

# International Union of Pure and Applied Chemistry

98<sup>th</sup> MEETING OF BUREAU

Montréal, Canada, 9-10 April 2016

MINUTES

Attendees: Prof. Natalia Tarasova (Chair), Prof. Russell J. Boyd, Prof. Christopher Brett, Prof. Margaret Brimble, Dr. Mark Cesa, Prof. Mei-Hung Chiu, Dr. Petr Fedotov, Prof. Hemda Garelick, Prof. Richard Hartshorn, Dr. Karl-Heinz Hellwich, Mr. Colin Humphris, Prof. Ehud Keinan, Prof. Jan Labuda, Ms. Bonnie Lawlor, Prof. Kew-Ho Lee, Prof. Christopher K. Ober, Dr. Thomas J. Perun, Prof. Jan Reedijk, Prof. Greg Russell, Prof. Mustafa Sözbilir, Prof. Carlos Tollinche, Prof. Pietro Tundo, Prof. Ron Weir, Dr. Bernard West, Prof. Kaoru Yamanouchi, Prof. Qi-Feng Zhou

Absentees: Prof. Tavarekere K. Chandrashekar, Prof. Angela Wilson

Guest: Prof. Doug Templeton, Prof. Neil Burford (in part), Dr. Roland Andersson (in part)

Secretary: Dr. Fabienne Meyers

## 1. INTRODUCTORY REMARKS AND WELCOME FROM HOSTING SOCIETY

Prof. Tarasova welcomed the members of the Bureau to the meeting and thanked the Canadian Chemical Society (CCS) and their Canadian National Committee for IUPAC (CNC-IUPAC) for their invitation and facilitation for hosting this Bureau meeting in the premises of the McGill University Faculty Club. She welcomed Neil Burford (Chair, CNC-IUPAC) and Roland Andersson (Director of the Chemical Institute of Canada).

Prof. Burford reviewed briefly the activities of the CNC-IUPAC and pointed out that no less than 16 members are today actively involved in the Bureau and various Divisions and Committees. Canada hosted two world Congresses, one in 1981 in Vancouver, and the Congress/GA in 2003 in Ottawa, and they are interested in hosting a Congress again in the near future. The Society is about to celebrate in 2017 the 100th anniversary of the Canadian Chemistry Conference in Toronto in May 2017 with the theme 'A Celebration of Chemistry'. The CCS has a good experience in hosting large events and the CNC-IUPAC has demonstrated good management, including investment in the involvement of young chemists through their travel awards which every year result in funding the attendance of young scientists to IUPAC-endorsed conferences.

## 2. FINALIZATION OF AGENDA

Prof. Tarasova asked if there were any changes or additions to the Agenda. Karl-Heinz Hellwich asked why the earlier agenda item that relates to the journal *Chemistry Teacher International* and for which additional information has been circulated more recently, had been removed. It was stated that the proposal was still under review and the Bureau shall wait for the outcome of that on-going assessment prior to reviewing the project.

## 3. MINUTES OF 97TH MEETING OF THE BUREAU (BUSAN, AUGUST 2015)

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The minutes of the 97<sup>th</sup> meeting of the Bureau held in Busan during the General Assembly in August 2015 are in the Agenda Book. Prof. Tarasova asked if there were any comments. There were no comments, and the minutes were approved.

#### 3.1 MATTERS ARISING FROM MINUTES (NOT COVERED BY ITEMS ON AGENDA)

There were no matters arising from the Minutes not covered by the Agenda.

#### 4. MINUTES OF 154<sup>TH</sup> EC MEETING (RTP, NOVEMBER 2015) AND NOTING INFORMAL DISCUSSION IN BUSAN AUGUST 2015 MEETING OF EXECUTIVE COMMITTEE

##### 4.1 RECEIPT OF DRAFT EXECUTIVE COMMITTEE MINUTES BY THE BUREAU

Prof. Tarasova noted that the draft of the 154<sup>th</sup> Executive Committee meeting minutes was in the Agenda Book and asked if there were any comments. There were no comments and the minutes were received by the Bureau.

##### 4.2 HIGHLIGHTS AND QUESTIONS ABOUT ITEMS NOT ON THE BUREAU AGENDA

There were no questions about items for the minutes of the Executive Committee.

#### 5. MINUTES OF 48<sup>TH</sup> MEETING OF COUNCIL

A preliminary draft of the 48<sup>th</sup> Council meeting is in the Agenda Book. These are currently under review.

Prof. Tarasova asked if there were any questions. There were no questions about this draft.

#### 6. ACTION ITEMS FROM PREVIOUS MEETINGS NOT COVERED ON AGENDA

Prof. Hartshorn referred to the list of outstanding, in progress, and completed action items included in the Agenda Book (p.86). A separate list of Executive Committee (EC) action items is in the Agenda Book (p.101). Relevant action items to be covered during the Bureau meeting are noted in their respective sections for reference.

Reviewing the EC's list, the actions *completed* are highlighted in yellow, those not included in this meeting agenda are in green, or otherwise labeled with a reference to the relevant Agenda items.

A quick review of the on-going items not later addressed in this meeting:

[154EC03] A notice about the availability of CI through DeGruyter has been sent to the group of former Young Observers; a follow-up/reminder can be sent again.

[154EC14] To develop and establish a process to propose, assess, and approve specific nominations of *IUPAC representatives 'ON' other organizations*.

[154EC15] Also in the context of reviewing the group of IUPAC representatives 'ON' other organizations, to review the current list and include strategic bodies.

[154EC24] To plan to develop and implement an online *claim* submission form to streamline the process.

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[154EC30] *In reference to the PhosAgro awards*, to review with Hugh Burrows (PAC scientific editor) the option of publishing papers from the Busan Symposium, especially from the 2014 winners whose projects are either completed or nearing completion, and

[154EC31] - To prepare an article for *Chemistry International* outlining the scope of the proposals awarded. *Both are in progress.*

Referring to the list on p. 86, the Secretary General informed the Bureau that the items not to be addressed in the Bureau meeting were all in progress or completed. He asked if there were any questions and there were none.

#### 7. REPORT OF THE PRESIDENT

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Traditional part of the report covers the functioning of the Secretariat, web-site, NAOs and ANAO membership. Several new initiatives include:

*[For Information]* Call for contributions to the UN Global Sustainable Development Report. A report is included in the Agenda Book.

As the IUPAC Strategic Plan states, “IUPAC accomplishes its mission by fostering sustainable development, providing a common language for chemistry, and advocating the free exchange of scientific information”. To increase the visibility of the Union in the global arena of sustainable development actions, the President suggests to provide (on a regular basis) the information about the IUPAC contributions to the fulfillment of Sustainable Development Goals (SDGs) to the UN Global Sustainable Development Report (GSDR). The GSDR is a United Nations publication aiming to strengthen the science-policy interface at the High Level Political Forum (HLPF) on Sustainable Development, which replaced the Commission on Sustainable Development after Rio+20 as the main United Nations platform providing political leadership and guidance on sustainable development issues at the international level.

*[For Information]* Women in chemistry background information is in the Agenda Book.

The recent “Global Science 2015” survey reveals that female scientists are more likely to be dissatisfied with salary/benefits, job availability, gender barriers, and how they feel valued as scientists than their male colleagues. The Global Science 2015 survey sample includes 1478 respondents, 58 % men and 42 % women, from North America, Europe, Asia, and South America. The study fielded during May 2015 and has produced interesting data on the experiences, perceptions, and differences between male and female scientists.

Women are generally underrepresented in science, technology, engineering and mathematics (STEM). More women are pursuing scientific careers, but men still largely dominate these professions. The study results showed that some women see gender as a barrier to pursuing a career in science, whereas men do not. When

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asked “Based on your experience, what do you perceive to be the biggest barrier to pursuing a career in STEM?”, 15 % of female respondents selected gender, compared with only 2 % for their male counterparts.

This research shows that women feel less valued in the workplace and more misunderstood as scientists. Forty percent of female respondents reported that the quality of the management negatively affects their job satisfaction (compared with 34 % for men). Forty one percent reported feeling misunderstood by others or isolated because of their scientific career.

Several initiatives dealing with IUPAC gender policy were discussed.

*[For Discussion]* Creation of the International Younger Chemists Network (IYCN) in collaboration with IUPAC. The proposal is in the Agenda Book.

IUPAC’s core values emphasize scientific excellence, communication, transparency, diversity, and ethical behavior. As it was stated in the Vice-President’s Critical Assessment at the General Assembly in Busan (2015), the potential of young chemists should be effectively used, in a combination with the life experience of the elder generations of chemists. One effective option is to gain synergy as the result of collaboration with the existing or emerging global institutions of young chemists, the International Younger Chemists Network (IYCN) being one of them. Our contacts with the leadership of the IYCN led to the project proposal “Creation of the IYCN in the collaboration with IUPAC”.

Following the meeting Bureau members will be asked to comment on the project proposal submitted by IYCN.

