

IUPESM President's Report WC2006, Seoul, Korea

Following is a list of important activities of the President and the Union during the past three years:

November, 2003: began series of discussions and negotiations with the IOMP and the International Union of Pure and Applied Physics (IUPAP) following a proposal by IUPAP that they form a Commission on Medical Physics. I realized that this could pose a "threat" to the IOMP and the IUPESM if such a Commission were to be formed without significant input from the IOMP and the IUPESM. There followed many months of deliberations and proposals culminating in the formation within the IOMP of an International Commission on Medical Physics (ICoMMP). ICoMMP would apply to join IUPAP as an "Affiliated Commission". This application was submitted and subsequently approved at the IUPAP General Assembly in October 2005. The ICoMMP Council will consist of approximately 20 members, three of whom shall represent the IUPESM (currently designated as the President, the Vice-President, and the Secretary-General). Details of ICoMMP are attached as Appendix I.

December, 2003: began series of discussions between the IUPESM, the IOMP and the IFMBE concerning the possibility of establishing a permanent Headquarters for the IUPESM and/or the IOMP and/or the IFMBE. Two potential offers were discussed (one from the Institute of Physics (IOP) and one from the Institute of Physics and Engineering in Medicine (IPEM), both in the UK. Peter Smith and I visited the IPEM HQ in York in January 2004 and Peter and Joachim Nagel had direct discussions with the IOP as well. Subsequently the IPEM submitted a draft proposal to the IUPESM. Unfortunately, the proposed charges were more than the Union could afford with its present sources of income, so I began discussions with the IUPESM ad hoc Strategic Planning Committee (Keith Boddy, Nandor Richter, and myself) and, subsequently, the Council (see Virtual Council Meeting below) about possible means to increase our income so that we would be in a position to negotiate a Contract that we could afford. Further discussions are on the Agenda for the 1st IUPESM Council meeting in Seoul. It should be noted that the IPEM did successfully negotiate a Contract with the IFMBE and is now their permanent HQ. In addition, the IPEM is now also providing some limited type of HQ support for the IOMP.

February, 2004: Dov Jaron and Keith Boddy represented the Union at an ICSU meeting in Paris where they proposed two programs for the ICSU initiative on "Science for Health and Well Being", these being on "The Impact of Technology on Hypercommunicable Disease Processes" and "Science and Technology in the Care of Patients and Persons with Disabilities".

January, 2005: Dov Jaron and Peter Smith represented the IUPESM at a meeting of the ICSU Science for Health and Well Being Steering Committee in Paris.

February, 2005: I formally endorsed the ICSU Science for Health and Well Being on behalf of the IUPESM. This initiative subsequently became a significant part of the 2006-2011 Strategic Plan for ICSU (see later and also the detailed report from Dov Jaron, Chairman of the ICSU Liaison Committee).

April, 2005: Kwan-Hoong Ng represented the IUPESM at the 1st ICSU Regional Meeting for Asia in Kuala Lumpur.

July, 2005: I officially nominated Dov Jaron for election as an Ordinary Member of the ICSU Executive Board and engaged in an extensive campaign to seek the support of ICSU General Assembly delegates.

August, 2005: a Virtual Meeting of the IUPESM Council was convened. This meeting continued for almost a year, with several decisions being made along the way and topics of New Business added (see complete Minutes in Appendix II).

October, 2005: Dov Jaron and I represented the IUPESM at the ICSU General Assembly meeting in China. A complete report is attached as Appendix III.

March, 2006: Dov Jaron was awarded a grant from the US National Science Foundation to organize a symposium on "*Science and Engineering Principles Applied to Control of Hypercommunicable Diseases*" to be held during the Seoul World Congress.

June, 2006: I officially approved the 2005 ICSU accounts and 2006 ICSU budget on behalf of the IUPESM.

June, 2006: Prof. Kwan-Hoong Ng was appointed as the official IUPESM representative to attend the inauguration of the new ICSU Regional Office for Asia and the Pacific in Kuala Lumpur.

July, 2006: Dov Jaron represented the IUPESM at the ICSU Science for Health and Well Being Executive Committee meeting in Paris.

APPENDIX I

International Commission on Medical Physics Committee Affiliated to the International Union of Pure and Applied Physics (IUPAP)

1. Name (Abbreviation): International Commission on Medical Physics Committee (IComMP)

2. Reports To: IOMP Council and IUPESM.

3. Membership:

- 3.1 Five IOMP Elected Officers (President, Vice-President, Past President, Secretary-General and Treasurer)
- 3.2 Three IUPESM Elected officers: President, Vice-President and Secretary-General.
- 3.3 Chairs of the IOMP Education and Training, Science, and Professional Relations Committees, and the International Advisory Council.
- 3.4 Three members nominated by IUPAP plus Delegates from not more than three related IUPAP Commissions.

