a record number of participants (800). Major geotechnical conferences held in the US during 1992-93 that involved ISSMFE, USNS, or ASCE sponsorship were Geotechnical Practice in Dam Rehabilitation, Raleigh, North Carolina, April 1993, and The Third International Conference on Case Histories in Geotechnical Engineering, St Louis, Missouri, June 1993.

The Seventh International Conference on Expansive Soils, which was co-sponsored by ISSMFE, was held in Dallas, Texas, August 2-5, 1992. There were 222 registrants from 23 countries that participated in the technical sessions and two post-conference tours.

A special symposium was held in Mexico in August 1992 at which memorial proceedings were issued in memory of the late Raul J Marsal, who made many contributions to the advancement of soil mechanics in Mexico and throughout the Americas. A two-volume proceedings is now available for the 1987 International Symposium on Geotechnical Engineering of Soft Ground. A two-day workshop on Foundation Performance During Earthquakes and Its Influence on Building Codes was held in Mexico City in August 1992.

Several conferences and meetings were held in Canada, including the 44th Canadian Geotechnical Conference in Calgary, Alberta, September 1991, and the 45th CGS Conference in Toronto, Ontario in October 1992 with 300 delegates, which emphasized innovation conservation, and rehabilitation. The 46th Conference was held in Saskatoon, Saskatchewan in September 1993 and had the theme Geotechnique – Past, Present and Future.

The ISSMFE is joining with the CGS in sponsorship of the First International Conference on Environmental Geotechnics to be held in Edmonton, Alberta, July 10-15, 1994. It is anticipated that as many as 800 delegates may attend this conference, which marks the first major effort by ISSMFE to greatly expand its activities in the area of environmental geotechnology.

#### MISCELLANEOUS ITEMS

The USNS has underwritten the new H Bolton Seed Medal

#### **Appendix 6f**

#### **REPORT ON ACTIVITIES IN THE SOUTH AMERICA REGION MAY 1991 – DECEMBER 1992 L Décourt**

##### **1. Introduction**

Five, out of the ten countries belonging to the South America Region, Argentina, Brazil, Ecuador, Peru and Venezuela, have replied to our letter asking for information.

##### **2. Argentina – Sociedad Argentina de Mecanica de Suelos**

From 5 to 9 of August, 1991 the 1st Argentinian Symposium on Geotextiles was held in Buenos Aires.

Scheduled for the next months are the following events:

- September/1992 : Course on Introduction to Rock Mechanics by Dr. Jorge Soares et al.
- November/1992 : Course on Geology for Engineers.

#### **3. Brazil**

##### CONFERENCES

- |                                   |   |
|-----------------------------------|---|
| – November/1991 : Rio de Janeiro  | – 2nd Symposium on Tailing Dams   |
| – November/1991 : São Paulo       | – 2nd Engineering Seminar on Special Foundations                        |
| – December/1991 : Brasilia        | – 1st Symposium on Non Saturated Soils                                  |
| – May/1992 : São Paulo            | – Symposium on Soils of the City of São Paulo                           |
| – September/1992 : Rio de Janeiro | – 1st Brazilian Conference on Stability of Slopes                       |
| – November/1992 : Belo Horizonte  | – Workshop – Brazilian needs in Geotechnical Engineering                |
| – November/1992 : Brasilia        | – Seminar on Applications of Geosynthetics in Geotechnical Engineering. |

#### **4. Ecuador**

The Equatorial Society is basically engaged in the preparation of a conference on land slides. Initially this symposium was to be the second in South America, but now they want it to be the first Pan American Symposium. I intend to discuss this matter with Prof. J.K. Mitchell during the Board Meeting.

Anyway, being either South American or Pan American, this symposium is scheduled for August 1993.

#### **5. Peru – Comité Peruano de Mecanica de Suelos, Fundaciones y Mecanica de Rocas**

##### CONFERENCES

Several conferences have been scheduled

- |           |  |
|-----------|--|
| May       | : Use of Gabions in Civil Engineering  |
| June      | : Brazilian Experience on the Design of Reservoirs and Hydro Electric Power Plants |
| August    | : Foundations in Difficult Soils   |
| September | : Symposium on Design of Pavements   |
| October   | : The use of Geotextiles in Civil Engineering                                      |
| November  | : Tunnels in Expansive Rocks   |

A National Conference on Soil Mechanics is scheduled for the near future

## **6. Venezuela – Sociedad Venezolana de Mecanica del Suelo e Ingenieria de Fundaciones**

### CONFERENCES

#### **– XII Venezuelan Geotechnical Symposium**

This event is scheduled for November and will deal with 25 years of Geotechnical experiences with the Caracas Metro. During the Opening of this event the III Conference Gustavo Perez Guerra will be given.