#### **8. VICE PRESIDENT’S CRITICAL ASSESSMENT**

Qi-Feng Zhou reported on the preliminary conceptions of his Vice President Critical Assessment and addressed the Bureau on the following issues. Framed as a follow-up to the recent revision of the Strategic Plan, the VP will seek input on three major challenges:

- (a) Membership Relations, including the development of a compelling value proposition and a new schema for the calculation of the national subscription;
- (b) Project System, reviewing how projects are generated and carried out, and considering how best to support interdivisional projects. Also, reviewing and adjusting the role and functioning of the Evaluation Committee;
- (c) Cooperation with Other Organizations, reviewing how best to establish and retain fruitful relations with other organizations, including OPCW, ICHO, ICSU, UNESCO, and also how to respond to the UN Sustainable Development Goals (SDGs) and deliberations for the COP21 Paris agreement on the reduction of climate change.

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Engagement with the chemical industry and with organizations such as ICCA, the International Council of Chemical Associations, should also be considered.

Prof. Tarasova thanked the Vice President for his work and asked the Bureau to communicate and share ideas with Professor Zhou. She mentioned that it is remarkable to notice that under the IUPAC umbrella, the USA, China, and Russia can work productively together.

#### **9. REPORT OF THE SECRETARIES GENERAL**

The outgoing Secretary General, Colin Humphris, and new Secretary General, Richard Hartshorn, briefly reported on current issues and activities.

Prof. Hartshorn mentioned that while new on the job, he learned from his predecessor and colleague officers; also, he recalled his own experience as Division President and valued the discussions he had with all the Division Presidents on the previous day. One question that he keeps asking is do the Statutes and Bylaws (S&B) fit the purpose of the new Strategic Plan.

To better appreciate where the Union stands today, Colin Humphris briefly reviewed how, during the last biennium and since his involvement in April 2014, the business of the Secretariat had been in part carried out with no Executive Director, only staff, no IT and an unreliable website, and an accounting system not up to standard. Changes started with the recruitment of the current Executive Director, and today the Secretariat is in a much better position; the office has been physically relocated to suitable premises, the accounting system has been updated and a financial controller hired full time, and a new website has been redeveloped. Most of last year's challenges are under control. Colin Humphris asked the Bureau if anyone had questions/concerns.

Professor Weir asked for a vote of thanks to recognize the works of the officers and the Executive Director for bringing IUPAC out of the past tumultuous periods.

Referring to the S&B, Prof. Tarasova encouraged the Secretary General to consider what changes might be needed to better serve the Union.

Roland Andersson recognized that the Secretariat is still very small and that a challenge in handling volunteers is that they often come with new ideas.

Colin Humphris recognized that it is best to outsource work for specific activities that require different skills, but this has to be balanced with the internal resources and knowledge of the Union.

#### **10. IUPAC STRATEGIC PLAN IMPLEMENTATION DISCUSSION**

*(addressing Action 154EC01 and 154EC35 on the Strategic Plan and engaging Bureau to consider how to implement)*

Mark Cesa referred to the Strategic Plan included in the Agenda Book (p. 120)

##### 10.1 STATUS

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Dr. Cesa reviewed the Strategic plan, including immediate and long terms goals, and immediate measurable objectives; the latest being:

- Brand IUPAC in the minds of stakeholders
- Improve quality and frequency of communication with stakeholders
- Increase revenue
- Expand and retain Member base
- Enhance interdivisional interaction and collaboration
- Emphasize multidisciplinary projects addressing critical global issues
- Support chemistry education in developing countries

#### 10.2 NEXT STEPS (COMMUNICATION/BRANDING; PROJECTS AND ACTIVITIES)

Dr. Cesa outlined a plan for the implementation which calls for various activities. In the areas of Communication and Branding, he highlighted the need to have a top-of-the-line website, timely press releases, broader reach including social media and ‘popular’ presence such as on Wikipedia, to increase links with chemical societies, increase presence at conferences for general information dissemination (via poster, brochures, and in person) and activities such as poster prizes. With the focus of increasing revenues, Dr. Cesa highlighted the need to enhance the individual affiliate program and also the corporate program to secure industry contributions. IUPAC could consider donations from education providers for IUPAC education content, for scholarship/stipends for conference attendances, and prizes. The option of obtaining grants to solicit new member countries adhesion and to secure membership of those in financial difficulties could be also explored.

With the help of the Secretary General, Dr. Cesa engaged the Bureau in an exercise where in break-out groups, he asked members to consider from their perspective as an IUPAC leader and as a representative of their NAO, what they envision as IUPAC’s unique role.

Break-out reports:

Group I, reporter Bonnie Lawlor

- Serves Science, global, consensus, international stage, service orientation, quality of the volunteers
- The organization that Serves the Science

Group II, reporter Bernard West

- Credibility, objectivity, building upon representatives from many different countries (diversity), NGO status in some areas (opportunity), distinguishes IUPAC as unique.
- Could we do more “lobbying” for policy? Challenge our volunteers to communicate outside more?
- Build upon our reputation to influence decision-makers around the world? Chemistry problems and solution to them (Major Centers of Decision Makers)

Group III, reporter Chris Brett

- The UN of Chemistry-why should they become involved?

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- We enable actions in standards, nomenclature and issues that affect the community
  - We share knowledge
- Group IV, reporter Ron Weir
- Communication with our NAO's! Some work well, some do not.
  - Share best practices somehow...lessons gained from each other
  - How does IUPAC react (proactive) to the global changes coming in Chemistry?

Dr. Cesa thanked the Bureau for all the input.

### 11. POSSIBILITIES FOR FUTURE STRUCTURE OF GREEN AND SUSTAINABLE CHEMISTRY

*(addressing Action 154EC16)*

Prof. Tarasova commented that the importance of “green chemistry” globally has rapidly increased since the Subcommittee on Green Chemistry was created in 2001. She invited Pietro Tundo (Elected Member on the Bureau, former President of the Organic and Biomolecular Chemistry Division (Div III) and current chair of the Subcommittee on Green Chemistry, to review the key activities of the Subcommittee.

The current Subcommittee (SC of Div III) is an international group with more than 20 members and 11 partnerships with other IUPAC bodies and external groups; 25 current projects; 42 completed. It produced a *PAC* special issue in July 2000 (<http://iupac.org/publications/pac/72/7/>) and a short history (CI Sep 2007; [http://iupac.org/publications/ci/2007/2905/1\\_tundo.html](http://iupac.org/publications/ci/2007/2905/1_tundo.html)).

The 1<sup>st</sup> International Conference on Green Chemistry (ICGC) was organized in 2005 ([https://en.wikipedia.org/wiki/International\\_Conference\\_on\\_Green\\_Chemistry](https://en.wikipedia.org/wiki/International_Conference_on_Green_Chemistry)), again with coverage in *PAC* (Nov 2007; <http://iupac.org/publications/pac/79/11/>).

The next International Conference on Green Chemistry (the 6<sup>th</sup>) is set to take place in Italy in September this year 2016.

In March 2012, another volume of *PAC* (<http://iupac.org/publications/pac/84/3/>) was the outcome of a project (2008-016-1-300, <http://iupac.org/project/2008-016-1-300>).

The most recent outcome is a book titled “Chemistry Beyond Chlorine” (project 2013-057-3-300), which is to be published in 2016 by Springer.

Prof. Tundo stated that a key goal is to collaborate with groups outside IUPAC, including PhosAgro, OPCW, OECD, or LAUNCH ([launch.org](http://launch.org)).

Prof. Tarasova indicated that IUPAC not only needs to think about how to better collaborate within IUPAC but also outside IUPAC. She asked that IUPAC strengthen its image and presence in that field, starting by involving not only Div III, but also Div VI (Chemistry and the Environment), CHEMRAWN (Chemistry for Applied World Needs) and COCI (Industry).

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Prof. Brimble (current President of the Organic and Biomolecular Chemistry Division) commented that “Green Chemistry” is indeed more than “organic chemistry” and it is now a field that needs to be taken up also by others.

All are in favor of organizing an *interdivisional* committee on Green Chemistry. The discussion included considerations of how can such a committee be arranged. The question was asked if such a subcommittee will be different than the Interdivisional Subcommittee on Materials (ISCM, subcommittee of Div I (Physical and Biophysical Chemistry), Div II (Inorganic), and Div IV (Polymer)); the ISCM has no funds. Will the Terms of Reference clarify that? Can such a body be financially independent? Shall the entity refer to Green Chemistry or Sustainable? Can the new committee be merged with an existing body?

The Treasurer recognized that while the principles might be clear, all the details will need to be sorted out and work prepared in advance for a proposal to be presented at the next Council.

Prof. Tundo reiterated that IUPAC engagement in the field is an opportunity to collaborate around the world.

Prof. Tarasova proposed a motion so that IUPAC organizes an Interdivisional Subcommittee on Green Chemistry.

25 for; no against; 1 abstention

With that approval, Prof. Tarasova will coordinate the preparation of the Terms of Reference which should be available for consideration at the next Executive Committee and for later presentation at Council.

**ACTION:** Natalia Tarasova to coordinate the preparation of the Terms of Reference for an Interdivisional Subcommittee on Green Chemistry; to be available for consideration at the next Executive Committee and for later presentation at Council.

