

# IMU

B U L L E T I N

OF THE

INTERNATIONAL MATHEMATICAL UNION

SPECIAL NUMBER

Eighth General Assembly, 1978

SECRETARIAT :

COLLEGE DE FRANCE

11, Place Marcelin Berthelot

75231 PARIS CEDEX 05 FRANCE

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INTERNATIONAL MATHEMATICAL UNION

EXECUTIVE COMMITTEE

(1 January 1975 - 31 December 1978)

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President : Professor Deane Montgomery

Vice-Presidents : Professor J.W.S. Cassels  
Professor G. Vranceanu

Secretary : Professor J.L. Lions

Members : Professor E. Bombieri  
Professor M. Kneser  
Professor O. Lehto  
Professor M. Nagata  
Professor L.S. Pontrjagin

Past President : Professor K. Chandrasekharan

EIGHTH GENERAL ASSEMBLY  
OF THE  
INTERNATIONAL MATHEMATICAL UNION

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OTANIEMI, FINLAND  
August 11 - 12, 1978  
(Opening session : 10.00 a.m)

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AGENDA.

1. Opening of the Assembly
2. Address by the President
3. Appointment of Committees :  
(i) Credential Committee, (ii) Resolutions Committee, (iii) Tellers,  
(iv) Committee on Finance and Dues, (v) Nominating Committees.
4. Review of the Activities of the Union :
  - A - (i) Symposia, Conferences, (ii) IMU Lectures, (iii) IMU Fellowship,  
(iv) ICMI, (v) Exchange Commission and Development.
  - B - (i) IMU Bulletin, (ii) Canberra Circulars, (iii) World Directory of  
Mathematicians.
  - C - Support for the Organization of the International Congress of Mathematicians;  
grant to young mathematicians from developing countries.
5. Relations with ICSU :
  - (a) ICSU Resolution on Free Circulation of Scientists.
  - (b) ICSU Recommendation on tax of scientific participants to meetings.
6. Finances and Dues
  - A - Financial reports for the years 1974 - 1977.
  - B - Proposals for 1979 - 1982 :  
The Executive Committee does not propose an increase in dues but it proposes  
a special appeal for contributions to finance the development activities,  
beginning with the allocation of not less than 20,000 dollars for the  
quadriennium 1979 - 1982.

C - Budget estimate for 1979 - 1982.

7. Elections  
(i) Commissions, (ii) Executive Committee
8. Approval of the budget 1979 - 1982.
9. IMU and the International Congress of Mathematicians
10. Adoption of Resolutions
11. Next meeting of the General Assembly
12. Any other item with the permission of the President

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REPORT OF THE EXECUTIVE COMMITTEE  
TO THE EIGHTH GENERAL ASSEMBLY  
OF THE INTERNATIONAL MATHEMATICAL UNION

Otaniemi, Finland  
August 10 - 11, 1978  
(covering period June 1, 1974 - June 30, 1978)

A. MEMBERSHIP

The union has now 47 members, 5 members more than at the time of the General Assembly in Harrison Hot Springs in 1974.

New Members :

During the period 1974 - 1978, the following members were welcome in the Union, admitted by postal ballot under unanimous recommendation of the Executive Committee :

ARAB REPUBLIC OF EGYPT	into	Group I	from	1.1.76
CAMEROON	into	Group I	from	1.1.76
IRAN	into	Group II	from	1.1.76
REPUBLIC OF SINGAPORE	into	Group I	from	1.1.76
REPUBLIC OF THE PHILIPPINES	into	Group I	from	1.1.78

whereas some misunderstanding with PAKISTAN about the constitution of its National Committee led to the conclusion that this country wanted to reconsider its adhesion to the Union on a safer basis.

Changes of Group of Adherence :

FEDERAL REPUBLIC OF GERMANY and FRANCE from Group IV to V, effective from 1975,  
SOUTH AFRICA from Group I to II, effective from 1975,  
IRELAND from Group I to II, effective from 1976,  
BRAZIL from Group I to II approved by postal ballot of the member nations.