### PUBLICATIONS

Two issues of the Bulletin of the SVMSIR have been published.

#### **REPORT ON ACTIVITIES IN THE SOUTH AMERICA R REGION AUGUST 1991 – DECEMBER 1993 L. Décourt**

In this report the most important activities of the Societies in the period from August of 1992 to December, 1993 are summarized.

#### **Brazil**

### EVENTS

The main events promoted by the Associação Brasileira de Mecânica dos Solos were:

- Fair on Dynamics in Civil Construction. São Paulo, from 12 to 13 August. 1992
- COBRAE I First Brazilian Conference on Stability of Slopes. Rio de Janeiro, from 3 to 5 November, 1992
- Tunnels in Soils, São Paulo, 3 December, 1992

### PUBLICATIONS

The Geotechnical Journal Solos e Rochas keeps on being edited each four months.

- The ABMS News are edited monthly.

### ELECTIONS

As far as the elections are concerned, the Brazilian Society supports Prof. Michele Jamiolkowsky and Mr. Luis Valenzuela, respectively for the offices of President and Vice President for South America of the ISSMFE.

The Associação Brasileira de Engenharia de Fundações, (Brazilian Association of Foundation Engineering) a sister Society of ABMS

created the Grillo Lecture in Honour to Prof. Odair Grillo the first soil mechanics engineer, and the first soil mechanics and foundations professor in Brazil. These conferences are to be given every two years. Exceptionally this year instead of one three conferences will be given in November 25 by professors Victor F.B. de Mello, Sigmundo Golombek and Luciano Décourt.

#### **Chile**

### EVENTS

The main activities of the Sociedad Chilena de Geotecnia were the following:

- 3rd Geotechnical Congress

This conference was held in La Serena in May of 1993.

- Intensive participation in the ISSMFE, TC-7

### LECTURES

Six important lectures were given in the period from August 1992 to June 1993 by Prof. Charles Fair Hurst, President of ISRM, Dr. George Zagorski, Vice President of National Seal Company (USA), Prof. Don Deere (USA), Prof. Michele Jamiolkowski (Italy) and Mr. Bayard Materon (Colombia)

### PUBLICATIONS

- Sochige News No. 13
- Special Volume, International Seminar on Seismic design, abandon and reclamation of dams, IX CPMSIF.
- Vol. IV of the IX PACSMFE
- Proceedings of the Third Chilean Geotechnical Conference

### ELECTIONS

The Chilean Society informs that supports Prof. M. Jamiolkowski and Mr. L. Valenzuela for respectively President and Vice President for South America of the ISSMFE.

#### **Equador**

The Sociedad Ecuatoriana de Mecanica de Suelos Y Rocas is promoting the First Pan-American Symposium on landslides. The Symposium, originally scheduled for September of 1993 was postponed to August of 1994.

## **Paraguay**

### EVENTS

The Sociedad Paraguaya de Geotecnia is organizing a large program of investigation on the occurrence of soft rocks in the Basin of the Prata River. This program involves many countries other than Paraguay like Argentina, Bolivia, Brazil and Uruguay. A first meeting held in the central office of ABMS was attended by the regional Vice Presidents of International Societies of Soil Mechanics, Rock Mechanics and Engineering Geology and also the Presidents of the societies of Brazil and Paraguay.

### ELECTIONS

Paraguay supports Prof. Jamiolkowski for the Presidency of the ISSMFE.

## **Peru**

### EVENTS

The Comité Peruano de Mecánica de Suelos, Fundaciones Y Mecánica de Rocas promoted the following events:

- August 1992 – Applications of Rock Mechanics in the design of tunnels
- October 1992 – Applications of Geosynthetics in Civil Engineering
- November 1992 – Structural solutions of foundations in difficult soils
- February 1993 – Design and construction of roads
- May 1993 – Foundation of structures
- December 1992 – VII Conference on Soil Mechanics and Foundation Engineering

### ELECTIONS

Peru supports Prof. Jamiolkowski for the Presidency of the ISSMFE.