*[Note added following the Executive Committee meeting of 13 Nov 2016 - Discussions following the Bureau meeting led to the conclusion that the new committee should be a full standing committee within IUPAC, the Interdivisional Committee on Green Chemistry for Sustainable Development, rather than a sub-committee. The Bureau and the Executive Committee subsequently approved both the draft terms of reference for the new committee and recommended roster for its members for the remainder of this biennium and the next one, and have, by implication, agreed to the change in status.]*

Regarding the book titled “Chemistry Beyond Chlorine” (project 2013-25 057-3-300), which is to be published in 2016 by Springer, since this book is to bear the IUPAC label, Prof. Weir noted he must read this book on behalf of ICTNS. Prof. Tundo indicated he would provide it to Prof. Weir immediately. *[Subsequent note: Prof. Weir received the book and after some modifications it was approved by ICTNS.]*



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#### **12. REPORTS FROM DIVISIONS AND STANDING COMMITTEES**

The Division Presidents and Standing Committee Chairs each spoke briefly to introduce their full reports in the Agenda Book.

- 12.1 DIV 1 – KRISTIN BARTIK (CALL IN FOR A REMOTE PRESENTATION)
- 12.2 DIV 2 – JAN REEDIJK
- 12.3 DIV 3 – MARGARET BRIMBLE
- 12.4 DIV 4 – GREG RUSSELL
- 12.5 DIV 5 – JAN LABUDA
  - 12.5.1 Resolutions from Division V Meeting for Consideration
  - 12.5.2 Resolution to Chemical Data
- 12.6 DIV 6 – PETR FEDOTOV
- 12.7 DIV 7 – TOM PERUN
- 12.8 DIV 8 – KARL-HEINZ HELLWICH
- 12.9 CHEMRAWN – CARLOS TOLLINCHE
- 12.10 COCI – BERNARD WEST
- 12.11 CCE – MUSTAFA SÖZBILIR
- 12.12 ICTNS – RON WEIR
- 12.13 CPCDS – BONNIE LAWLOR

#### **13. ITEMS FROM MEETING OF DIVISION PRESIDENTS**

Prof. Jan Reedijk chaired the meeting of the Division Presidents and Standing Committees Chairs held the day prior and presented a summary of the issues reviewed.

In reference to the General Assembly, the DPs brainstormed on suggestions and for improved cross-divisional interactions. A breakfast session could be organized where on each table one member of each group is represented and one Division/Committee lead a presentation of what is happening in his/her group. In turn, after such session, each Div/Cmt will have a member informed on each other group and who can relay a brief report to his/her Div/Cmt. Ultimately, the goal is to increase awareness and better knowledge about other activities.

The DPs also value specific one-to-one exchange and wish to preserve in the schedule an opportunity for such meeting.

It will be desirable if CCE and ICTNS were to meet for their 2<sup>nd</sup> full day after the Divisions.

DPs concurred that simultaneous coffee breaks are desirable as they foster opportunities to network (in opposition to Busan where coffee was only available in each meeting rooms).

In reference to the Election process, the DPs appreciated that the cycle completed in 2015 has been significantly shortened. They suggested that early identification of the Nominating Committee Chairs and lists of the electorate would greatly improve the process. The DPs also recognized that a pro-active role for the Nominating Committees

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in identifying qualified candidates was important and that activating NAOs to make nominations of good candidates remains a major challenge.

Lastly, the DPs considered the visibility of IUPAC through *PAC* and IUPAC-endorsed conferences. They concurred that to maintain a high appreciation of *PAC* and if possible to further improve its reputation, we need to make sure that:

1. there are enough Recommendations and Technical Reports published each year;
2. all major and relevant conferences do apply for IUPAC endorsement; especially 'regular' IUPAC series and those relevant to the fields of the Divisions.

Professor Reedijk asked if there were any questions.

Dr. Cesa stressed that in advance of the elections, it was important to engage the NAOs.

Lynn Soby asked if the Divisions will gain nominations by being more specific and identifying the expertise that their committee is seeking. She stressed that one objective of the Secretariat for the coming cycle will be to clarify the eligibility of each current member much earlier.

Richard Hartshorn stressed that to support the work of the Nomination Committees (NC), current members of Divisions and Standing Committees can be invited to share suggestions with their relevant NC.

#### **14. REVIEW OF COMPANY ASSOCIATES PROGRAM**

Bernard West, Chair of the Committee on Chemistry and Industry (COCI), briefly informed the Bureau about an on-going project (2014-018-2-022) lead by COCI and that is to review and assess the Company Associates (CA) program.

(see <http://www.iupac.org/project/2014-018-2-022>)

The project has started, but its membership had to be revamped due to volunteers' limited availability and other commitments.

A survey was completed in 2014. From the results, it appears that the actual engagement with industry is medium to strong and that the key benefits of the CA program for IUPAC are that the engagement of industrial chemists in defining needs and project opportunities, executing projects, and using the output of IUPAC projects. The benefits for industry included project outputs, nomenclature and standards, technical publications, outreach, and education.

In phase 2 of this project, the task group will develop scenarios for an updated CA scheme, and plan to solicit feedback from NAOs, IUPAC leaders.

(An update was published in *Chem. Int.* March 2016, p. 19; <http://dx.doi.org/10.1515/ci-2016-0210>)

Colin Humphris stressed that a review of the CAs is critical not only for keeping an engagement with industry, but also in considering the potential financial implication, since the CA scheme can constitute a revenue source.

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#### 15. 2015 GA/CONGRESS, BUSAN, KOREA

##### 15.1 LESSONS LEARNED

Lynn Soby recalled that shortly after the meeting in Busan, a survey was sent to all current and incoming officers and current and next Bureau members, to seek feedback on the GA schedule. The 2015 schedule was new and the survey focused on these new features. 19 responses have been received on the survey (out of 63 invites) and a compilation of the replies is enclosed in the Agenda Book (p.294). In short:

- Overall, the Busan schedule is a suitable blueprint.
- The joint opening reception as coordinated at the Congress was well attended.
- The interdivisional meetings should be retained, but better coordinated with more advanced planning and agenda outline.
- The options for earlier task group meetings should be preserved if possible.
- The scheduling of a split Bureau, ½ before Council and ½ after was well perceived.
- The scheduling of the Council as it was in Busan should be continued, but the time during the actual elections should be used to continue business, even if these are ‘minor’ items or the presentation of service awards.
- The model of the WCLM has been evolving every GA, but the last two, involving YOs, are well perceived.
- It has been suggested that the Distinguished Women in Chemistry awards should be highlighted at the opening Ceremony of the Congress. Also, an idea to run project posters at the congress has been proposed.

Lynn Soby noted the earlier request from the DPs preferring a simultaneous coffee break, and invited comments.

##### 15.2 FEEDBACK ON ELECTION PROCESS AND GA SCHEDULE

Lynn Soby referred to the Agenda Book (p. 287) and concurred with the DPs assessment that a way to further improve the process will be in deciding the Nomination Committees composition much earlier and with a task more clearly outlined. The eligibility of current members will also be shared in advance to afford more transparency.

The Secretary General raised the question of the electorate and stressed that it shall be reviewed and more clearly spelled out.

##### Relevant By-Laws (B3.104)

The Titular Members of each Division Committee shall be chosen by an electorate comprising the Titular Members, Associate Members and National Representatives on the Division Committee, *together with the members or officers of such other bodies within the Division that the Bureau may specify*. The number of Titular Members shall not exceed ten unless otherwise determined by the Bureau.

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Upon reviewing the Bylaws, Fabienne Meyers confirmed that the practice has been to include Subcommittee Chairs and Task Group Chairs of current projects. Professor Hartshorn proposed to review the question more carefully and survey each Division's practice. The ultimate outcome is to define a process that serves the Division Committees well.

#### 15.3 WCLM AND IDENTIFICATION OF TOPIC/LEADER FOR NEXT WCLM

*(addressing Action [154EC19] and [97BU05])*

Colin Humphris reviewed briefly what the World Chemistry Leadership Meeting (WCLM) has become, and recalled that earlier [and up to 2011], the WCLM was a meeting on strategy, held as part of the General Assembly (*Prior to 2001, the WCLM was integral part and organized by the Congress*). Originally, this was an opportunity for the leaders of national chemistry bodies to discuss issues or priorities of importance to world chemistry. In recent years, and starting with the GA in 2013, IUPAC has tried to use this forum to stimulate debate between younger chemists and chemistry leaders on important themes such as the role of IUPAC in facilitating sustainable development.

The Bureau is asked to decide on the topic and project leader for the WCLM in Sao Paulo, and Colin Humphris suggested that a theme be chosen in a way to engage Young Observers as it was in Busan.

Hemda Garelick recalled that while she was involved in the planning in 2015, that the process of engaging Young Observers to draft project proposals evolved smoothly during and soon after the GA, but the momentum had been lost when the process reached the point of getting each group proposal mentored by a current member. She asked that if such a plan is to be repeated, that each Division plans to be receptive to the YOs initiative and be prepared to provide constructive feedback on their proposal.

Chris Ober raised the idea of a topic surrounding interdisciplinary research. He recognized that two such groups exist within IUPAC, Materials and Green Chemistry, but more could be explored; also, every chemist should in principle fit in one or the other group. A challenge will be to seek and foster interdivisional engagement.

After some discussion, Prof. Tarasova thanked the Bureau for their input. Hemda Garelick and Chris Ober volunteered to develop a plan which will also involve the Young Chemists Network and Young Observers.