Thus, the members are distributed as follows :

Group I Arab Republic of Egypt, Argentina, Cameroon, China-Taiwan, Cuba, Greece, Iceland, Democratic People's Republic of Korea, Mexico, New-Zealand, Nigeria, Norway, Republic of the Philippines, Portugal, Singapore, Turkey.

- Group II Austria, Brazil, Bulgaria, Denmark, Finland, Iran, Ireland, Israël, Pakistan, Rumania, South Africa, Spain, Yugoslavia.
- Group III Australia, Belgium, Canada, Czechoslovakia, Democratic Republic of Germany, Hungary, India, The Netherlands, Sweden, Switzerland.
- Group IV Italy, Poland.
- Group V Federal Republic of Germany, France, Japan, United Kingdom, U.S.A., U.S.S.R.

This membership corresponds to a total voting strength of 110 and an annual subscription of 156 units. The unit being fixed at Sw. Fr. 600- the total amount of dues is therefore Sw. Fr. 93 600.

#### B. SYMPOSIA and CONFERENCES

The following symposia and conferences were held under IMU's co-sponsorship during the period under report. Detailed reports of these have already been presented in the IMU Bulletin n°9, 10. The scientific activities of the Union for the year 1977 are going to be presented in Bulletin n°13.

- 1975
1. Second International Symposium on Mathematical Problems in Theoretical Physics, Kyoto, January 23-29.
  2. Nordic Summer School on Partial Differential Equations, Lund, Sweden, June 16 - July 5.
  3. International Colloquium on Analysis and Topology, Paris - Orsay, June 17 - 20.
  4. Joint IMU / IUTAM Symposium on Applications of Methods of Functional Analysis to Problems of Mechanics, Marseille, September 2-6.
- 1976
1. Colloquium on Modular Forms, Bonn, July 2-14.
  2. Fourth International Symposium on Topology, Prague, August 23-26.
  3. Regional Conference on Mathematics and African Development, Rabat, July 26-31.

- 1977
1. International Symposium on Algebraic Geometry, Kyoto, January 10-14.
  2. International Colloquium on Topology and Algebra, Zürich, April 12-16.
  3. International Conference on Spectral Theory for Differential Problems, Uppsala, Sweden, April 18-23.
  4. International Conference on the Mathematical Problems in Theoretical Physics, Rome, June 6-15.
  5. International Symposium on Analysis and its Applications, Ibadan, Nigeria, June 25 - July 2.
  6. International Symposium on Approximation Theory, Campinas, Brazil, August 1-6.
  7. International Colloquium on Universal Algebra, Esztergom, Hungary, June 27 - July 1.
  8. International Conference on Differential Equations and their Applications "Equadiff IV", Prague, August 22-26.
  9. International Conference on Combinatorial Theory, Canberra, August 16-28.
  10. International Colloquium on Theory of Sets - Foundation of Mathematics, Beograd, Yugoslavia, August 29 - September 2.
  11. International Conference on Operators Algebras, Ideals and their Applications, Leipzig, September 20-30.
- 1978
1. Joint IMU / IUTAM Symposium on Symmetry and Group Theoretic Methods in Mechanics, Novosibirsk, August 25-29.

### C. IMU LECTURES.

Pursuing the series initiated in 1971, the following IMU Lecturers were :

1. Professor D. Mumford, I.H.E.S. (Institut des Hautes Etudes Scientifiques) Bures-sur-Yvette, France, in 1975.
2. Professor A.G. Vitushkin at U.C.L.A. (University of California at Los Angeles), in April-May 1977.

Both series are published in "L'Enseignement Mathématique".

#### D. IMU FELLOWSHIP.

Following Resolution 1 of the Seventh General Assembly held in Harrison Hot Springs, a special fund for the IMU Fellowship programme has been established, most generously helped by the Italian Research Council donation of five millions lire.