From the other societies of the South America Region no information was received.

## **Appendix 7**

### **PERMANENT COORDINATING SECRETARIAT MEETING LISBON 21ST JUNE 1993**

Report by Secretary General

A meeting of the Permanent Coordinating Secretariat was held in Lisbon on 21 June 1993 with Professor Lousberg as Secretary. It was held concurrently with the Three Presidents' Meeting, subsequent to which a combined meeting was held.

## CONFERENCES

A check was made of conference dates for the three sister societies over the next few years and it was noted that there were no clashes. The XI ECSMFE in Copenhagen in 1995 is being co-sponsored by IAEG who may hold their Council Meeting at this venue.

## ISRM JOURNAL

The ISRM Secretary General explained that the ISRM Journal is sent by DHL directly to members in 5 countries at \$10 per person for the 4 copies per annum. An alternative operation is to send copies in bulk to KLM in Amsterdam, who will insert sheets from National Groups at no extra cost, and post to individuals.

## IAEG STATUTES

The IAEG Secretary General advised that the new IAEG statutes were now available.

## IUGS MEMBERSHIP

All three sister societies are now affiliated members of the International Union of Geological Sciences. A proposal has been made that the Working Party on the World Landslide Inventory (WP/WLI) on which there are members from all the sister societies, should become an IUGS Commission.

## DIRECTORY

After lunch with the three Presidents, at their request the meeting discussed the possibility of producing a combined Directory for the three sister societies on computer disc. There was discussion on what might be included, in addition to details of individual members; for example, the statutes of the Societies, details of Technical Committees/Commissions, Board Members, educational material available and similar material. This matter was also discussed at the Three Presidents' Meeting and at the subsequent combined meeting, where it was agreed that a comprehensive data base for the three sister societies should be established, which could be accessed as desired by each of the three societies. A commercial organisation could be used to set up the data base and retrieval system.

## **Appendix 8**

### **14TH ICSMFE, HAMBURG, SEPTEMBER 6-12, 1997**

Report by U Smolczyk

The Congress will be held in the Congress Centre which is located in the centre of the city of Hamburg. The congress facilities are abundant: there are 17 halls of various sizes starting with 3,000 persons audience down to 50.

The center is connected to an international luxury hotel but there are another 25 international hotels available. Thus accommodation in several price classes will be no problem. It should be mentioned that even small hotels provide a good standard at moderate prices.

The place is easy to get to. By taxi the airport is only 20 min away. Intercity trains stop right next door to the congress place. An efficient signposting system guides car drivers straight to an underground car park with 1000 vehicles capacity. Public transport is well developed. Rapid transit underground and suburban rails links, buses and even port ferries are all included in the same public transport system. In the city you are never more than 500 m away from a rapid transit rail station. Tickets are valid for any means of transport and a special Congress Ticket allows participants to use public transport free of charge.

Just a few minutes' walk from the congress are ten shopping malls with any kind of exclusive and normal shopping facilities. Also, opera, museums, theatres and a beautiful park with its own Japanese garden are in walking distance.

It is assumed that more than 1,000 participants may be expected. The congress itself will last six days. Using extensive fair facilities, an exhibition of foundation engineering will be complementary. It is assumed that in 1997 the reclamation of Eastern Europe will have come to a stage when civil engineering will be needed extensively. Thus we expect a vital interest of building companies to document their capacities in realizing difficult foundation problems.

The programming has just commenced by a first meeting in early December. As here in Delhi, most probably there will be a combination of plenary sessions and parallel discussion sessions. Based on good experiences with German national conventions, it is intended to provide ample possibilities to get an active exchange of experiences between science and practice. Therefore topics like environmental geotechnics, underground works in soft ground, development of underground space for various kinds of usage, developments in modern foundation engineering techniques, application of geotextiles, improvement of ground will be on stage. Of course, the usual topics of soil mechanics will be considered adequately, too.

There will be no problem to offer interesting by-programmes and tours. We shall rather run into difficulties when we shall make the choice. Technical excursions will lead to projects where participants can look how the results of modern geotechnics are applied in practice. Post conference tours will be offered to all four directions, and naturally a visit to Berlin with her large building programmes to become the German capital will be included.