#### 15.4 YOUNG OBSERVERS PROGRAM/ENGAGEMENT

Prof Hartshorn reviewed briefly how currently YOs are recruited. The process is mainly dependent on the NAOs that provide funding. Each NAO proceeds with its selection and funding mechanism. By coordinating an activity within the GA which

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involves YOs, IUPAC only provides an added incentive for the NAOs to develop and manage such a program.

YOs primary involvement is their attendance at the regular Division and Committee meetings.

A discussion revolved around the concern of better recruits, better prepared YOs, and better ways to retain the YOs engagement after the GA.

Prof. Brimble suggested that IUPAC explore channels to keep them engaged so that they can be involved with members in current discussions. She asked if listings of former YOs were available which can be used by the Divisions.

As a former YO himself, Prof Hartshorn is motivated to define a program that is more engaging. The emerging opportunities coming from IYCN shall at the same time be considered.

As soon as a clear program for the WCLM 2017 emerges, the NAOs will be invited to consider the opportunity to invite and facilitate the attendance of young chemists at the GA.

#### **16. 2017 GENERAL ASSEMBLY & CONGRESS, SAO PAULO BRAZIL**

*(addressing Action [154EC05] and [154EC21])*

Lynn Soby reported on her site visit with the Congress 2017 organizers in Sao Paulo on 24-26 February 2016. She referred to the minutes of that meeting included in the Agenda Book (p. 314).

She indicated that the Congress site is centrally located and is an hour away from the airport. All the amenities are very suited to host the Congress and GA. The congress organizers are prepared to issue invitation letters for those who will need a visa. Like in Busan, the GA registration desk will be merged with and managed by the Congress.

On the programming level and for the Congress, Roberto Torresi is now in charge of addressing requests.

Prof. Tarasova asked if following their presentation in Busan, the Congress organizers have reached out to our Divisions. Hemda Garelick confirmed that indeed they received an invitation to make suggestions, but she received little feedback.

Lynn Soby indicated that so far, the attendance of two Nobel Prizes winners was confirmed.

The Congress organizers are also planning to stage the Women awards symposium in a prominent section of the program, and are working jointly with the IUPAC team involved in this project. The organizers are working hard to ensure a good diversity.

Lynn Soby encouraged everyone to review the Congress website for an outline and update of their program. She expected that this joint GA/Congress will foster strong links between IUPAC and the Sociedade Brasileira de Química (SBQ), and she encouraged

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everyone to work together as much as possible and provide support and feedback to the SBQ.

#### **17. 2019 GENERAL ASSEMBLY & CONGRESS, PARIS**

*(addressing Action [154EC22] and [97BU09])*

Colin Humphris reported that he and Lynn Soby have had a visit to the Congress venues on 10-11 February 2016, on their way to the Finance Committee meeting. Colin Humphris recalled that following the Organizers' presentation in Busan, there were concerns related to the logistics of using two separate venues, the Palais des Congres for the Congress and Council, and La Maison de la Chimie for the rest of the General Assembly. The two venues are a short three stops subway ride which takes less than 30 minutes. They met with Nicole Moreau and Jean-Pierre Vairon and practiced that subway run.

The program planning is well advanced. The proposed International Advisory Board is listed in the Agenda Book (p. 337); in addition to including the President and Vice President, the Bureau is asked to nominate one more member. The motion is made to nominate Richard Hartshorn.

Two symposia will be devoted to the IUPAC anniversary and these sessions will be staged at La Maison de la Chimie; see details in the Agenda Book.

#### **18. IUPAC 100 - CENTENARY PLANNING STEERING GROUP**

*(addressing Action [153EC24]; [153EC25]; [97BU01])*

Prof. Tarasova referred to the Agenda Book (p. 386) which includes a copy of "The centenary white paper." She asked if there were any comments.

As a follow-up to the preparation of this whitepaper, Prof. Tarasova proposed the formation of the IUPAC100 Management Committee and informed the Bureau that she has approached Mary Garson as a potential chair and that Prof. Garson is willing to lead the group.

Prof. Tundo suggested that a meeting in Rome be one of the activities and recognizing that Italy is one of the founding members of IUPAC (*along with Belgium, France, USA, and UK*).

Colin Humphris raised the question about funding for the activities related to IUPAC100. He stated that his assumption is that these shall be at zero cost. He suggested that the Bureau develops a position as to what spending IUPAC can afford and how could IUPAC fund any aspect of the celebrations.

*[For Decision]* Proposed formation of the IUPAC100 Management Committee.

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The Bureau was asked to approve the formation of the IUPAC100 Management Committee and also approved Mary Garson as chair.

The motion was moved; the Bureau approved; all in favor.

Prof. Tarasova suggested that all the members of the earlier steering group remain on the committee, and asked if there were any additional volunteers. There were none. In addition, the Treasurer shall be included as *ex officio*.

#### **19. FINANCE AND BUDGETS**

*(addressing Action [154EC06], [154EC07]; [154EC23])*

Colin Humphris reported on the Finance and Budgets and in addition to the details provided in the Agenda (reproduced below), he referred to the documentation included in the Agenda Book for details on the 2015 investment portfolio (p. 391), 2016 Year-to-date investment portfolio (p. 401), copy of the audited reports (p. 411), approved budget 2016-2017 (p. 428), organization budget (p.432), and NAO subscription status (p. 433).

##### 19.1 REPORT ON CURRENT FINANCIAL SITUATION

The changes implemented to our accounting system to move to a full accrual basis in 2015 have provided unparalleled insights into the financial performance of the Union and, importantly, its cash needs. It is important that the Bureau understands that the numbers in the past may not have reflected the true operating costs and expenses and cash needs of IUPAC. The 2015 Audit is not yet complete so all numbers in the following should be considered provisional; the issues they highlight are, however, very real. An unaudited 2015 Profit and Loss statement, Balance Sheet and Cash flow are in the Agenda Book.

The budget for 2015 was put together on the traditional basis and predicted a small surplus of \$30k for the year. In actuality, we have seen a loss of approximately \$130k. As this was a General Assembly year, higher costs were anticipated but, however, the Union also faced a number of exceptional expenses relating to the enforced office move, support to the failing IT systems, development of the new website, the new accounting system, and corrections to staff benefits. Additionally, there were no costs for *PAC* and *CI* distribution put into the 2014-2015 budget numbers. As you will see below the Union has lost some NAOs and it also suffered a \$45k loss on currency due to the strength of the US Dollar. Losses are planned in the budgets for 2016 and 2017 and care will be needed to ensure that these losses are not exceeded to ensure the longer-term financial sustainability of the Union. We can only absorb losses by drawing down our investment portfolio, inevitably reducing future interest income. This is important; \$125k of interest income was taken in December 2015 to help the cash flow position.

Cash Flow is the primary concern. Over 2015 cash outflows were \$1,574k and inflows \$1,258k giving net cash outflow of \$316k. The financial position at the beginning of 2016 was weak and the Union has had to use a line of credit to meet

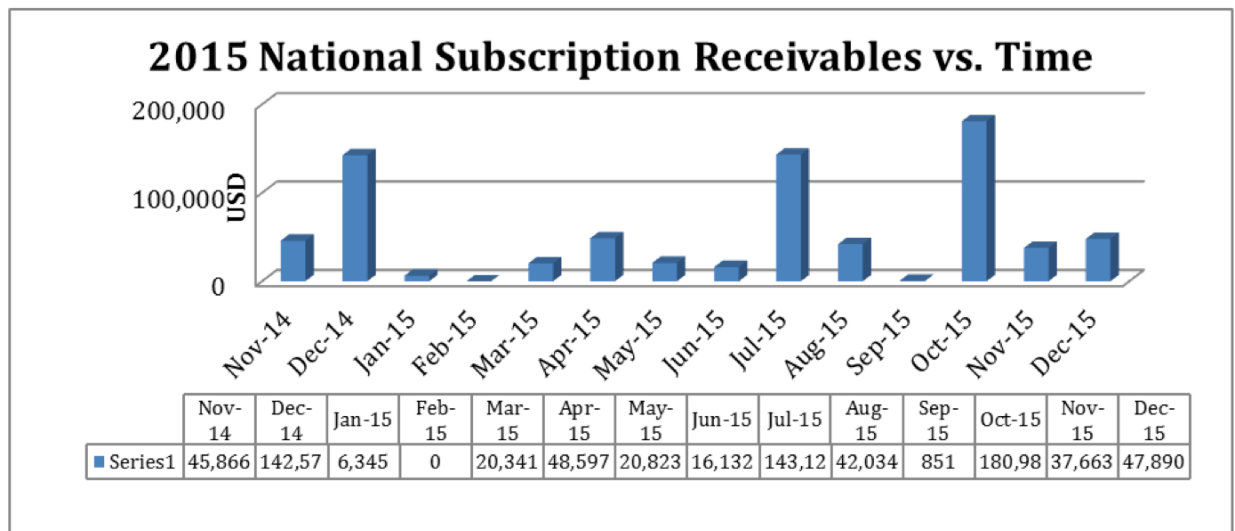
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its ongoing commitments. We are borrowing and will see interest charges as expenses in 2016. We will monitor the cash position carefully and will need to be in a strong position ahead of 2017, a General Assembly year.

The annual position, however, masks the day-to-day difficulties of having sufficient cash available to meet obligations.