Dr. A. Swarup, from the Tata Institute of Fundamental Research in Bombay, was the IMU grantee for a Fellowship in 1975. He spent the first part of his stay at the Institut des Hautes Etudes Supérieures in Bures-Sur-Yvette near Paris, and the second half at the Eidgenossische Technische Hochschule (ETH) in Zürich.

Part of the Italian donation has been granted in 1978 to another young mathematician from the Tata Institute in Bombay. Dr. Balasubramanian received an invitation for a three-months visit to the Mittag-Leffler Institute in Sweden, IMU provided him with his travel expenses and part of his local expenses.

#### E. ACTIVITIES OF COMMISSIONS.

##### I. INTERNATIONAL COMMISSION ON MATHEMATICAL INSTRUCTION. (I.C.M.I.)

Since January 1st, 1975, the new Commission, elected at the Seventh General Assembly in Harrison Hot Springs, is composed of the following members at large :

S. IYANAGA	L.D. KUDRJACEV
E. BEGLE (*)	J. LELONG-FERRAND
P.L. BHATNAGAR (*)	B.H. NEUMANN
E. CASTELNUOVO	Z. SEMADENI
B. CHRISTIANSEN	J. SURA'NYI

and of 43 representatives of National Subcommissions.

The Executive Committee consists of :

President :	S. IYANAGA
Vice Presidents :	B. CHRISTIANSEN
	H.G. STEINER
Secretary :	Y. KAWADA
Members :	E.G. BEGLE (*)
	L.D. KUDRJACEV
	Sir J. LIGHTHILL

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(\*) Professor E. BEGLE passed away on March 1st, 1978 and Professor P.L. BHATNAGAR died on October 5, 1976.



The first meeting of the new elected ICMI was held at Vancouver during the International Congress of Mathematicians. The general theme of the meeting was : *"Evaluation of Modern Mathematics Curricula"*.

Another ICMI Symposium will be held at Helsinki, during the next International Congress of Mathematicians. The theme will be :

*"What Knowledge, Experience and Understanding of Mathematics should a Mathematics Teacher have ?"*.

The most important event for ICMI during this four-years period was the Third ICME (International Congress on Mathematical Education) held at Karlsruhe University, Federal Republic of Germany, from August 10 to 21, 1976.

During this Congress, a session of the General Assembly of the Commission was held on August 19, gathering 92 participants from 37 countries and UNESCO.

A detailed report of this Assembly is given in ICMI Bulletin n°8, December 1976.

### 3rd International Congress on Mathematical Education.

The organization of this Congress and its management were in the hands of the local organizing Committee with Professor Dr. H. Kunle as chairman.

The planning of the Programme was in charge of the International Programme Committee, under the chairmanship of Professor Dr. H.G. Steiner.

The Congress was attended by 1,831 full members from almost 80 countries.

The programme was meant, firstly, to give a broad survey of current trends and problems in mathematical education, and to also give participants the opportunity on more specific subjects according to their individual interests.

Thus, five main papers were presented by invited speakers and a special emphasis of the Congress activities was given in the 13 sections, each of them being opened with a survey-trend report, presented by an invited speaker and followed by a discussion with the International Advisory group and the participants.

Poster-sessions, Projects, Workshop and Working group were also presented and held discussions.

The full versions of the survey-trend reports are been published by UNESCO as volume 4 of the series *"New Trends in Mathematical Teaching"*. The ICMI Bulletin n°8 (December 1976) gives a detailed report of this Third ICME.

ICME 4 will be held at the University of California, Berkeley, from August 11-16, 1980.

