

## International Union of Pure and Applied Chemistry

### 109<sup>th</sup> Bureau Meeting: Hybrid

#### 5 and 6 November 2022, Frankfurt am Main, Germany

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Present in person: Lidia Armelao, Ghada Bassioni, Chris Brett, Mei-Hung Chiu, Attila Csaszar, Petr Fedotov, Javier García Martínez, Mary Garson, Richard Hartshorn, Greta Heydenrych, Helle Johannesen, Ehud Keinan, Wolfram Koch, Christine Luscombe, Laura McConnell, Leah McEwen, Zoltán Mester, Fabienne Meyers, Marietjie Potgieter, Amelia Rauter, Jan Reedijk, Michelle Rogers, David Shaw.

Present online: Buxing Han, Fran Kerton, Anna Makarova, Ken Sakai, Zhigang Shuai, Jürgen Stohner (day 2 only), Gloria Obuzor (intermittently, connection problems).

#### Preamble:

The format of this meeting was exploratory rather than focused on reporting. The two foci were the composition and aim of the to-be-launched Science Board, and to enable the Divisions and Committees to learn from each other and adapt each other's best practices. A few other topics were covered as well, as outlined below and detailed in the accompanying Supporting Information (numbered files attached).

#### Science Board:

Starting 2024, the Bureau will be split into a Science Board (**SI\_01**, **SI\_02**) and an Executive Board to separate the scientific strategizing of the Union from its governance. In this spirit, the Interdivisional Committees are assigned to either the Science or the Executive Board, depending on their remit as defined in the Statutes and Bylaws (**SI\_03**). Some Interdivisional Committees may be assigned to both Boards, for example the Project Committee. Our small-group sessions plus subsequent general discussion focused on the requirements for members from outside of IUPAC (referred to herein as "External Members" until we have found a better term), as well as our general expectations for the Science Board.

#### Who may nominate and what are the timelines for the election?

- There will be an open call for nominations, including self-nominations, in combination with a request from the President to NAOs, umbrella organisations (CEFIC; EuChemS, ISC, etc.) to each nominate 3-4 individuals from the broader chemistry/science community, not limited to their own country or organisation.
- The Bureau will act as Nominating Committee to winnow down the ballot to 10-16 entries.
- The External Members will be elected according to Timeline 2 (**SI\_02**).
- As the ballots for the Internal Members are already known and the electorate is small, Timeline 1 could be completed earlier than currently planned, provided the electorate gets a chance to know the people who are eligible.

#### Who may be nominated?

- External members need not come from an NAO country AND they may not qualify as "Internal Members" (a rather unlikely, but not impossible, constellation).
- There was no clear conclusion regarding potential prior IUPAC history for External Members.
- This will require a considerable time commitment, so avoid people who will not have time, such as recent Nobel Laureates and CEOs.

- Candidates should be academic/industry leaders or standards specialists, all with a view beyond their own subject area.
- We will strive for a reasonable geographic and career stage spread, also with an eye on continuity and succession planning.
- Specific areas in which we miss expertise in IUPAC:
  - Industrial workflows for standardisation
  - Software development, e.g. for electronic laboratory notebooks (ELBs)
  - Non-proprietary data standards
  - Digitising our own (archival) data and tools.
- Society/association experience would be beneficial.

#### What will the SB do?

- Determine in what contexts IUPAC brings value, clearly define the scientific work that sets IUPAC apart from other (chemical) science associations.
- Determine which needs of the community can be fulfilled by IUPAC, keeping in mind the point above.
- Advocate the ongoing and increasing relevance of IUPAC as the need for digital standards will only increase.
- Advise the Treasurer and Finance Committee on the required level of detail of the Budget, keeping in mind discussions elsewhere about interdivisional projects (see below).
- One potential Budget scenario could be a 25/75 Science Board/Divisional split for projects, with the Science Board's 25% going towards flagship projects (**SI\_04**). Later, a 50/50 split could be considered.
- Identifying popular, but ill-defined concepts for rigorous, IUPAC-endorsed definitions (e.g. bio-orthogonal, metal-organic framework).
- An idea was raised of a Scientific Advisory Board to the Science Board with no big time investments, consisting of high-profile individuals:
  - Pool of ideas
  - Pool of consultants
  - Add an imprimatur to IUPAC's scientific activities.