Subscriptions from NAOs are three quarters of our annual income, but the timing of the payments is unpredictable. We have no control as to when these are paid through the year and, unfortunately, beyond; France and Belgium have only recently paid their 2015 subscriptions. The timing of the NAO National Subscription payments for 2015 until the end of 2015 is shown in the figure below.



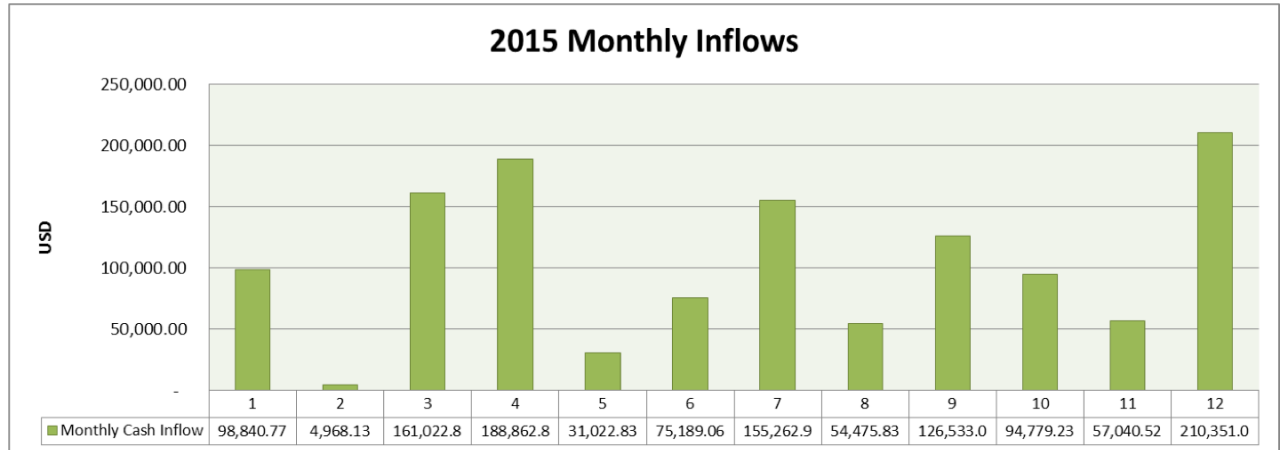
Whilst the Union has some regular and predictable cash obligations (payroll), all other calls on cash are just as unpredictable. Our investment portfolio is relatively inflexible, being designed to maximise returns. An analysis of the project system back to its inception shows a potential of up to \$800k of committed funding that could be called on at any time.

The overall Monthly Inflow of total revenue is shown below:

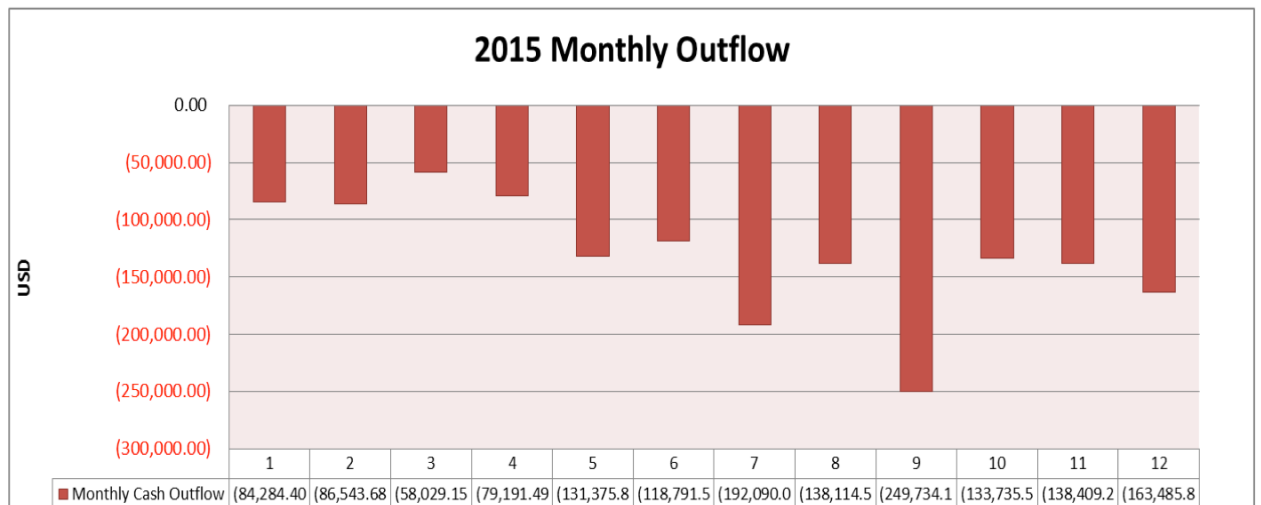


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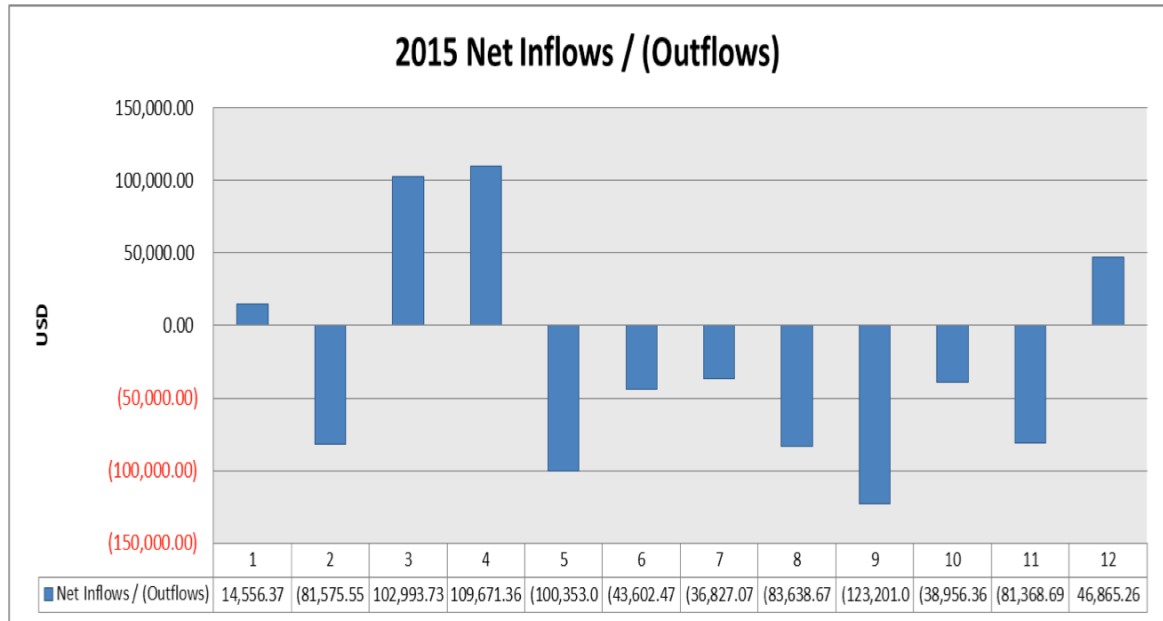
The overall Monthly Outflow (Expenses) is shown below:



The net effect in 2015 is shown below:

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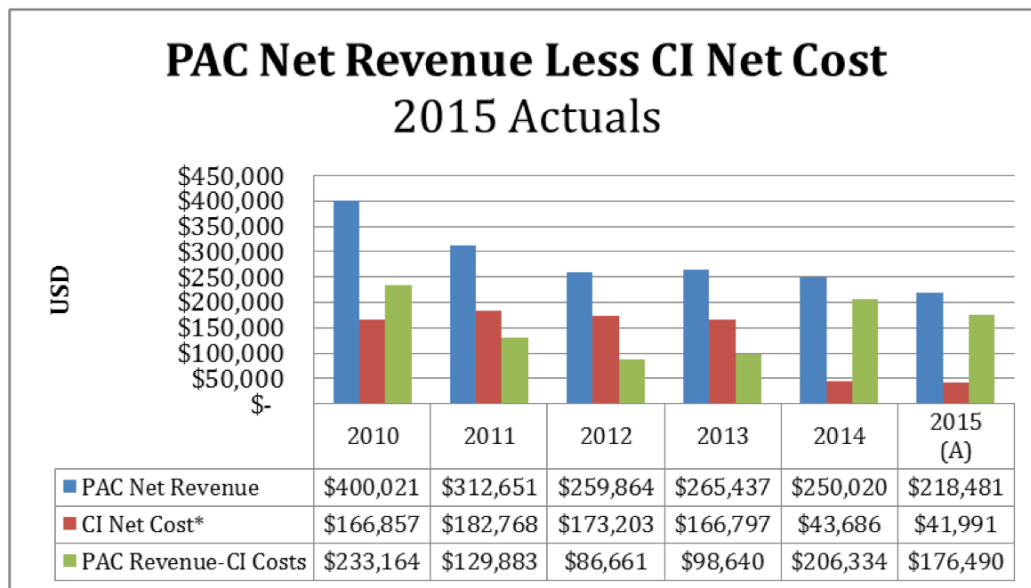
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A further complication for 2017 is that 2016 is the last year we are contracted to receive a €100k advance from De Gruyter, potentially further damaging cash flow early in 2017. Renegotiation is a priority.