Conferences on mathematical education, co-sponsored by ICMI (or IMU) for this 4 - years period were the following :

in 1975 :

- . International colloquium on evolving a mathematical attitude in the secondary education,  
Nyiregyhaza (Hungary), August 18-23, 1975.
- . International Symposium on combinatorics and probability in primary schools, Warsaw (Poland), August 25-28, 1975.
- . IFIP second world conference on computer education, Marseille, (France), September 1 - 5, 1975.
- . The Fourth interamerican conference on mathematical education, Caracas, (Venezuela), December 1 - 6, 1975.
- . Regional Conference on development of integrated curriculum in Mathematics for developing countries in Asia, Bharwari (India), December 15 - 20, 1975.

in 1976 :

- . The First Pan-African Congress of Mathematicians was held in Rabat (Morocco) from July 26 - 31, 1976.  
It worked in close cooperation with ICMI, especially in the second part of the Congress devoted to the aspects of mathematical education in Africa :
  - pre-university education ; higher education ; recognition of mathematical studies and diplomas between African universities.

in 1977 / 1978 :

- Support for these plans was decided in the General Assembly of ICMI at Karlsruhe :
- . International Conference on the Problems of training of Teachers of Mathematics, Pécs (Hungary), August 23 - 27, 1977.
- . Informatics and mathematics in secondary schools, impacts and relationships, Varna (Bulgaria), September 13 - 18, 1977.
- . Regional Seminar : Calculators in School Teaching, Luxembourg, May 29-3 June 1978.
- . The First Southeast Asian Conference on Mathematical Education - May 29, June 3, 1978, has been held in Manila, Philippines, with the following objectives :

- 1) to provide a regional forum for the presentation of the results of studies made with regards to
  - the type of mathematics programs currently offered at all levels,
  - the type of mathematics programs that should be and could be offered so as to meet the goals of developing countries like the Philippines and other S.E. Asian countries,
  - the training and upgrading of the mathematics staff in our schools.
- 2) to explore ways of making the problems of mathematical education known to the public and to our governments so as to obtain the needed support.
- 3) to explore ways of regional cooperation in mathematical education and research.

ICMI Bulletins give an extended information on these meetings as well as thorough review of :

- Number 9 . Cooperation between science teachers and mathematics teachers - collaborative programme between CTS, ICMI and UNESCO, (seminar to held at Bielefeld, Federal Republic of Germany, September 17 - 23, 1978).
- Number 10 . The activities of the "International study group on the Relations between the history and the pedagogy of Mathematics". (a programme of lectures, seminars and discussions on this theme to be developed at ICM'78 in Helsinki).
- . detailed programme of the three half days devoted to the ICMI Symposium on the education of mathematical teachers during the ICM' 78. August 16 - 18, 1978.

From 1975, the following issues of ICMI Bulletin were published :

- |          |              |           |                |
|----------|--------------|-----------|----------------|
| Number 5 | April 1975 , | Number 6  | October 1975 , |
| Number 7 | April 1976 , | Number 8  | December 1976, |
| Number 9 | June 1977 ,  | Number 10 | March 1978.    |

## II. EXCHANGE COMMISSION.

Report on the period January 1, 1975 to June 30, 1978.

by A.J. COLEMAN (Chairman)

The following is a purely personal report by the Chairman of the Exchange Commission summarizing the activities of the past three and half years which were carried out in the name of the Commission, and setting forth the difficulties which have been encountered in our efforts to implement the mandate given to the Commission at Harrison Hot Springs in 1974.