#### How will the SB do it?

- Meet 6x/annum and less frequently as things settle.
- Pair up outside/inside members to help the outsiders orient within the organisation and to enable informal discussions between people with different perspectives.

**To do:** (UPDATE 26 June 2023: This was done and the first round of elections has been completed)

- Javier asks for names of suitable organisations to contact for nominations. **(ALL)**
- Need a final decision on prior IUPAC involvement for External Members. **(ALL)**
- Need better terminology than Internal/External, please send suggestions to Richard/Greta. **(ALL)** ((Suggestions: Internal→Committee/Organisation/leave as is; External→Community))
- Need a proper job description and workflow for obtaining the nominations. **(WHO? EvC or Officers?)**

**To do:** (UPDATE 26 June 2023: This was done and the first round of elections has been completed)

- All candidates need statement and short bio featured on the website. (can be solicited by **Secretariat** once nominations are in)
- Decide on Timeline 1. **(WHO? EvC or Officers?)**
- Define the tasks that the SB needs to do in the biennium already. **(WHO? Bureau?)**

### Communication and best practice guidelines

The aim of the small-group sessions and subsequent discussion was to provide some general information from all the Divisions and Committees to establish guidelines for best practice workflows and to identify areas where improvement would be needed. What follows is a list of suggestions, some of which are already implemented in some groups:

- Most/all group members should have a well-defined function within the group, in addition to the group's officers. Ideally, each group has a:
  - Project officer
  - Internal Communications officer for talking to other divisions informally
  - External Communications officer (social media and more, see below, and note that there is a group working on establishing a proper communications strategy)
  - Webmaster.
- All divisions could consider harmonising their KPIs to report their work and have consistent descriptors for successful projects. ((caveat – no competition between groups, KPI should not become an end in itself, see Impact Factor –*Greta*))
- Regular strategic reviews for each group.
- Issue regular calls for project proposals with guidelines on what topics are the focus.
- Interdivisional projects could be better managed if project funds would be more centrally budgeted, e.g. disbursed directly by the Science Board and/or Project Committee rather than assigned to each Division/Committee upfront. See also the Science Board section.
- More realistic timelines for project completion!
- There are bottlenecks in ICTNS review process – can they be supported better? Workflows at De Gruyter could also be improved to shorten publication times.
- Better interactions/connections between divisions and interdivisional(!) committees, as well as subcommittees within divisions.
- Reduce the number of subcommittees whenever possible.
- We need a database accessible to IUPAC volunteers that would offer easy-access reporting tools to extract lists of contacts on specific bodies or from particular countries. Alternatively, the lists on the website should be made more searchable.
- Engage whole group, especially younger/newer members to optimise candidate pool for succession planning. Consider developing welcome packs for new members, akin to a beginner's guide to IUPAC. (SI\_05, available as Word directly from Jan ([reedijk@chem.leidenuniv.nl](mailto:reedijk@chem.leidenuniv.nl)))
- Consistent Terms of Reference and web presence.
- Engage the broader community at conferences, see such events, including conference sponsoring, as recruitment opportunities.
- Also use conferences and other outreach events to get content for PAC via special issues.
- CCE could be engaged to develop more educational resources based on project outcomes of other groups, also in a bid to develop CTI and because there is an intrinsic value to bringing the divisions' and committees' work out to the teacher level (high school/college). One example would be digitalised/appified cheat sheets for the colour books, targeted for college audiences, different languages.
- Better engagement directly with the NAOs. In this sense, the NAO Forum is a good initiative.
- IUPAC as a whole should engage more with organisations from other subject areas, not least in the contexts of data management and cheminformatics. IYBSSD could provide a good starting point for building lasting relationships.