Earnings from the partnership with De Gruyter are summarized below. *PAC* net earnings were below plan, but relatively stable, showing a small increase in Euro year on year.

The numbers are given in USD with 2014 exchange rate of 1.329 and 2015 of 1.100. Growth in *PAC* revenue is observed in Euro numbers for *PAC* net revenue to IUPAC from 188,126 € in 2014 to 198,619 € in 2015.



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CI Net Cost Calculation (USD)		
2014	2015	
\$ 65,142	\$ 59,285	DeGruyter
\$ 21,456	\$ 17,294	ACS Payment to IUPAC
\$ 43,686	\$ 41,991	IUPAC Net Cost

In conclusion, the Treasurer mentioned again that while the system is under much better control, the challenges remain around the management of the cash flow due to the unpredictability of both the income from National Subscriptions which can be paid any time within the year, and the outgoing expenses of having to reimburse claims associated with the various on-going activities of the Union.

In the ensuing discussion, the ideas of creating an endowment and establishing a corporate membership were mentioned.

### 19.2 PERFORMANCE OF INVESTMENT PORTFOLIO

The Investment Portfolio was transferred to BB&T in November 2014 following a decision of the Executive Committee on advice from the Finance Committee. A 2015 year end summary and 28 January report of the investment performance is included in the Agenda Book. During 2015, the investment portfolio outperformed the market benchmark gaining 1.28 % (benchmark 1.06 %). The Portfolio at December 31<sup>st</sup> 2015 was \$3,882,926. Annual income was \$132,737 from which \$125,000 was drawn for liquidity in December 2015. The Finance Committee remains very pleased with the performance of BB&T.

### 19.3 AUDITED FINANCIAL STATEMENT FOR 2014/15

The Audit report for 2014 is in the Agenda book. The 2015 Audit is in process, with the site visit and testing phase completed. All financial information reported for 2015 is pre-audited numbers.

The 2015 report will be forwarded to the Bureau when available.

### 19.4 REPORT OF FINANCE COMMITTEE MEETING 8<sup>TH</sup> FEBRUARY-OVERVIEW AND KEY TAKE AWAYS (CH AND LS)

### 19.5 BUDGET UPDATE FOR 2016-2017

The 2016-2017 Approved IUPAC Budget and Organizational Budget Allocations are in the Agenda book.

Coin Humphris confirmed that there was no change for the Divisions/Committees.

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#### 19.6 NAOs NATIONAL SUBSCRIPTION PAYMENT STATUS (AS OF 23 MARCH 2016)

A summary of our NAO subscription payments for 2015 and 2016 is in the Agenda Book for reference.

The following National Adhering Organizations were notified of their impending loss of NAO status in September 2015 and reminded of their outstanding invoices: Argentina, Belgium, Jordan, Tunisia, Ethiopia, Colombia (provisional) and Costa Rica (provisional).

We received payments of the 2014 National Subscription from Argentina, Jordan and Belgium (payment was applied to 2014). As of 31 December 2015, Tunisia, Ethiopia, Colombia (provisional), and Costa Rica were considered automatically removed from NAO status, due to being 24 months in arrears and were notified 11 January 2016 of this change.

In addition, IUPAC received a notification that Luxembourg wished to withdraw from IUPAC as an NAO. This was compliant with our Statutes (having paid their NS for 2014-2015). IUPAC currently has 57 NAO's for 2016.

#### FINANCIAL IMPACT:

The 2016-2017 budget includes Tunisia and Ethiopia, but does not include the two provisional NAOs. This will represent a loss of \$3,297.

The 2014-2015 budget included Colombia and Costa Rica in the calculations (2014 = \$7,464 and 2015 = \$7,661 with Colombia being the majority).

Overall loss for 2014-2015 against budget for these four countries amounts to \$22,345. This loss will be written off in the 2015 Audit.

#### STATUS OF 2015 NAO SUBSCRIPTIONS:

We currently have outstanding NAO subscriptions receivable of \$26,028 for the following countries: Argentina, Cuba\*, Greece, Kazakhstan, Pakistan and a partial balance for Turkey.

Lynn Soby confirmed that since the report was compiled, Greece has paid its subscription for 2015.

#### 19.7 IMPLICATIONS OF THE STRATEGIC PLAN FOR FUTURE BUDGETS

*(addressing Action [154EC35] asking the new DPs to consider the new Strategic Plan)*

Richard Hartshorn asked the DPs to consider these reports especially in the light of the new strategic plan. He indicated that future budget changes might need to be examined in the plan drawn and drafted in advance of the next Finance Committee. He asked all the DPs to share ideas and concerns with the Officers and in particular the Treasurer.

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**20. NATIONAL SUBSCRIPTION TASK FORCE**

Colin Humphris reviewed the background of the establishment of such a task force. For the biennium 2016-2017, Council agreed that IUPAC would receive subscriptions from member countries based on the interim model (2015 subscriptions plus 5% p.a.). Significant difficulties had been encountered with the calculation model in use at the time. Council also agreed to the formation of a National Subscription Taskforce to propose a new model for calculating subscriptions for implementation in the 2018-2019 biennium. The history and issues with the subscription calculations were reviewed in a January 2016 *Chemistry International* article, included in the Agenda Book (p.434) or <http://dx.doi.org/10.1515/ci-2016-0105>.

The task force has held one web meeting to discuss its role, the task and the way forward. The goal is to establish an equitable way to calculate the National Subscription from a suitable proxy of the current chemical endeavor in that country. How to account for currency variation is also being considered.

The task force has received some feedback from a few NAOs and is now considering various proxies including academic research publications, patents and IP. One challenge is to manage expectation since *a priori* everyone will hope to pay less than with the current model. The task force is considering options of how to engage NAOs more effectively by providing incentives for early payments. It is therefore important that the perceived value of IUPAC is made clear to all. To be manageable both for the NAOs and IUPAC, the final model to calculate NS will also need to be smoothing to abrupt changes.

**21. APPLICATIONS FOR NATIONAL ADHERING ORGANIZATION STATUS**

Lynn Soby informed that there were no applications for National Adhering Organization Status received by the Secretariat as of 28 March 2016.

**22. WEBSITE IMPLEMENTATION**

(addressing Action [[153EC08]])

Lynn Soby invited everyone to visit the new site that was launched the day before. She stressed that the site deployment was a work in progress, involving the developers, but that it also needs a critical review of the content that is presented. She asked everyone to return comments and also to be on the look-out for an email inviting them to login and review their profile/contact information. She expressed her view that the website is IUPAC's public face and is an important component of the Union branding and that it is part of the value proposition that new members, be individual or national, can perceive.

**23. PUBLICATIONS**

23.1 STATUS REPORT *CHEMISTRY INTERNATIONAL*

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[154EC25]

In addition to the details provided in the Agenda (reproduced below), Colin Humphris referred to the Agenda Book which includes a one-page description of the mission of the magazine and the role of the new editorial board.

At its meeting on 1<sup>st</sup> November 2015, the Executive Committee approved the implementation of recommendations for *CI* by the Committee on Publications and Cheminformatics Data Standards (CPCDS). In summary, CPCDS believed that moving forward, *CI*, in conjunction with the new IUPAC website, should serve as a key promotion and two-way communication tool to increase awareness and visibility of IUPAC; both internally to members and externally to other Chemical Societies, students, researchers, and interested members of the general public. Its current editorial perspective could and should serve a broader audience to IUPAC's advantage.

CPCDS recommended that *CI* should move forward with a focus on digital, whilst continuing with a seasonal print with issues published 4 times per year starting in 2017. *CI*'s presence on the website should evolve in a transition to digital-only and leverage publishing opportunities offered by the new IUPAC website. A new business model is needed in view of the impact on member benefits for Affiliate and Company members as well as our active volunteers.

These recommendations have been discussed and agreed with De Gruyter.

CPCDS also recommended the establishment of an Editorial Advisory Board (EAB) to help with *CI* production. Based on volunteers keen to be actively involved, the EAB held a formative teleconference to discuss its role, and structure, and active involvement in the editorial process for 2016 onwards. It is recommended that board members act in both advisory and active participatory roles. For this reason, it is recommended that it is an Editorial Board, dropping the advisory focus.

Bureau members are asked to consider the current membership and make recommendations to broaden the geographic diversity. The current initial membership is:

Hugh Burrows, Editor, *Pure and Applied Chemistry*  
Javier Garcia  
Richard Hartshorn, IUPAC Secretary General  
Colin Humphris, IUPAC Treasurer  
Robert Lancashire  
Bonnie Lawlor, Chair, CPCDS  
Dave Martinsen  
Leah McEwen

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Fabienne Meyers, Managing Editor, *Chemistry International (CI)*  
Leiv Sydnnes

Bureau members are also asked to consider the proposed Terms of Reference for the Editorial Board. These reflect the *modus operandi* up to formal approval at the Council Meeting IUPAC 2017.

The first edition of *CI* in 2016 was freely available, but with the ability to authenticate IUPAC members, it will be sold outside the IUPAC community for the second edition onwards.

Colin Humphris asked if anyone had any comments and also asked Bureau members to come forth with suggestions for additional volunteers, especially from the Far East.