### Activities.

- 1) Following up on suggestions at Harrison Hot Springs, Professors Kahane, Kuiper and Lions looked into the possibility of obtaining significant financial support of the Commission by UNESCO but had no positive success.
- 2) On recommendation of the Commission, the IMU paid the travelling expenses of Professor J. Globevnik of Ljubljana, Yugoslavia who had a very successful visit to Trinity College, Dublin in 1976.
- 3) On recommendation of the Commission, the IMU contributed \$600 towards the travelling expenses of Professor Z. Semadeni from Poland, who made an extensive visit to South East Asia in May and June, 1978.
- 4) Professor B.H. Neumann of the Australian National University and a member of the Commission has taken the leading role in maintaining the production of the Canberra Circular which contains a very useful list of mathematical conferences and noteworthy information about mathematicians.
- 5) The Commission put before the Canadian International Development Agency a request, on behalf of African mathematicians, for support of the All African Mathematical Conference held in Rabat, Morocco in July, 1976. CIDA made a grant of \$16,000 ear-marked for partial support of travelling expenses of mathematicians from the less-developed countries.
- 6) At Rabat, the African Mathematical Union was created. On behalf of the AMU, the Commission put requests forward for financial support of several projects. CIDA agreed to support, in the amount of Can. \$47,300 the conference on Pre-University Mathematics in Africa which is being planned for April, 1979.
- 7) Professor Kawada, the Chairman of the Asian Sub-Committee of the Commission, corresponded about the possibility of holding a conference of mathematicians in Asia. However, progress on this idea seems to be inhibited by financial difficulties.

8) Pursuant to the Statutes of the IMU, which gives to standing commissions the authority to make their own internal office and banking arrangements, by a unanimous mail ballot in November, 1976 the Commission authorized the opening of a Current Account in the Canadian Imperial Bank of Commerce, Bagot and Brock Street, Kingston Ontario, Canada. For cheques to be valid, they must be signed by two of the Chairman, Treasurer and Deputy-Treasurer who, until December 31, 1978, are Professors A.J. Coleman, W.C. Higginson and K.K. Oberai respectively.

9) The Commission was invited to give financial support to the Analysis Conference which was held in Nigeria from March 25 to April 7, 1977 but was unable to help due to lack of funds (we had \$59,21 !). However, Professor T.T. West, a member of the Commission from Eire, attended largely at his own expense. Professor West has served as External Examiner for a Ph.D. thesis in Nigeria and acted as my proxy on the Preparatory Committee for Rabat.

Questions for Discussion in Finland.

It is clear from the above account that, although the Commission has accomplished a few useful things, we have scarcely begun to find ways by which mathematicians in developed countries can encourage and help our colleagues in developing countries. At Harrison Hot Springs, there was talk about putting \$6,000 at the disposal of the Commission. However, this proposal, which I understood had been approved by the General Assembly was never implemented by the Executive Committee. I realize that the sudden increase in travelling costs made the IMU central financing very difficult and it is not obvious what we could have done with \$6,000. As Professor Sz. Nagy remarked. in 1974 the going rate for a single Post Doctoral Fellowship in North America was \$9,000.

Without funds available to hold meetings of the Commission, it is very difficult to generate ideas and enthusiasm or to make plans. Something can be accomplished by mail, but not very much since all of us give our time gratis and are burdened with pressing personal or local university responsibilities. We must, therefore, make the best possible use of the opportunity of meeting one another in Finland. Those of us who get to Otanemi should share our views and try to ensure that the Assembly gives the Commission a clear mandate and authorizes a structure for it which will enable the Commission to respond affectively to the needs and wishes of our colleagues in developing countries. Arrangements have been made for Open Meetings on these problems at Helsinki on the evenings of Friday, August 18th, and Monday, August 21st - the place to be announced.

The following have been suggested as possible topics for consideration.

1) The current state and needs of mathematicians in Asia, Africa and South America;

- 2) The implementation of the new Statutes for the Commission which were issued in 1977 by the Executive Committee ;
- 3) The recommendations dealing with international cooperation of the Conference on Mathematics in Third World Countries held in Khartoum in March, 1978 ;
- 4) The mechanism of worthwhile exchange of mathematicians between the developed and the developing countries ;
- 5) How to obtain adequate financial resources to accomplish the work which we set ourselves ;
- 6) Procedures for facilitating the exchange of books, periodicals and notes.

