

I. Summary and Highlights

Following the 2003 General Assembly in Ottawa, COCI entered a new phase of its development with significant changes in membership and a new funding model. In addition to the 2004 Annual COCI meeting held in Brussels held in May, two strategy meetings have been held (Farnham, UK, Feb 2004, Oxford, April 2005) to map out the future direction and priorities for COCI. These strategy meetings were attended largely by the titular members. The main outcomes:

- Establishment of a project structure with the titular members each responsible for a project area. These include:
 - Company Associates program
 - Trade Associations program
 - Safety Training Program and workshops
 - Public Appreciation of Chemistry(contribution to CCE program)
 - Liaison with NAO's and national chemical societies
 - IUPAC inter-divisional activities
 - Non- and inter-governmental (NGO/IGO) liaison
- Definition of a model for project working and appointment of Aldo Alles as overall project coordinator
- Establishment of objectives for the COCI projects.
- Review of strategic priorities in conjunction with COCI terms of reference and IUPAC's strategic goals

Selected outcomes are listed in Section II, taken in concert with the strategic priorities of IUPAC. The full details are available in the minutes for the meetings described, and these are posted on the COCI page of the IUPAC website. Visual aids presented at the meetings are also included in these minutes.

Highlights include:

- Continuing success of the IUPAC-UNESCO-UNIDO Safety Training Program into 2005 with seven former trainee Fellows attending a workshop session scheduled for the IUPAC Congress in Beijing. A workshop is being planned in Africa for 2006.
- Increased impetus behind the Company Associates (CA) program, with a prime focus on recruitment. A universal format for recruitment has been mapped out, and clarification of accountabilities of NAO's and COCI has resulted. A new brochure explaining the IUPAC CA program has been prepared and widely distributed. Two digests of projects aimed at highlighting those of particular interest to industry have been produced and it is anticipated that these will be produced twice yearly. A positive development is that conference sponsors in several countries have been offered a one year CA membership gratis, again to encourage recruitment.
- The DIDAC program has now entered its rollout and assessment phase and it was thus considered appropriate to transfer the leadership of this project to CCE. Written material, transparencies and CD-ROMs have been prepared in several languages.

- The NGO/IGO liaison project has continued to develop links with funding authorities and it is pleasing to note that UNESCO continues to support the Safety Training Program.
- In order to enhance interaction with the IUPAC Divisions, each has been approached to nominate a representative to COCI. It is anticipated that the COCI meeting at Beijing will be attended by the Divisional representatives.
- The Trade Association Project continues to develop and links with the International Council of Chemical Associations (ICCA) are being explored, in particular with regard to the Safety Training Project and the public image of chemistry.
- The Public Appreciation of Chemistry project has been concerned largely with contributing to, and supporting the Value of Chemistry project (Przybylowicz), the Propagation of Chemistry project (UK Resolution, Ottawa 2003) and the WCLM. Aspects of all three programs have now coalesced.

II. COCI contributions to IUPAC's strategic goals

a) IUPAC will provide leadership as a worldwide scientific organization that objectively addresses global issues involving the chemical sciences.

1. Strategy Meetings (Farnham, UK, Feb, 2004 and Oxford, UK, April 2005)

- A key objective for these meetings was to identify the unique role of COCI (and IUPAC) over and above national societies. It is essential to avoid unproductive duplication. With respect to COCI, many national chemical societies have highly successful industrial divisions which offer members a locally customised range of benefits.
- We concluded that our emphasis should be upon projects which share best practice globally and build upon, customise and disseminate the work of the national organisations in the following prime areas:
 - Capacity building (e.g. safety training)
 - Public perception of chemistry
 - Authoritative NGO role of IUPAC - forum for public and political debates
 - Reputation and trust

Our focus for these topics should include economic development as well as societal and environmental factors.