#### 23.2 STATUS REPORT *PURE AND APPLIED CHEMISTRY* (addressing Action [154EC26])

The Bureau should note that the publishing process and collaboration with De Gruyter continues to run reasonably smoothly. Attention has been given to errors arising during the proofing process although these are now the exception.

Attention by CPCDS and during the *PAC* Editorial Advisory Board in Busan was on impact factors: the high impact of Standards and Recommendations contrasted with the difficulty of attracting leading chemists to publish conference papers in *PAC*. Bureau will recall that it approved the endorsement of the San Francisco “Declaration on Research Assessment” at the meeting in Busan. Looking forward a concern is a decline in content (it is down 30 %). De Gruyter plans to hold the price at the 2016 level for 2017 to forestall cancellations. This is an important issue for IUPAC to address through the *PAC* Editorial Advisory Board.

The De Gruyter plan for *PAC* in 2015 was for an aggressive growth in sales. In the event they faced a large reduction in subscriptions associated with the bankruptcy of a large subscription service (SWETS) and worked hard to recapture some lost income resulting in a better than expected 2015 income.

Bonnie Lawlor indicated that the current decline of *PAC* content was a concern also for De Gruyter and that the *PAC* editor was looking into realigning conference invitations. The timing for the preparation of technical reports and recommendations is instead less predictable, and enforcing a submission deadline for these specific type of manuscripts is not suitable.

#### 23.3 VIRTUAL PUBLISHING AND DATABASES

Bonnie Lawlor reported that the De Gruyter Database “Standards On-Line” was launched on schedule last month. 2017 improvements will include InChI and a periodic table interface to access data.

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“Standards On-Line” is an added value, subscription bearing tool to facilitate advanced searches of the *PAC* Standards and Recommendations back catalogue. This will be royalty bearing for IUPAC (12.5%) with an expected income close to €20,000 in 2016.

Lynn Soby reported that SpringerMaterials are preparing a proposal for IUPAC consideration regarding the full Solubility Data Series to be developed into a database, either separately or as an integral part of SpringerMaterials. They are now looking at the costs associated with digitizing the full volumes of the SDS. Work will be ongoing to formalize a licensing agreement.

#### **24. STATUS REPORT ON IUPAC SECRETARIAT**

##### 24.1 INFORMATION TECHNOLOGY AND PROCESS INNOVATION

Lynn Soby explained that since she begun in August 2014, she has reviewed all the Secretariat’s functions and has implemented major changes, upgrades, and process improvements. These include the accounting system and reports, the handling and processing of claim forms, the management of the members’ data, the election process, the website, etc.

##### 24.2 STAFF AND THEIR RESPONSIBILITIES

Lynn Soby reviewed briefly the status of the Secretariat staff and key roles and responsibilities. She indicated that since Jay Lucido started to work for IUPAC in July 2015 as financial controller, Linda Tapp’s role has gradually shifted; Linda now manages all the Membership programs, including National Adhering Organizations, Company Associates, Affiliate Membership Programs, and Associated Organizations. A goal is to continuously review, streamline and simplify the various processes that the office is handling.

The Secretariat also outsources specific technical skill, for example for the web development and maintenance.

##### 24.3 CLAIM FORM PROCESSES

Lynn Soby reviewed the current claim form process and guidelines. She reported that the processing of claims was labor-intensive and that the work has actually increased since a receipted reimbursement policy was put in place. The length of time for reimbursement of claims has been a difficult issue for some of our volunteers, but an effort is made to make payment within a month. While we optimized the claim forms to enable a better tracking process, it remains a process that needs improvements if IUPAC is to manage cash flow more effectively. A goal is to develop a process that will be entirely digital with an online submission form and claim.

Lynn Soby asked for input from the Bureau members regarding future improvements.



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**25. REPORT OF THE MEMBERSHIP RELATIONS COMMITTEE**

*(addressing Action [154EC27]; [153EC30]; [153EC31])*

Mark Cesa recalled that within the scope of the new strategic plan, IUPAC is to “expand and retain member and volunteer base with an emphasis on diversity and inclusion.” The responsibility of the Membership Relations Committee (MRC) is therefore to also include retention of our current membership – National Adhering Organizations (NAOs), Associate National Adhering Organizations (ANAOs), Fellows and Affiliates – as well as recruiting new members.

Dr. Cesa indicated that the MRC met on Friday and started to explore options regarding types of membership and to develop a value proposition, i.e. a statement that describes why a stakeholder belongs to the organization.

In parallel, it will be important to collect ideas and survey members. Dr. Cesa hoped to make progress in the next few months and will report at the next Executive Committee.

Dr. Cesa stressed that it is very important that IUPAC can accurately frame what its unique role is and asked everyone to share their thoughts and in particular reflect on the most important things that IUPAC do for its members. In order to be able to plan and proceed with recruiting, and to expand IUPAC’s reach, the Committee recognized that having a coordinated approach and good and accurate contacts are key.

The MRC is composed of Mark Cesa (chair), Richard Hartshorn (*ex officio* Secretary General), Chris Brett, K.-H. Lee, Petr Fedotov, Carlos Tollinche, and Ron Weir.

Dr. Cesa will share the minutes of the recent meeting with the Bureau, when available. Prof. Tarasova will inquire to other Unions about their own practices and see what lessons can be learned from them.

**26. REPORT OF THE IUPAC COMMITTEE FOR ICSU**

*(addressing Action [154EC13])*

Mark Cesa (chair of that committee) informed the Bureau that the Committee met on Friday. In addition to the chair, the committee includes Prof. Brimble, Prof. Mei-Hung Chiu, Dr. Fedotov, Prof. Tarasova (*ex officio* as President and IUPAC representative on ICSU) and Dr. Humphris (*ex officio* as Treasurer).

The Committee is to “evaluate the value and effectiveness of IUPAC membership in ICSU and to recommend actions as needed to the Bureau; to assist the Secretariat, through the Executive Director, in response to requests from ICSU for information, nominations and other matters; and to coordinate applications from IUPAC volunteers for ICSU projects.”

Mark Cesa reported that, so far, the Committee focused primarily on evaluating IUPAC’s role in ICSU with an eye toward maximizing the value to IUPAC of this membership,

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consistent with the mission, goals and objectives of IUPAC's new strategic plan. Prof. Tarasova as President and IUPAC representative on ICSU will also gather ideas and best practices from others. ICSU is essentially focused on three major areas: universality of Science, science for policy, and research collaboration. IUPAC has currently two active projects, one with IUPAP on the participation and leadership of women in chemistry, and a second with IUCr on the concepts and terminology of crystal engineering.

Dr. Cesa mentioned that IUPAC paid about USD 24k per year and the issue is simply if IUPAC gets such value in return.

## **27. PROJECTS REVIEW**

### 27.1 COMMITMENTS REPORT, PROJECTS EXPENDITURES, AND PROPOSALS UNDER REVIEW

Fabienne Meyers referred to the report on p. 440 which compiles both the commitments and the current budget and balance of each current project.

The report is organized by Division and Committee. For each Div/Cmt the top part of the report lists the commitments made since Jan 1<sup>st</sup> and towards specific project; these commitments are made against the Division biennium budget and a recommended portion is to assign 70% towards specific projects and 30% to operational expenses such as off-year meeting. The bottom part is a status report of all current projects that have remaining funds and regardless of when these projects were initiated. The budget of each project is not restricted to the biennium and instead assigned at the time of their approval for the life time of the project.

The 'planned end date' is an indication of when the specific project might be completed and Task group members are regularly asked to review and update the status of their projects.

Also enclosed in the Agenda Book (p. 468) is the latest report of proposals under review. Such reports are generated monthly and circulated to the DPs; it provides a timely probe of the proposals that are at that time in the review process and at various stages of assessment.

## **28. REPORT FROM PROJECT COMMITTEE**

*(addressing Action [97BU03] The PC to consider alternative metrics to reach of definition of "Scientifically Emerging Region")*

Prof. Templeton, Chair of the Project Committee, referred to his report included in the Agenda Book (p. 483). He stressed that by virtue of its role, the PC only sees a fraction of project proposals, which includes large projects or interdivisional ones. A guiding principle is always the assessment the scientific merit and the quality of the proposed activity, be that of a project or a conference seeking support. The PC activities are clearly relevant to the new strategic plan and do measure well against the Strategic Plan objectives.

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Among the issues under discussion, the Committee has reached no resolution regarding the 'definition' of "*Scientifically Emerging Region*."

At its meeting on this past Friday, the Committee decided that from now on it will postpone to the following biennium, the assessment of proposals coming from Divisions seeking full support for a large proposal when at that time, the Division has itself already committed its entire biennium budget to other projects. A resubmission postponed the following year will require a recommendation from the new Division President. This practice is to encourage Divisions to better manage their own budgets and to recognize that the PC funds are not simply an extension of their own Division funds, but are for interdivisional/multidisciplinary projects or large projects in which the Division itself must make a commitment.

Prof. Tarasova thanked Prof. Templeton for his report and asked if the PC has looked into the UNESCO report "Global State of Science" ([http://en.unesco.org/unesco\\_science\\_report](http://en.unesco.org/unesco_science_report)) for a definition of SER?

Mark Cesa asked if the project proposals were assessed against the new Strategic Plan. Prof. Templeton replied that the current proposal form does not explicitly make such a connection, but that the guidelines could be reviewed. Dr. Cesa suggested that doing so will provide a suitable highlight of the Strategic Plan.