The following terms of reference of the Commission on Exchange were drafted :

1. The Commission shall consist of a Chairman, and nine other members (including the Secretary of IMU, ex-officio), elected by the General Assembly of the Union (G.A.) on the nomination of the President of IMU.
2. The Commission shall elect, from among its members, a Secretary who shall act also as its Treasurer, unless the Commission appoints another member for that purpose.

The Chairman, the Secretary (if any) and the Treasurer (if any) shall be designated as Officers of the Commission.

The commission may, in exceptional circumstances, elect the Chairman as Secretary or Treasurer, as the case may be, provided that the Commission has at least two different (elected) officers.

The Commission shall make its own financial arrangements, subjects to By-law 10 of IMU.

3. The Commission shall be charged with the work of promoting and facilitating the international exchange of mathematicians and students of Mathematics for scientific purposes, in accordance with the Statutes and By-laws of the Union, and the administrative policies of the Union, as determined by the Executive Committee of IMU. To that end, the commission shall :

- a) support, as hitherto, the exchange of visits with member countries of the Union, in which, for one reason or another (e.g. non convertible currencies), such exchanges are not especially easy to arrange by other means ;
- b) cooperate with the Regional Groups established in the General Assembly of the Union in 1974 for the encouragement of the growth of Mathematics in developing countries ;

c) advise and assist existing international agencies working toward the same objective - such as UNESCO and ICSU - to the extent the Commission considers desirable, through the intermediary of the Executive Committee of IMU, with due regard to the non-governmental and non-political nature of IMU and its administrative policies, and without duplicating or prejudicing the work of the Commissions and Committees of IMU at points of common interest.

4. The Commission may accept gifts, legacies and subventions, subject to Statutes of IMU, Section 16. The Commission shall make its own arrangements for the utilization of such funds for the activities mentioned in (3), subject to approval of the Executive Committee of the Union.

5. The annual budget of the Commission shall be submitted to the Executive Committee of IMU for approval.

6. The Commission shall file a quadriennial report at each regular meeting of the General Assembly.

The E.C. decided to submit the text of the Terms of Reference of the Commission on Exchange to the members of the Union by postal ballot. The officers of the E.C. (that is, the President, two Vice Presidents and Secretary) were authorized to act on behalf of the E.C. in relation to the work of the Commission on Exchange, when urgent action was called for.

The result of the postal ballot up to November 15, 1976 are 67 positive votes out of 104 voting strength, thus giving a majority for the approval of this text which is inserted in the By-laws of the Union. No negative vote was received.

#### F. MEETINGS OF THE EXECUTIVE COMMITTEE.

The Executive Committee met five times during the period under report :

- (i) 34th meeting, Harrison Hot Springs, Aug. 16, 1974.
- (ii) 35th meeting, Paris, May 29-30, 1975.
- (iii) 36th meeting, Paris, May 28-29, 1976.
- (iv) 37th meeting, Cambridge, June 1-2, 1977.
- (v) 38th meeting, Paris, April 17-18, 1978.

Reports of these meetings are published on the IMU, Bulletins nos. 8, 9, 10, 12.

The Executive Committee lost one of his members, Professor M. Nicolescu, Vice President of our Union, who passed away suddenly in June of 1975.

Upon its recommendation, the member nations agreed by postal ballot to nominate Professor Vranceanu as Vice President of the Executive Committee.

#### G. WORLD DIRECTORY OF MATHEMATICIANS.

IMU suffered another great loss in December 1977 ; after the sudden death in June 1975 of one of our Vice Presidents (Professor Nicolescu), Professor Frostman who remained in charge of the W.D.M. after completing his terms of Secretary of our Union, passed away. The work of the W.D.M. is continuing.

Detailed accounts will be given at the General Assembly.

#### H. RELATIONS WITH ICSU-UNESCO.

The annual ICSU-UNESCO subvention has been of a great help to the Union, in its effort to promote international scientific activity. It stood as follows for the preceding years :

1975 : US\$ 13,000-

1976 : " 12,000-

1977 : Basic allocation of US\$ 8,000- , supplementary grant of US\$ 1,000- and special allocation under UNESCO contract of US\$ 3,000, to enable support to the Ibadan Symposium, the Rome Conference and the Equadiff IV in Prague.