The IComMP may co-opt up to a further three members.

4. Chair: The IOMP President or as appointed by the President.

5. Terms of Reference / Charge

- 5.1 To advance the application of physics to medicine.
- 5.2 To uphold and support the mission and activities of both IOMP and IUPAP.
- 5.3 To Establish closer links between medical physicists and medical engineers and other pure and applied physicists.
- 5.4 To promote the objectives of IUPAP in the area of expertise of IComMP.
- 5.5 To attract pure and applied physicists to work in medical physics.
- 5.6 To provide advice to IUPAP on the activities and needs of medical physics.
- 5.7 To foster research and education.

6. Meetings, Procedures and Other Matters

- 6.1 The IComMP shall make a written report to the General Assembly of the IUPAP.
- 6.2 The Chair of the IComMP will be a delegate to the IUPAP General Assembly.

APPENDIX II

VIRTUAL COUNCIL MEETING: August 2005 through April 2006

MINUTES

Responses were obtained from AC Members Orton, Terio, Niroomand-Rad, Allen, Lamm, Morucci, Nagel, Barbenel, Ng, Kikuchi, Richter, Smith, Magjarevic, and Jaron.

1. Application from The International Union for Quaternary Research (INQUA)

Motion: To approve INQUA application for admission as an International Scientific Union Member.

Proposed by: CO

After much discussion, this was approved by majority vote of 9 FOR, 1 AGAINST, and 1 ABSTENTION. President Orton voted in support of this application at the subsequent ICSU General Assembly. INQUA was elected unanimously.

2. Application from International Union of Materials Research Societies (IUMRS)

Motion: To approve IUMRS application for admission as an International Scientific Union Member

Proposed by: CO

After much discussion, this was approved by majority vote of 9 FOR, 1 AGAINST, and 1 ABSTENTION. President Orton voted in support of this application at the subsequent ICSU General Assembly. IUMRS was elected unanimously.

3. IUPESM application for NGO status within WHO and UN.

Motion: Start the process to apply for NGO status within WHO and UN

Proposed by: JN

Seconded by: CO.

This was approved unanimously by a vote of 12 FOR, 0 AGAINST.

Subsequently Orton obtained application documents to apply for NGO status from WHO and UN but was not able to submit the applications since they had to be submitted by June 1st and there was insufficient time to obtain all the required documentation such as audited financial statements and annual reports (which we have never generated). Also, Peter Smith made the following important comments:

Before deciding that IUPESM should apply for NGO status with the WHO and other UN organisations we need to decide what we wish to achieve by this and how it effects the two constituent organisations (IFMBE and IOMP). I think I am correct that IFMBE is already recognized by the WHO as an NGO. The IOMP is currently developing an overall strategy and one of the draft objectives is “the creation of links with WHO, possibly in conjunction with IFMBE through IUPESM”. It does not make sense for the three organisations to each continue with, or request, NGO status with WHO. If IUPESM does go ahead will both IOMP and IFMBE do all their activities involving WHO through IUPESM and not be separately accredited with WHO? I believe the three organisations should decide what the next steps are in working together, not just one organisation (IUPESM) developing without commensurate change in the other two. We should continue the debate and aim to agree the way ahead at Seoul.

This topic has been placed on the Agenda for further discussion at August 28th IUPESM Administrative Council meeting in Seoul.

4. How to increase income?

Motion: To establish a small *ad hoc* committee of the Executive Committee to investigate the need for increasing income and, if appropriate, to propose ways this might be achieved (to report back to the EC within six months, in time for a full discussion at the Seoul Council meetings).

Proposed by: CO

Seconded by: DJ.

This was approved unanimously by a vote of 12 FOR, 0 AGAINST but no EC members made any suggestions as to how income might be increased. Subsequently, Orton submitted the following suggestions:

We need to make some long-term decisions. Firstly, I think we have to first decide how active we want the IUPESM to be. Do we want the IUPESM to be more responsive to the needs of its members and more active in interactions with outside agencies, such as ICSU, UN, WHO, etc., or are we satisfied with the status quo, where the major activities are organization of the triennial World Congresses and attendance at ICSU General Assemblies? If we decide the latter, then we don't need to seek ways to increase income. If we decide on the former, then increased income is essential. At the end of this report, I'll ask you to make a decision.

How can we increase income?