At present, the German Geotechnical Society is about to prepare the main contracts and to define the budget items. It seems that the congress expenditure may amount to 1.2 million dollars. Depending on the number of participants we hopefully will be able to remain with the congress fee for participants and companions below the present level here.

## Appendix 9

### INTERNATIONAL AFFILIATIONS

#### Report by Secretary General

#### IUGS

The Council of the International Union of Geological Sciences at its August 1992 meeting in Kyoto admitted ISSMFE into affiliated Membership of IUGS. In accordance with IUGS policy an annual account of ISSMFE activities was submitted to IUGS in December 1992.

A proposal is under consideration to structure the UNESCO Working Party on World Landslide Inventory (WP/WLI) as a Commission of IUGS. ISSMFE representation on WP/WLI is through TC11 on Landslides.

#### UATI

The Secretary General attended the biennial General Assembly of the Union of International Technical Associations and Organisations in Paris 5/6 April

1993. It was announced at this meeting that ISSMFE had resumed its membership of UATI.

One of the matters given prominence at the meeting was the need to focus on University-Industry cooperation. UATI had been asked by UNESCO to organise a congress on this topic in Brussels 23–26 June, 1993.

UATI/WFEO Joint Executive Committee is focusing its attention mostly at present on developing activities under the IDNDR Joint Working Committee. The President of the Joint Working Committee, M Villevielle, gave an outline of the five projects assigned to them by the IDNDR Scientific and Technological Committee, viz.: Megacities, Seismic and Wind Resistant Structures, a Roving Seminar, Floods and Storms, and the specific case study of Lake Nyos in Cameroon. Work under Megacities has been entrusted to the Institution of Civil Engineers in London (see item 18). A Roving Seminar project had been instituted in the Caribbean. Work had been done on floods and storms, particularly in relation to early warning and detection systems. Studies had also been made on Lake Nyos.

A presentation was made to the meeting by Mr John Mackenzie, Secretary General of WFEO who saw 3 major areas in which UATI/WFEO cooperation would be fruitful, viz: Sustainable Development, Environmental Engineering and IDNDR activities.

Subsequent to this meeting and after discussion with the ISSMFE President, Dr Morgenstern, letters dated 24 June were sent from the ISSMFE Secretariat to M Pecoux, UATI Secretary General, one informing him that ISSMFE would be interested in participating in any IDNDR projects with a geotechnical interest in which UATI was involved, and the other proposing that UATI could sponsor a civil engineering library distribution scheme similar to, but more comprehensive than, the ISSMFE Model Library Scheme. The possibility of ISSMFE taking a lead role in such an initiative was expressed.

No reply has been received from UATI with respect to IDNDR, but a favourable response was received with respect to the Library Distribution Scheme. This letter requested that ISSMFE should send to UATI a draft project proposal with costs sometime in October, to enable it to be put to the UATI Administrative Board at its meeting on 5 November 1993 in Brussels.

A proposed Library Distribution Scheme, prepared by the Secretary General and approved by the Board at its meeting in Athens on September 19, was sent to UATI on September 29, 1993.

## Appendix 10

### COMITE FRANCAIS DE LA MECANIQUE DES SOLS SOUS-COMITE FRANCOPHONIE

#### French Model Library

#### Report by M Gambin

In the late 80's Technical Committee TC-21 investigated the possibility of setting up a model library for distribution to research or educational institutions in developing countries at a low cost or free of charge.

The list of books written in English was prepared as early as 1988. Further to the request of President Morgenstern at the Council Meeting in Florence, May 1991, tentative list of French books is proposed here which has been eagerly awaited by countries such as Morocco, Tunisia, Egypt, Romania, Algeria and Iran, to quote those countries who have a National Society affiliated to the ISSMFE. This list prepared by the French Society is being circulated among other French speaking countries such as Belgium, Canada and Switzerland to obtain full agreement of their respective National Societies. A final list with cost involved shall be presented at New Delhi or shortly before hand.