1978 : a provisional allocation of US\$ 12,000 is proposed.



A special UNESCO contract has been formalized to enable granting some young mathematicians from developing countries to attend ICM '78 in Helsinki under the Travel Grants sub-committee ; it amounts to US\$ 2,000.--.

COSTED equally participates to this IMU Travel Grants Fund for the same amount. I.C.L. helped with a contribution of about US\$ 400,-- and the Organizing Committee of the ICM in Helsinki waived off the registration fees for the IMU grantees and offered inexpensive accommodation for them.

U N E S C O preparation of the Draft Medium-Term Plan 1979-1984.

ICSU circulated UNESCO consultation of Non-governmental Organizations in connection with the preparation of the Draft Medium-Term Plan for the years 1979-1984, under a questionnaire form. After discussion at the meeting of the Executive Committee in Cambridge, the following answer was given to the Executive Secretary of ICSU, considering that a detailed answer point by point to this questionnaire was impossible since many questions were of extreme importance and could only be answered after a general consultation of IMU members :

"The main point IMU wants to emphasize is that we, at IMU, put strong efforts towards the promotion of Science in general, and of Mathematics in particular, both Pure and Applied, in Developing Countries. Our Educational Branch (ICMI) is also making strong efforts in these directions".

General Committee meeting of ICSU in Budapest, September 1977 :

Recommendation of ICSU :

In its General Committee meeting in Budapest, September 1977, the following Recommendation was made by ICSU :

"The General Committee invites the International Scientific Unions to consider the introduction of a tax of US\$ 5,-- on scientific participants at Union sponsored Congresses and Conferences at which a registration fee is charged : 50% of the tax to be retained by the Union and 50% to be transmitted to ICSU. It invites the Unions to study the possibilities of introducing this and to report back to the General Committee at its 9th session".

RESOLUTION ON FREE CIRCULATION OF SCIENTISTS :

In its 15th General Assembly, the International Council of Scientific Unions made the following Resolution on Free Circulation of Scientists :

*"Having been informed* of a number of cases in which bona fide scientists from National Adhering Bodies of the International Scientific Unions had recently been prevented from attending Symposia organized and sponsored by these Unions through a refusal to grant entry visas and,

*Recalling* the earlier decisions taken by the ICSU emphasizing the right of free movement of scientists in this connection,

*Draws the attention* of the individual scientific Unions and other ICSU bodies to the following guidelines and *recommends* their adoption :

i) Before Symposia or meetings are arranged :

a) an assurance in writing should be obtained from the organizers in the country concerned that visas will be granted to bona fide if proper applications are made, and

b) the unfortunate consequences which may arise through failure to grant visas should be communicated to the organizers of the symposia or meetings involved ;

ii) The procedure recently adopted by the IUPAC is commended for observance by other Unions, namely :

a) that applications for visas where necessary should be made to the appropriate authorities not less than three months before the date of the symposium or meeting, and if these visas are not granted or promised in writing one month before the date of the event, sponsorship should be withdrawn, and

b) arrangements for future meetings in any country found unable to comply with these principles should be suspended until more satisfactory circumstances exist,

iii) National adhering bodies of the ICSU should urge the authorities in their countries to facilitate the delivery of attendance and exit visas for scientists to attend such meetings,

iv) Each Union or other ICSU body should inform the ICSU and its Committee on the Free Circulation of Scientists of cases in which withdrawal of sponsorship has become necessary so that other Unions may take this into account in making their own arrangements for meetings and symposia,

v) The Chairman of the Committee on Free Circulation and the Secretary General of ICSU should maintain a record of cases reported, to which scientific unions and other ICSU bodies may refer."

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