As I see it the only viable way to do this is to increase membership and hence membership dues. There are two ways we might do this:

- 1. We could seek **National Members** as specified in our Statutes: “**National Members:** Any country having adherence with any of the Constituent Organizations. A National Member shall be the designated representative of a scientific academy, research council, scientific institution or an association of such institutions. The designated representatives shall represent the fields of physical and engineering sciences in medicine in that particular country.”*
- 2. We could seek more **Constituent Organizations** and/or **Affiliates**. Our Statutes state: “**Constituent Organizations:** shall be international non-governmental organizations which fully adhere to all the tenets of the IUPESM and fully support all its endeavours.... **Affiliates:** Affiliates may adhere to IUPESM in the following categories: (a) associations (b) corporations. Affiliate Associations shall be scientific, non-governmental associations having activities in the field of physical and engineering sciences in medicine. Affiliate Corporations shall be companies with an interest in medical physics or biomedical engineering.”*

Let me address each of these in turn.

National Members

A problem with inviting National Members to join the IUPESM might be that our current Constituent Organizations already have representatives from national organizations as their members. It might be argued that the IUPESM already has national representation via all the national organizations represented by the IOMP and IFMBE. Hence it would not be appropriate for the IUPESM to offer National Membership to the same organizations represented in the IOMP and IFMBE.

In my opinion, if we decide to open up National Membership in the IUPESM we should not invite the national medical physics and bioengineering organizations to join but should go after the national scientific academies and councils. As I see it, this would have the added benefit that it would form an alliance between the national medical physics and bioengineering organizations that are the IOMP and IFMBE members, and their respective national scientific academies and councils. I think that such alliances might be considered by the IOMP and IFMBE to be one of the major benefits of membership in the IUPESM.

New Constituent Organizations

A problem with this is, of course, that it will dilute the roles in the IUPESM of the current two Constituent Organizations. Hence I think that if we do decide to seek new Constituent Organizations, we should first get approval from the IOMP and IFMBE. Additional Constituent Organizations would, of course, widen our sphere of influence. It might change the nature of our World Congresses or, maybe, lead to the development of additional World Congresses. It would certainly change the make-up of our

Administrative Council and Officers. I think it would increase our stature in ICSU and our ability to work with outside agencies, such as the UN, WHO, etc.

What might attract an international organization to want to join the IUPESM? I think that the main attraction might be ICSU. Indeed, I think that this was the major reason the IOMP and IFMBE joined together to form the IUPESM in the first place. Could there be other organizations out there that would want this benefit? I suspect so.

Affiliates

I think it unlikely that the IOMP and IFMBE would have any problem with our seeking Affiliates, since these do not have voting representation on the Administrative Council or General Assembly, and their members cannot be Officers. Potential reasons for Affiliate Association membership are similar to those above for new Constituent Organizations. Examples of potential associations we might consider approaching include the RSNA, SPIE, etc. Reasons for Affiliate Corporations to join are less obvious. Since I know that the IOMP (and, I suspect, the IFMBE) has considerable difficulty attracting and maintaining corporate members, I think we should not pursue this because it might interfere with their efforts.

All these are, of course, aimed primarily at increasing our income but, secondarily, they will also enhance our scope of influence.

Orton sent a Questionnaire to seek EC member opinions.

We received responses from six members of the EC. These are reviewed below along with some comments from EC members.

Q.1. Should we maintain the status quo and not seek ways to increase funding?

No: 4

Yes: 2.

Comments:

“If the IFMBE or the IOMP want the IUPESM to undertake a particular activity then they should fund it by increasing their dues”.

“I do not think this will be easy to achieve”.

“The IUPESM should be more active in interactions with outside agencies”.

“The IUPESM is predominantly the steering body of its constituent organizations...the detailed work should be carried out through the member organizations...however...seeking ways to increase funding is still desirable”.

Q.2. Should we seek new Constituent Organizations (after getting approval from the IOMP and IFMBE)?

No: 2

Yes: 2

Maybe: 2.

Comments:

“We need to have something to offer before going out to sell IUPESM.”

“I...suspect that there are no appropriate other international organizations which might have benefit to join the IUPESM at the moment”.

“It depends ...what kind of impact it may have on the Union (in particular WCs which are large as they are) as well as IOMP and IFMBE operation.”
“The pros and cons should be discussed in Seoul”.

Q.3: Should we seek new Affiliate Associations?

No: 2

Yes: 3

No opinion: 1.

Comments:

“To enhance mutual relationships and promote cooperative activities we should try to seek new affiliate associations such as the RSNA, SPIE, etc.”

“It will be difficult to find affiliate associations not knowing what kind of impact they would have on the Union”.

“With careful selection they would be welcome”.