**BIBLIOTHÈQUE TYPE POUR LE GÉOTECHNICIEN PROJECT DE LISTE D'OUVRAGES**

(Model Library – Tentative list)

1er niveau  
(1st level)

Injection des Sols  
H Cambefort, Eyrolles, 1967

Aide Mémoire d'hydraulique souterraine  
M Cassan, Eyrolles, 1986

Les Essais in-situ  
M Cassan, Eyrolles, 1988

Mécanique des Sols  
J Costets et G Sanglerat, Dunod, 1992

La Pratique des Sols de Fondation  
G Filliat, Rédacteur en chef, Le Moniteur, 1981

Remblais et Fondations sur sols compressibles  
J P Magnan, presses ENPC, 1984

Eléments de Mécanique des Sols  
F Schlosser, Presses ENPC, 1989

Guide pour l'étude et la réalisation des soutènements  
Y Tcheng, UTI, Sedima, 1981

Règles Techniques de conception et de calcul des fondations des ouvrages de Génie Civil  
Fascicule 62, Titre V, CCTG  
LCPC/SETRA, 1992

Fondations superficielles, fondations profondes  
Documents Techniques Unifi's (D.T.U.) 13-11, 13-12, 13-2  
CSTB, Paris, 1978-1992

Instructions Techniques pour la surveillance et l'entretien des Ouvrages d'Art:  
a) Fondations en site terrestre (Fascicule 11), 1979  
b) Fondations en site aquatique (Fascicule 10), 1979  
c) Ouvrages de soutènement (Fascicule 51), 1985  
LCPC/SETRA

2e niveau  
(2nd level)

Dimensionnement des ouvrages en palplanches en acier  
A Houy, Imprimerie Quablez, Metz, 1986

Remblais sur argiles molles  
S Leroueil, J P Magnan, F Tavenas, Lavoisier, 1985

Capacité portante et tassements des fondations à partir des essais in-situ  
J Nuyens, P U Bruxelles & Eyrolles, 1973

Dynamique des Sols  
A Pecker, Presses ENPC, 1984

Fondations et ouvrages en terre  
G Philpionnat, Eyrolles, 1979

MUR 73  
LCPC/SETRA, 1973

Les Pieux Fores  
LCPC/SETRA, 1976

Réalisation des Remblais et couches de forme,  
Guide Technique dit G.T.R. (2 fascicules)  
LCPC/SETRA, 1992

Recommendations AFPS 1990 (Tomes I et II)  
AFPS, Presses ENPC, 1990 et 1991

Recommendations Clouterre  
Presses ENPC, 1991

**Appendix 11**

**SETS OF BOOKS SENT BY SOCIEDAD ESPAÑOLA DE MECANICA DE SUELO Y CIMENTACIONES TO SOUTH AMERICAN ISSMFE MEMBER SOCIETIES.**

- Quinto Congreso Europeo de Mecanica del Suelo y Cimentaciones (Abril, 1972) Madrid.
- Memorias del Simposio Nacional sobre Rocas Blandas (Noviembre, 1976) Madrid.
- Memorias del Simposio Nacional sobre Tuneles (Diciembre, 1974) Madrid.
- Simposio sobre "Uso Industrial del Subsuelo" (Abril, 1981) Madrid.
- Simposio sobre Terraplenes, Pedraplenes y Otros Rellanos (Marzo 1986) Torremolinos.
- El Agua y el Terreno en las Infraestructuras Viarias (Noviembre, 1989).
- Geotecnia y Cimientos I: Propiedades de los suelos y de las rocas (1971), por J A Jiménez Salas et al.
- Geotecnia y Cimientos II: Mecanica del suelos y de las rocas (1981), por J A Jiménez Salas et al.
- Geotecnia y Cimientos III: Cimentaciones, excavaciones y Aplicaciones de la Geotecnia (1980) por J A Jiménez Salas et al.

**Appendix 12**

**ISSMFE NEWS**

Report by Secretary General

ITEMS FOR ISSMFE NEWS

The experiment of appointing Regional assistant editors has been disappointing as the response from them has been very poor. This highlights the difficulty of getting material for ISSMFE News. For example a note in the December 1992 issue asking for interesting or unusual photographs with some 250 word description has evinced no response. On the other hand, a direct request to Professor Jamolkowski for an article on Pisa resulted in the excellent article which appeared in Vol 20, No 2, May 1993. Clearly more short articles of this type should be sought. In an effort to improve the flow of material, a letter dated 15 June 1993 was sent from the Secretariat to all Member Societies asking if they could each appoint a suitable person to send items of interest to the Secretariat. The letter listed the sort of items which would be suitable for inclusion in ISSMFE News. Only a small number of positive responses with suggested names has been received, but a further letter has been sent and it is to be hoped that this will in time lead to regular contributions from Member Societies.