2. Trade Associations program

- Liaison and cooperation with Trade Associations has been recognised as a key priority for COCI. Its program is anchored by Colin Humphris of CEFIC. The appropriate global conduit for COCI for the chemical industries is the International Council of Chemical Associations (ICCA). We have recognized that the potential value in the relationship with the industry representative bodies comes through the global science perspectives of IUPAC and its reputation for scientific excellence.
- We are seeking support for existing projects (Safety Training Program and DIDAC; see below) from the ICCA, which through its support for Sustainable Development, has a keen commitment to capacity building.
- We are initiating a dialogue for shaping new projects relating to public perceptions of science where we can seek alignment between the industry's global concerns with those of chemistry as a whole.
- It has been suggested that IUPAC could play a greater proactive role as an NGO in brokering multi-partite debates on topics of public interest. Such events promoted by a trade association can be perceived to be biased by self interest and can thus preclude attendance by certain groups (e.g. politicians). The independence and the formidable reputation of IUPAC for scientific probity could ensure wider participation.

b) IUPAC will facilitate the advancement of research in the chemical sciences through the tools that it provides for international standardization and scientific discussion

The chemical industry values IUPAC's work on standards very highly. COCI will emphasise this work in its reports to CA's and as part of its recruitment efforts. Many

IUPAC-sponsored scientific conferences are highly appreciated by staff in the chemical industries, as evidenced by the level of attendance at many events.

c) IUPAC will assist chemistry-related industry in its contribution to sustainable development, wealth creation, and improvement in the quality of life

1. COCI Company Associates Program

- Policy requires that recruitment of CA's is an NAO function whereas it is COCI's role to communicate benefits to the CA membership. In short, it is COCI's job to provide a focus for CA members and to influence IUPAC activities to provide benefits to the CA's, whilst representing CA issues to the various IUPAC bodies. In practice, the situation is not effective in that it appears that the majority of NAO's are passive with regard to CA recruitment. In the first instance, COCI members are approaching their local NAO to establish a cooperative mechanism for recruitment in cases where no procedure exists. The revamped brochure mentioned in Section I above also explains the benefits of CA membership and is being used to promote recruitment drives.
- An initiative organised by the Secretariat is offering one year's free CA membership to companies which have sponsored certain IUPAC conferences.
- Akira Ishitani (Japan) leads the CA program. Japan has by far the largest number of CA's and a very successful meeting of Japanese CA representatives was held in July 2004.

2. Trade Associations Program

- A common point of interest between the Trade Associations and COCI is the area of Reputation and Trust. This is a potential future topic for pursuance.

3. Liaison with IUPAC Divisions

- Alan Smith acts as the Divisions Coordinator for COCI. In this role, he is vetting projects in other divisions for particular relevance to the chemical industry. A twice-yearly digest is being produced consisting of abstracts of existing and new IUPAC projects of particular relevance to the industry, and dispatched as a booklet to CA's. A first contribution has been distributed and a second has been prepared.
- Each IUPAC Division has been invited to nominate a representative to COCI with a purpose of improving understanding between the commercial and academic aspects of IUPAC's activities.

d) IUPAC will foster communication among individual chemists and scientific organizations, with special emphasis on the needs of chemists in developing countries.

1. Safety Training Program and Workshops

- As indicated in Section I, capacity building in developing countries is a cornerstone of COCI's future ambition. The IUPAC-UNESCO-UNIDO Safety Training Program (and associated Workshops), led by Mark Cesa, is COCI's flagship program. This continues to thrive and has elicited significant interest from potential trainees from developing countries. Success of the Safety

Training Program into 2005 continues with seven former trainee Fellows attending a workshop session scheduled for the IUPAC Congress in Beijing. A workshop is being planned in Africa for 2006.

2. Teaching Materials

- There has been significant recent progress with the production and dissemination of DIDAC teaching materials. The material is of particular utility in support of teaching chemistry in developing countries – see II e 1 below.

3. Responsible Care

- The Responsible Care program, originating in Canada, has been successfully customised in many countries. As a part of its capacity building initiatives, COCI, led by Bernard West and Colin Humphris, is investigating the feasibility of establishing training programs and workshops targeted at developing countries and emerging economies.

e) IUPAC will utilise its global perspective and network to contribute to the enhancement of chemistry education, the career development of young chemical scientists, and the public appreciation of chemistry

1. DIDAC

- The development of DIDAC as a project with the objective of producing chemistry teaching materials was initiated by Agfa Gevaert. IUPAC's formal involvement was initiated by \$4000 seed funding by COCI. Alex Pokrovsky has been instrumental throughout in gaining funding and commitment from UNESCO. A meeting was held with Agfa in February 2004 at which the DIDAC project was officially transferred to UNESCO.
- COCI, through its members and its links with UNESCO, has been the prime driving force within IUPAC of the development of the DIDAC teaching materials and their customisation and distribution. Monographs, CD-ROMs, transparencies and posters have been translated into several languages, with notable recent progress in China and Japan.
- The focus for DIDAC activities is now moving from production of materials to its use in teaching. Accordingly, it is considered that IUPAC's future interest in DIDAC is now more appropriately pursued within CCE. The transition has been organised with the CCE chairman, Peter Atkins. COCI involvement will continue, particularly with regard to fund raising.