Q.4: Should we seek new Affiliate Corporations?

Yes: 2

No: 2

Maybe: 2.

Comments:

“There may be selected affiliates who would be appropriate and not undermine IOMP and IFMBE.”

“This will not be easy”.

Other Comments:

The current IUPESM arrangements should be used and developed to bring the two communities closer together”.

“Our trump card is our membership in ICSU”.

“I think we should try to maintain our Union as it is”.

There being no clear consensus, this topic has been placed on the Agenda for further discussion at August 28th IUPESM Administrative Council meeting in Seoul.

5. To appoint Colin Orton as Interim Chair of the Awards Committee to replace Dov Jaron who was a potential candidate for this award.

Proposed by: DJ

Seconded by: CO.

This was approved without dissent.

6. To appoint Colin Orton as Interim Chair of the Nominating Committee to replace Jean-Pierre Morucci who will not be able to attend the Seoul World Congress.

Proposed by: J-PM

Seconded by: CO.

This was approved without dissent.

7. Motion: Dov Jaron be reappointed as ICSU Liaison Committee Chairman for the next three years.

Proposed by: CO

Seconded by: PS.

Seven votes were received, 6 FOR and 1 AGAINST. Joachim Nagel, in voting against this proposal, responded that he supported reappointment of Dov Jaron as ICSU Liaison Committee Chairman but considered that such appointments are the prerogative of the next Administrative Council, not this one. Orton agreed with this since the ICSU Liaison Committee is *ad hoc* and such committees are typically appointed by the President. Since Prof. Nagel will be the President during this period, he has the right to propose this to the 2006-2009 EC at their meeting in Seoul.

There followed a general discussion about when Committee Chairs should be appointed, before the WC or during the 1st meeting of the 2006-2009 Executive Committee in Seoul. Most agreed that early appointment was desirable so that new Committee Chairs could work on selecting Committee members during the WC. However, Prof. Nagel was very opposed to this since he considered that it would not be right to “*impose chairs on the new EC*” and risk “*alienating and paralysing the new EC*”.

After exchange of e-mails, Prof. Nagel agreed that it would be desirable, if possible, to “select” the nominee for the next Chairman of the Congress Coordinating Committee before the WC so that the new Chair would have the opportunity to attend meetings of the CCC in Seoul and be active in discussions and presentations of the 2009 and 2012 WCs. Prof. Nagel is pursuing this.

APPENDIX III

ICSU General Assembly Report

The ICSU General Assembly was held 18 – 21 October, 2005, in Suzhou, China, about a two hour drive from Shanghai. It was preceded on 17 October by a half-day meeting in Shanghai, during which time representatives from the China Academy of Science and Technology (CAST) made presentations on Science and Human Well-being and on Science for Sustainable Development. This was followed by a late afternoon meeting of the working group on the Science for Health and Well Being initiative in Suzhou. President Colin Orton and Vice-President Dov Jaron represented the IUPESM at these meetings. Following is a brief review of some of the activities of special interest to the IUPESM followed by a fuller synopsis of the proceedings.

Significant events of interest to the IUPESM

- The Science for Health and Well Being initiative, initially proposed by the IUPESM, was approved for grant funding by ICSU, starting January, 2006.
- Dov Jaron made it to the final two candidates for election to fill the one opening for an at-large representative of the biological unions on the ICSU Executive Board, only to lose out to the incumbent candidate seeking reelection for a second term. Candidates from four other biological sciences unions failed to make it this far.
- The ICSU Strategic Plan for 2006 – 2011 was approved. It should be noted that the topic of Health is one of the major elements of the strategic plan. This is a highly significant addition to ICSU’s focus areas and reflects the growing influence of IUPESM and its constituent organizations on ICSU’s activities.

- Approval was given to organize Unions into science-related clusters, in part to balance Union representation on the ICSU Executive Board between the sciences.
- Because of withdrawal of UNESCO and US State Department funding from 2007 and devaluation of the US dollar (all ICSU dues have been in US dollars), dues increases were approved: in 2007 dues will be in euros at parity with US dollars, an effective increase of about 20 - 30% since they were fixed in 2002, and this will be followed by 5% increases in 2008 and 2009.
- A Regional Office for Africa has been established in 2005 in Pretoria, South Africa, with funding at the rate of 700,000 euros/year.
- A Regional Office for Asia and the Pacific was approved to open in 2006 in Kuala Lumpur, Malaysia.
- A Scientific Data and Information Forum was established
- The International Network for the Availability of Scientific Publications (INASP) was approved as an Interdisciplinary Body of ICSU.