## NORTH AMERICA

In response to a request from the President the Secretary General wrote to John Gadsby of BiTech, 18th September 1992, regarding the possibility of distributing ISSMFE News in Canada and USA, but also expressing the view that inclusion of an ISSMFE section in Geotechnical News may be a better solution. There has been an understanding for some years that such a section should be included and ISSMFE News is sent to BiTech for them to extract relevant items. However, BiTech have not always included a specific ISSMFE section.

BiTech quoted a price of about USD 1.00 per copy for inserting separate copies of ISSMFE News into their mailshots. The cost of distributing 6000 copies, four times a year, to members in Canada and USA is thus USD 24,000 or approximately GBP 16,000. This compares with a total budget figure for ISSMFE News of GBP 6,500. The GBP 16,000 represents about GBP 2.70 per member, compared with ISSMFE membership fee which for Canadian and USA members averages barely GBP 3.00 per member.

### **Appendix 13**

#### **ISSMFE AUDITED ACCOUNTS 1991, 1992**

##### **Report by Secretary General**

##### **1 JAN 1991 TO 31 DEC 1991**

The ISSMFE audited accounts for 1991 show an increase in cash balance of GBP 31,212, and a decrease of CHF 43,315. Taking GBP 1 = CHF 2.535 gives a net increase of GBP 18,464 compared with a budgeted deficit of GBP 22,280. It can be seen from the attached summary tabulation of accounts and budget items that subscription receipts exceeded the budgeted amount by GBP 5,806 (probably because it was a Council Meeting year) and other income exceeded budget by GBP 12,398, arising mainly from higher than expected interest rates in the UK for 1991, together with GBP 3,875 from the 1989 World Geoguide. Expenditure was substantially less than budgeted on a number of items, in particular travel and entertainment (GBP 8,119), YGEC (GBP 6,000) as there was no request for any money to support YGEC activities, and staff emoluments and office (GBP 6,900) as the University of Cambridge is not at the moment asking for rental payments on the office space and facilities used by ISSMFE. Corporation Tax exceeded budget by GBP 2,134, which reflected the higher interest received on which the corporation tax is based.

##### **1 JAN 1992 TO 31 DEC 1992**

The ISSMFE audited accounts for 1992 show an increase in cash balance of GBP 10,858 plus CHF 13,354. Taking GBP 1 = CHF 2.2175 on 31st December 1992 gives an increase in cash balance of GBP 16,880. This compares with a budgeted deficit of GBP 11,650.

It can be seen from the summary tabulation of accounts and budget items that subscriptions exceeded the budgeted amount by GBP 2,569 and other income exceeded budget by GBP 4,352, mainly because of higher than expected interest rates.

Office expenses, photocopying, telephone, fax, stationery and postage were a little less than budgeted, but the main items of saving in expenses were travel and entertainment (GBP 11,508 less) and staff emoluments (GBP 7,494 less). Other major savings against budget were GBP 5,000, as no video lectures were made, and GBP 6,000, as there were no requests for YGEC expenditure. The newsletter showed a slightly greater cost than expected (GBP 631) and corpo-

ration tax was GBP 2,066 higher, reflecting higher interest earned. There was also an expenditure of GBP 840 on reproducing slides which was not allowed for in the budget.

#### **SUMMARY OF ACCOUNTS AND BUDGET ITEMS 1991**

RECEIPTS	Actual GBP	Budget GBP	Actual-Budget GBP
Subscriptions	63,806	58,000	+5,806
Other Income	23,398	11,000	+12,398
<b>EXPENDITURE</b>			
Travel and Entertainment	16,881	25,000	-8,119
Photocopying	897	1,500	-603
Telephone, Telex and Fax	1,221	1,320	-99
Stationery	586	700	-114
Postage	2,022	2,000	+22
Auditors Fees & Bank Charges	922	800	+122
List of Members	0	0	0
Newsletter	5,826	6,500	-674
Corporation Tax	4,634	2,500	+2,134
Kevin Nash Medal	0	1,500	-1,500
YGEC	0	6,000	-6,000
Model Library	0	1,000	-1,000
Office Equipment	1,196	1,500	-304
Video Lectures	4,090	4,500	-410
Staff Emoluments and Office Costs	30,100	37,000	-6,900