- We need an overarching, clear communications strategy (for which a working group has been set up).
  - Social media ((do we still want to be on Twitter, given its recent development? –Greta))
  - Website needs to become more accessible to newcomers and occasional browsers
  - Marketing, brand valorisation
  - Publicise the successes of IUPAC's bodies more, consider approaching dissemination platforms.
- The Union may need to rethink its entire organisational structure:
  - Chemistry has become more interdisciplinary, that is, problem-centred rather than subject-centred and emerging areas are not necessarily covered by current divisional setup
  - Eliminate overlap and cross-purposes
  - In case of a major overhaul and/or rearrangement into looser, project-based units, we need to assess eligibility criteria for participation to retain the size of the volunteer pool
  - Org structure needs to be optimised for what we want to accomplish, so this needs to be defined first
  - Possibly a first task for the Science Board.

**To do:** (UPDATE 26 June 2023: Most of this is still in progress)

- Send Javier suggestions of science organisations that may be good to contact and establish ties to. (**ALL, 28 November**)
- Send Javier suggestions for science aggregation platforms to disseminate our work. (**ALL, 28 November**)
- Establish need for webmaster training and set up a schedule. (**Greta: December/January**)
- Establish what interactive resources IUPAC volunteers may need and draw up a plan to establish that. (**Greta, this is somewhat longer-term, timeline and workflow to follow**)
- Define the roles needed for each group, write up a best-practice guide. (**WHO? WHEN?**)
- Work on communications strategy, keeping in mind marketing aspects and IUPAC's brand valorisation. (**Bonnie's group, and who else? When? What about related topics – prizes, conference endorsement, etc.? (see below)**)

## Other topics

### Finances

- Overall, financials look sound. (**SI\_06**)
- More travel costs, not clear yet if this is inflation or represents real more travel.
- The 2024-2025 Budget will be set up by February 2023 and will be presented to the Finance Committee shortly thereafter.
- The following factors will be considered in the scenario modelling (and the different scenarios will be clearly explained):
  - Inflation
  - Level of project funding assignment (see Science Board and Communication sections) central vs decentralised possibilities: e.g. 0:100 (current), 25:75 (first round for Science Board) and later on 50:50.
  - Travel – cannot go back to status quo ante
  - Finance market fluctuations.

### General assembly preparation

- Open question: Should we stretch the virtual General Assembly over five days rather than three to accommodate time zone edges? ((no clear resolution to this))
- Timing of 2020-2023 Solvay award ceremony not 100% set yet.
- Division Vice-Presidents' meeting must not overlap with Bureau.
- Bureau needs to be right before Council for any last-minute decisions and to ensure a smooth transition to EB and SB.

### WCLM & Presidents' Forum (SI\_07) (UPDATE 26 June 2023: Presidents' Forum will take place)

- Should avoid overlap of WCLM with other Congress events, ideally it should be right after a morning Plenary in the same room.
- Presidents' Forum open to all chemistry society presidents, regardless of NAO status. The aim is to find synergies/discussion points under leadership of IUPAC, to establish IUPAC as the leading international body in chemistry. Presidents of associations such as CEFIC and EuChemS will be invited too. It must be made clear that the meeting is an informal exchange of ideas and not a place where decisions are made, lest NAOs feel excluded, as no NAO reps will be invited (unless they happen to be President of their chemical society).
- President of IUPAC sends invites.
- **To do:** Compile list of all societies Presidents. (**Secretariat, March 2023?**)

### Endorsed Conferences and Calendars (UPDATE 26 June 2023: Still in progress)

- We have a shortage of endorsed conferences
  - How about endorsing the NAOs' national conference?
  - Other IUPAC member countries can get discounted rate if they are members of their local societies, this can be advertised as a member benefit
  - Other criteria must be maintained.
- At conference
  - IUPAC banner in a prominent place
  - One-year deadline too onerous, we could shorten it. Pretty much just say that they will have less exposure from IUPAC then. Convert application to online form?
- **To do:** Rewrite the criteria for conference endorsement. (**WHO? WHEN?**)

### Prizes (UPDATE 26 June 2023: Longer-term initiative, in progress)

- Need a centralised workflow to have the same style, communication and due dates for all IUPAC prizes.
- **To do:** Write up new workflow for the prizes (**WHO? WHEN?**)

### Data management (SI\_08)

- We make recommendations but do not ensure that they are applied consistently / we do not provide the tools that enable that.
- We are not very good yet at managing distributed data and dynamically assembling them.
- All Divisions and Committees need to revise their own usage of terms to conform with the Gold Book. (**as part of regular strategic review?**)
- A key role for IUPAC could be to coordinate business models for FAIR efforts in chemistry.