Detailed Report

The SHWB meeting, October 17

Many Union representatives participated in this meeting that had been convened by Dov. Dov and Mark Wahlqvist presented a review of the program. A discussion ensued as to how the initiative might be implemented and, if possible, made into a full-fledged ICSU program. It was noted that the SHWB initiative was singled out in the ICSU Strategic Plan as a demonstration of how Unions could work together to develop important programs.

Union's Forum, Tuesday, October 18

Union representatives met to review recent developments in ICSU and to discuss how to improve the way Unions interact within ICSU. Topics discussed included:

- International research collaboration—leadership, organization, financial support
- The value of ICSU to the Unions—portal for world science, influence policy, financial leverage, recognition
- The ICSU Strategic Plan
- Loss of some funding (UNESCO and US State Department) and proposed dues increases
- New Regional Offices and how Unions can best interact with them
- Interactions between Unions, National members and Interdisciplinary Bodies (these are the three types of ICSU members)
- The role of Unions and ICSU in development of national and international science policies—links to national and international multidisciplinary groups, targeted statements, conferences, etc.
- The Science for Health and Well Being (SHWB) initiative — Dov and Mark Wahlqvist gave presentations on the status of the initiative to the Union's Forum
- The clustering of Unions was presented and discussed

- A ballot was held to select two candidates from each of the four clusters of Unions for submission to the General Assembly for election as Executive Board Members at Large. For our Biological Sciences cluster, Unions had submitted the names of six candidates and, from these, Dov and the Board member seeking reelection were chosen.

General Assembly, October 19 - 21

Some of the important events were:

- The grant to continue the SHWB initiative was announced and plans to form a “Scoping Group” were presented. This Scoping Group would be responsible for further development of the initiative in order to make it into a full ISCU program.
- Unfortunately Dov lost out to the incumbent candidate seeking reelection in the ballot for selection of the Executive Board Member at Large to represent the Biological Sciences. This did not surprise us, of course, since the incumbent Board member was far better known than was Dov, having been elected at the last General Assembly and having served on the Board for the past three years. We did, however, do considerable lobbying for Dov both before and during the General Assembly, and were pleased that he made it to the final two candidates.
- The ICSU Strategic Plan for 2006 – 2011 was presented, discussed and approved. Items in the plan of interest to the IUPESM include planning for natural and human-induced hazards and disasters, sustainable development, health and well being, freedom and responsibilities in the conduct of science, collection and maintenance of scientific data and information, science education in developing countries, and international research collaboration. See the attached pdf document for the full report.
- Gabriel Ogunmola, Chairman of the Regional Committee for Africa, gave a presentation. He explained the process of selection of the site for the new Regional Office for Africa and its Director. He explained that Pretoria, South Africa had been selected and that the office opened under the direction of Sospeter Muhongo in September, 2005. Dr. Muhongo met with us later and expressed an interest in opening negotiations with the IUPESM to help him support the development of physical and engineering sciences in medicine in his region. He indicated that he was especially keen to identify expert medical physicists and biomedical engineers in Africa (and African experts working abroad), and seeking strategic partnerships.
- The Anupam Varma, Chairman of the Regional Committee for Asia and the Pacific, gave a presentation. He explained that, after meetings with representatives from the Government of Malaysia, Kuala Lumpur had been selected as the site for the new Office, pending approval by the Malaysian Cabinet and signing of a Memorandum of Agreement between the Malaysian Academy of Sciences and ICSU. Search for a new Director of the Office is underway.
- The new clustering of Unions was presented and approved. The clusters are shown in Table 1 in Appendix B. It was explained that these clusters are not set in stone and can be amended if any Union feels that it is wrongly placed. The

clustering of Unions will make it easier to balance membership of the various sciences on the Executive Board and, maybe, make it easier for Unions with similar interests to collaborate

The Treasurer reported that the finances of ICSU had been considerably stressed in the past three years, due primarily to the devaluation of the US dollar during the past three year period during which there had been no increase in dues (see p.39 of the attached Strategic Plan for fuller details). Essentially, since dues have been set in US dollars, the effective income from these has gradually decreased and is currently running at about 70 - 80% of their value when established in 2002. Several staff at ICSU HQ in Paris had been laid off. For 2005 and 2006 members had been asked to voluntarily submit their annual dues in euro at parity with US dollars i.e. an approximately 20 - 30% increase, but few had complied. It was suggested the main reasons for this were either that the dues paid to member organizations had already been fixed and would need to be raised to pay for these increased ICSU dues, and/or dues paid to member organization had also been fixed in US dollars, so these organizations were also suffering from the devaluation problem. The approved budget included a line item for health related activities, reflecting the presence of such activities in the strategic plan.