#### **SUMMARY OF ACCOUNTS AND BUDGET ITEMS 1992**

RECEIPTS	Actual GBP	Budget GBP	Actual-Budget GBP
Subscriptions	70,569	69,000	+2,569
Other Income	17,352	13,000	+4,352
<b>EXPENDITURE</b>			
Travel and Entertainment	13,492	25,000	-11,508
Photocopying	291	1,500	-1,209
Telephone, Fax	1,395	1,450	-55
Stationery	512	700	-188
Postage	1,427	2,000	-573
Auditors Fees & Bank Charges	1,073	900	+173
List of Members	0	0	0
Newsletter	7,431	6,800	+631
Corporation Tax	4,566	2,500	+2,066
Kevin Nash Medal	0	0	0
Office Equipment	889	800	+89
Video Lectures	0	5,000	-5,000
Staff Emoluments and Office Cost	31,506	39,000	-7,494
YGEC	0	6,000	-6,000
Model Library	836	1,000	-164
Slides	840	0	+840

INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND FOUNDATION ENGINEERING

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1991

	Credit Suisse SFr	Barclays Bank £	Investment Accounts £	University of Cambridge £
CASH BALANCE AT 1 JANUARY 1991	129,381	64,124	101,322	(4,542)
ADD: RECEIPTS				
Subscriptions	148,014	5,418	—	—
Lexicon sales and other publications	—	861	—	—
Travel refund	—	397	—	—
Interest received	—	6,939	11,326	—
World Geoguide	—	3,875	—	—
	<u>277,395</u>	<u>81,614</u>	<u>112,648</u>	<u>(4,542)</u>
LESS: PAYMENTS				
Emoluments and staff costs	—	21,116	—	8,984
Travel and entertainment	—	16,881	—	—
Photocopying	—	—	—	897
Telephone, telex and fax	—	1,183	—	38
Postage	—	—	—	2,022
Stationery	—	353	—	233
Newsletter	—	5,826	—	—
Audit fees	—	799	—	—
Bank charges	313	—	—	—
Corporation tax	—	4,634	—	—
Master videos	—	4,090	—	—
Office equipment	—	1,196	—	—
	<u>313</u>	<u>56,078</u>	<u>—</u>	<u>12,174</u>
ADD: TRANSFERS FROM OTHER ACCOUNTS	—	70,648	—	12,000
LESS: TRANSFERS TO OTHER ACCOUNTS	<u>180,016</u>	<u>12,000</u>	<u>—</u>	<u>—</u>
CASH BALANCE AT 31 DECEMBER 1991	<u>SFr97,066</u>	<u>£84,184</u>	<u>£112,648</u>	<u>£(4,716)</u>
INCREASE/(DECREASE) IN CASH BALANCE	<u>SFr(32,315)</u>	<u>£20,060</u>	<u>£11,326</u>	<u>£(174)</u>

Information: At 31 December 1991 - £1 = SFr 2.5350

Audited by Coopers and Lybrand Deloitte.

INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND FOUNDATION ENGINEERING

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1992

	Credit Suisse SFr	Barclays Bank £	Investment Accounts £	University of Cambridge £
CASH BALANCE AT 1 JANUARY 1992	97,066	84,183	112,648	(4,716)
ADD: RECEIPTS				
Subscriptions	143,709	5,762	-	-
Lexicon sales	-	355	-	-
Slide sales	-	563	-	-
Travel and postal refund	-	403	-	-
Interest received	-	6,511	9,520	-
	<u>240,775</u>	<u>97,777</u>	<u>122,168</u>	<u>(4,716)</u>
LESS: PAYMENTS				
Emoluments and staff costs	-	21,987	-	9,519
Travel and entertainment	-	13,492	-	-
Photocopying	-	-	-	291
Telephone, telex and fax	-	1,395	-	-
Postage	-	-	-	1,427
Stationery	-	244	-	268
Newsletter	-	7,431	-	-
Audit fees	-	870	-	-
Bank charges	355	43	-	-
Corporation tax	-	4,566	-	-
Model library	-	836	-	-
Office equipment	-	889	-	-
Slides	-	-	-	840
	<u>355</u>	<u>51,753</u>	<u>-</u>	<u>12,345</u>
ADD: TRANSFERS FROM OTHER ACCOUNTS	-	51,842	-	9,000
LESS: TRANSFERS TO OTHER ACCOUNTS	<u>130,000</u>	<u>9,000</u>	<u>-</u>	<u>-</u>
CASH BALANCE AT 31 DECEMBER 1992	<u>SFr110,420</u>	<u>£88,866</u>	<u>£122,168</u>	<u>£(8,061)</u>
INCREASE/(DECREASE) IN CASH BALANCE	<u>SFr13,354</u>	<u>£4,683</u>	<u>£9,520</u>	<u>£(3,345)</u>