#### **29. REPORT FROM EVALUATION COMMITTEE**

Prof. Chris Brett, Chair of the Evaluation Committee (EvC), informed the Bureau that the Committee was working with the EvC's recently revised terms of reference with the goals of focusing their assessment on identifying what works well for the conduct and completion of a project and on providing insight that will result in improvement of the project outcome. The Committee will need to examine interim reports and explore ways to standardize these reports. The work of the EvC is to supplement that of the Divisions and is not an audit. A communication with the DPs/Standing Committee Chairs will be established to consider how best to proceed. Each member on the EvC has a specific responsibility in acting as a link with a specific Division/Standing Committee.

In the ensuing discussion, it was suggested the EvC look at the task groups population vs age, gender, regional diversity, and also if the task group members and chairs are simultaneously titular or associate members.

It was argued that the preparation of interim reports can help to bring a project to completion and therefore the EvC will need to consider what incentives it might provide to ensure that such reports are prepared and reviewed in a timely fashion. Ultimately the role of the EvC is to formulate and share good practices.

#### **30. PRIZE COMMITTEE: IUPAC/SOLVAY AWARD**

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Mark Cesa reported that there were 14 applications for this year's prize and the committee was currently proceeding with its review. The target date for announcing this year's award is set for the end of April.

#### **31. COMMITTEE ON CHEMISTRY RESEARCH FUNDING**

*(addressing Action [154EC28] To obtain clarification from funding agencies ref their future involvement and about CS3 (Chemical Sciences and Society Summit) plan/report following their recent meeting in September 2015)*

Mark Cesa informed the Bureau that CCRF was considering options for a third call for proposals and that, at the meeting in Busan, a possible collaboration with the CS3 initiative on water had been proposed, and CS3 organizers were favorable to IUPAC involvement. The CS3 initiative is a collaboration between the Chinese Chemical Society (CCS), the Gesellschaft Deutscher Chemiker (German Chemical Society, GDCh), the Chemical Society of Japan (CSJ), the Royal Society of Chemistry (RSC), and the American Chemical Society (ACS).

CS3 have issued a white paper,

<http://www.acs.org/content/acs/en/global/international/regional/eventsglobal/cs3.html>

Mark Cesa recalled that IUPAC's original involvement was to set-up and facilitate a process for calls for collaborative projects and their evaluation. If indeed such a process is now in place with its own momentum, IUPAC involvement is no longer necessary.

#### **32. DISCOVERY AND NAMING OF NEW ELEMENTS**

Prof Jan Reedijk reviewed the naming process triggered by the recent publication in *PAC* (Jan 2016) of the technical reports validating the discovery and assignation of elements 113, 115, 117, and 118.

The concerned laboratories have been invited to propose names and the provisional recommendation presenting these names will be subjected to a public review period of 5 months. The procedure is the subject of a recent feature article published in *CI* (March 2016; <http://dx.doi.org/10.1515/ci-2016-0205>)

Following the 5-month public review, it is foreseeable that the final recommendations are published towards the end of the year or early 2017.

#### **33. EXTERNAL FUNDING SOURCES AND RELATED PROJECTS**

33.1 THE PHOSAGRO PROJECT [154EC32]

33.2 NEW OPPORTUNITY – SINOPEC [153EC45]; [153EC46]

33.3 OTHER POSSIBILITIES

Colin Humphris referred to the Agenda Book (p. 490) for an updated report describing the PhosAgro/UNESCO/IUPAC grant program. Now in its 3<sup>rd</sup> round, the program has

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provided research grants for young researchers. The joint program is the result of a collaboration that was triggered during the IYC2011.

Alternative funding mechanisms needs to be explored that allow IUPAC to take part in activities of significant size and impact that also have the potential for good publicity.

The Vice President reviewed the potential opportunity emerging from a contact with Sinopec Director for Research, Dr. Xie Zaiku. It is now for IUPAC to articulate and propose practical ways that will allow such a relationship to translate into tangible funding opportunities targeted to specific initiatives. Negotiations are on-going.

For IUPAC, it is most important not to become involved in a conflict of interest with industry and to preserve its credibility and independence.

A question pointed to the Samsung prize. This is actually an endowment, restricted to educational projects and awards.

Prof. Tundo recognized that the Sinopec opportunity is a timely initiative. He suggested that it would be preferable that the format of such a joint program be unique and somewhat different than with PhosAgro.

Colin Humphris mentioned that the next Executive Committee will be in Beijing and that his hope is to have an agreement signed by the end of the year.

Bernard West mentioned that COCI was in a good position to nurture collaborative interest with industry. He recalled that at the WCLM in Busan, Dr. Hubert Mandery, director general of the European Chemical Industry Council (CEFIC), alluded to the initiative/opportunity of bringing Responsible Care through Africa. Similarly, the COCI Safety Training Program could be expanded.

Other opportunities could be explored, working with organizations such as OPCW, the Organisation for the Prohibition of Chemical Weapons, on issues related to security, or with UNEP, the United Nations Environment Programme, on issues pertaining to sustainable development, especially in Africa.

#### **34. INCHI TRUST**

Richard Hartshorn briefly informed the Bureau about the latest InChI developments and in particular about the recent projects of relevance to Health & Safety and inventory management. Such developments could prove to be important for InChI and be of great practical interest and generate visibility. He recalled that the Trust was responsible for developing the codes once the requirements and specifications were outlined as a result of a specific IUPAC project.

InChI has reached 15 years of age and the Trust plans to have a conference in 2017, to not only review what InChI has contributed to the field, but also to seek new ideas.

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The formal relationship between IUPAC (via Division VIII and CPCDS) and the Trust was reformulated last year to better reflect the role of CPCDS.

#### **35. NPU**

*[153EC35]*

Colin Humphris mentioned that he had been the IUPAC representative on NPU (Nomenclature for Properties and Units (in Clinical Chemistry)) for several years. The International Federation of Clinical Chemistry (IFCC) is also part of the steering group that oversees the development and promotion of NPU terminology for clinical chemistry and laboratory medicine throughout the world. (see Division VII report).

Colin Humphris explained that the NPU guidelines for clinical chemistry are currently being used in Denmark, Sweden and Norway. Within the Chemistry and Human Health Division (Div VII), the IUPAC NPU subcommittee has initiated projects to support the integration of NPU terminology with the international health standard, SNOMED CT. The integration of NPU with the SNOMED CT still requires acceptance by the owner of SNOMED CT, and adoption by additional countries.

#### **36. OPCW ETHICAL GUIDELINES WORKSHOP/FUTURE INTERACTION**

*(addressing Action [154EC33] To follow-up the discussion at the Bureau and consider if the OPCW ethical guidelines deserve or not endorsement)*

Prof. Tarasova referred the Bureau to the Agenda Book (p. 493) which contains an OPCW request to IUPAC for possible endorsement and promulgation of the text of The Hague Ethical Guidelines.

Professor Tarasova recalled the long-standing cooperation that IUPAC has developed with OPCW and Mark Cesa stressed that OPCW does see IUPAC as a reliable partner that provides unbiased science input. Dr. Cesa pointed out that the Guidelines are suggestions for the type of consideration that shall be included in the code of conduct. He proposed that if the Bureau is in support, that he will inform IUPAC NAOs of the existence of the guidelines and draft a message of endorsement, merely to encourage and suggest that they adhere to guidelines.

A motion was made to endorse the OPCW Guidelines.

The Bureau voted all in favor.

Mark Cesa informed the Bureau that he will also be an observer at a meeting at the end of April on educational activities. Professor Tarasova will attend OPCW Day on May 2.

#### **37. CONFERENCE ENDORSEMENT PROGRAM**

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Lynn Soby referred to the summary list of conferences endorsed since 2015 July and included in the Agenda Book (p. 498). The Secretariat has recently updated the database of our conferences in order to provide detailed reports and better tracking of the conferences. The program management has also been recently defined for specific roles and responsibilities. Dr. Meyers is responsible for the conference's approval process with assistance from Linda Tapp (database and file management) and Enid Weatherwax (Approval Letters). This workflow should allow for more growth in the program, communication and management of content for *CI* and *PAC*, and a streamlined system to reduce "churn" and improve record keeping and file management.

Fabienne Meyers urged the Division Presidents to be more proactive in providing information on conferences that need to be properly endorsed (some run with the IUPAC label before applying for endorsement) and also proactive in engaging with organizers of events which could potentially be endorsed. Recognizing that an endorsed conference is a benefit for IUPAC affiliates, there is value in properly-assessed applications. Conference input also impacts on *PAC* content.

Recognizing that well-managed conferences can generate revenue, Prof. Tundo asked if/how could conferences be a revenue stream for IUPAC, similar to what it is for ACS or EuCheMS.

#### **38. DATES AND PLACE OF NEXT BUREAU MEETING**

Richard Hartshorn confirmed that the next meeting will be a virtual meeting next April or May and in advance of and preparation for the Council. The following meeting will be at the General Assembly in Sao Paulo.

#### **39. ANY OTHER BUSINESS**

Prof. Tarasova asked if there was any other business. There was none. She thanked the participants for their useful input and comments and for their help in keeping to the schedule. The meeting was adjourned at 11:50 am.