## PAC

- Interim editor is A. Ganesan of East Anglia University.
- PAC is undergoing a major strategic review.
- This includes potentially moving to new publisher when contract with De Gruyter expires at the end of 2024. Greta will *not* be involved in *any* discussions on this.

## Projects

- Matching external funding for projects is a “nice to have” but we should take care to not frighten people away with such a requirement, as matching funding might also be hard to obtain.
- The Project Committee does not get many requests for funding and reminds Divisions/Committees that they need to be proactive for Project Committee funding.
- Also mentioned in more than one other context in this meeting is the idea to centralise the funding, decouple it from the divisions and just have one central pot. This will make collaboration between divisions simpler and make bookkeeping and tracking funds simpler. This would also make it easier to integrate the Science Board into the budget. One caveat is that the money is needed at different points in the process depending on the project.
- For the General Assembly: How about a project poster exhibition, perhaps also on social media? This should be discussed under the communications strategy.

## NAOs

- Could income from NAOs be enhanced with more income from industry?
  - We could be more ambitious in our CA charge as \$2500 is not much. The model of calculation for NAOs already includes industry size in a given country, so this would need careful consideration to avoid double-dipping
  - With more income from industry we would need to ensure that people know that we are independent and not open to industry lobbying
  - It may be better to ask for funding of specific initiatives, and this is where the planned Centenary Endowment Board could play an important role
  - Transparency needed about source of funding and where that money goes: sponsorship vs membership. Companies may like sponsorship more, as this gives more visibility.
- “National” Adhering Organisations should be relabelled as “XYZ” Adhering Organisations.
- **To do:** Suggestions for “XYZ” to Richard by **28 November**. (**ALL**)

## International Year of Basic Sciences for Sustainable Development (IYBSSD)

- This is a chance for IUPAC to become more closely connected to other organisations with a similar remit in other subject areas.
- **To do:** Let Fabienne know which IYBSSD-related events you’d like to post on IUPAC’s [IYSSBD website](#). (**Ongoing**)

## GWB 2023 (SI\_09)

- The theme for 2023 is “[Breaking Barriers in Science](#)” to tie in with the IYBSSD
- Coordination
  - Zoom speed-networking to help with organising
  - [Detailed organisers’ guide](#)
  - Not just for women!!
- Bureau members are asked to become participants and multipliers for this event.

### ChemVoices

- Formerly with IYCN, [now with IUPAC](#).
- **To do:** Get in touch with Laura with suggestions for content. (**Ongoing**)

### CEDEI – Committee on Ethics, Diversity, Equity and Inclusion (please don't call it "cee-dee", SI\_10)

- CEDEI is not just about policy and governance, but also has a few projects in the pipeline.
- **To do:**
  - Feedback and commentary on the policy documents attached to these notes. (**ALL, 28 November**). (files starting with cedei\_)
  - Also check prizes for possible instances of age-discrimination. Instead of a fixed age, maybe a period after getting a PhD? (**WHO? WHEN?** Part of streamlining of prizes workflow?)
  - Guidelines on hosting conferences in countries where not all people are welcome or have the same rights. (**WHO? CEDEI? WHEN?**)

### IYCN

IYCN has contacted IUPAC with the aim of redefining and deepening our relationship with them (SI\_11). They would like to be incorporated into IUPAC, yet somehow remain independent, which indicates that closer discussions are warranted to find out how they picture this relationship.

**To do:** Discussions with IYCN representatives. (**WHO?** Must be done in **February** if it is to be presented at 2023 Council Meeting)

### Increasing scientific output and impact

- Div V may increase their President's term to 4 years
  - **Christine** will send this proposal to Richard for proposing to Council