Information: At 31 December 1992 - £1 = SFr 2.2175

Audited by Coopers and Lybrand Deloitte.

## Appendix 14

### ISSMFE ORDINARY BUDGET

	YEAR					
	1992 GBP	1993 GBP	1994 GBP	1995 GBP	1996 GBP	1997 GBP
<b>RECEIPTS</b>						
Member Society						
Subscriptions	63,800	68,000	70,000	70,000	72,000	74,000
Interest (less Corp. Tax)	11,465	8,000	7,000	7,000	7,500	8,000
	<u>75,265</u>	<u>76,000</u>	<u>77,000</u>	<u>77,000</u>	<u>79,500</u>	<u>82,000</u>
<b>EXPENDITURE</b>						
Emoluments & Staff						
Costs	31,507	40,500	42,000	42,000	44,000	44,000
Office costs & equipment	889	800	7,500	8,000	9,000	9,000
Photocopying & printing	290	1,600	500	500	600	1,000
Telephone & Fax	1,396	1,600	2,000	2,200	2,500	2,500
Postage	1,427	2,200	1,800	1,900	2,000	2,500
Stationery	510	740	600	700	800	1,000
Audit fees/Bank charges	1,075	1,000	1,200	1,200	1,250	1,300
Travel and entertainment	13,090	25,000	38,000	30,000	30,000	30,000
	<u>50,184</u>	<u>73,440</u>	<u>93,600</u>	<u>86,500</u>	<u>90,150</u>	<u>91,300</u>
<b>SURPLUS (DEFICIT)</b>	25,081	2,560	(16,600)	(9,500)	(10,650)	(9,300)
<b>ACCUMULATED SURPLUS ORDINARY &amp; EXTRAORDINARY BUDGETS</b>	253,160	233,420	223,570	217,220	207,470	207,770

### ISSMFE – EXTRAORDINARY BUDGET

	1992 GBP	1993 GBP	1994 GBP	1995 GBP	1996 GBP	1997 GBP
<b>RECEIPTS</b>						
Corporate Member Subscriptions			4,000	7,000	10,000	10,000
Conference Income			30,000	15,000	10,000	30,000
Royalties: Proceedings/Reports			3,000	3,000	3,000	3,000
Sales of Slides	563	2,000	2,000	2,000	2,000	2,000
Sales of Videos		2,000	500			
Lexicon and other Sales	355	400	500	500	500	500
	<u>918</u>	<u>4,400</u>	<u>40,000</u>	<u>27,500</u>	<u>25,500</u>	<u>45,500</u>
<b>EXPENDITURE</b>						
Conference Support		6,000	15,000	6,000	6,000	6,000
Proceedings and Reports						
Model Library	836	1,000	500	600	700	1,000
Other Initiatives			4,000	5,000	5,000	5,000
Videos		5,000				
Slides	840		1,400	1,400	1,400	1,400
Kevin Nash Gold Medal		0				1,000
List of Members		7,400	2,000			10,000
ISSMFE NEWS	7,431	7,300	9,000	10,000	10,000	10,000
UATI Subscriptions			1,350	1,350	1,500	1,500
	<u>9,107</u>	<u>26,700</u>	<u>33,250</u>	<u>24,350</u>	<u>24,600</u>	<u>35,900</u>
<b>SURPLUS (DEFICIT)</b>	(8,189)	(22,300)	6,750	3,150	900	9,600