2. Public Appreciation of Chemistry (PAC)

- The public appreciation of chemistry has been recognised as one of the key elements of COCI's strategy. One of COCI's objectives here is to represent industry concerns and viewpoints within the wider IUPAC ambit.
- In the IUPAC community at large, there is a massive amount of excellent PAC material available and consequently much duplication and dissipation of effort. In this light, it has been agreed that the leadership of PAC activities should rest with CCE, with COCI as a contributor with particular emphasis upon the industry aspects and concerns.

- The formal contributions of COCI to this project have been limited, and include its support of the Value of Chemistry project and, in conjunction with CCE, the project in support of the UK resolution at Ottawa relating to the propagation of chemistry.
- Personal contributions of COCI members to this effort in a national context are at a significant level. One objective is to pool material and to make this publicly available via the COCI web-page.

f) IUPAC will broaden its national membership base and will seek the maximum feasible diversity in membership of IUPAC bodies in terms of geography, gender and age

National Representative (NR) Co-ordination

- The COCI membership is notably diverse with regard to geography and its national representatives make a major contribution to this. Nevertheless, there are a number of appropriate countries which are not represented and with whom we have very limited contact. The committee is deficient with regard to gender and age balance and furthermore is lacking in members who are currently employed in the chemical industries.
- The leader of COCI's National Representatives program, Jonas Unger, recognises the imbalance and has formulated optimal criteria for future NR's. A program to increase awareness of COCI's strategy and objectives amongst the national societies is a future objective.

IV Major Challenges facing COCI

1. CA recruitment

- As indicated in paragraph II c1 above, CA recruitment suffers from diffusely-shared accountabilities amongst the IUPAC community. It is also clear that the role of the NAO in recruitment has not been fully communicated, accepted or legitimised in many cases.
- COCI clearly has a major role to play in CA recruitment and is energised so to do. Notwithstanding, a more widely supported CA program would be a major mechanism to interact with chemistry's largest constituent body – namely chemists working in industry.
- At the 2004 Bureau meeting in Bled, it was proposed that the Executive should establish a task team to streamline the CA recruitment process. In particular, the ownership of the program by the NAO's is a critical success factor.

2. Public Appreciation of Chemistry

- It is clear in very many countries that the image of chemistry in the public eye is at best misunderstood and more often is distinctly negative. The responsibility for restitution of the good name of chemistry falls upon all who espouse the profession. It is proposed that this topic be addressed by IUPAC with greater urgency and more resource than hitherto.

3. Funding Model for COCI

- Michael Booth has been appointed Treasurer of COCI with responsibility for expenditure accounts, budgets, forward planning and funding mechanisms.
- Given the geographic diversity of COCI's membership, the biennial grant is totally consumed to cover committee meetings. COCI does not receive a grant to fund its own projects. In the past, profits from conferences have alleviated the situation but these funds have now been exhausted
- A request was made at the 2004 Bureau that COCI be granted a project budget in line with other Divisions and Standing Committees. Without this facility, COCI will be unable, for example, to run its Safety Training Program which requires committing to trainees and participating companies well in advance.
- One of COCI's objectives is to attract funds from the industry to support IUPAC initiatives and projects. In this context, the provision and communication of the benefits to industry of IUPAC's work is crucial. Whereas we recognise that in today's industrial climate, cash donations are scarce, we have been successful in receiving benefits-in-kind and significant living expenses for STP trainees during their period with the host company.

In conclusion, we believe that COCI has made good progress over the past biennium with regard to adaptation to its changed status. A distinct strategy, with associated

priorities, has been agreed and adopted. Clear accountabilities and processes are in place and projects and programs have realistic objectives. In addition to the challenges mentioned above, a key goal for the next biennium will be to engage more members who continue to be active in the chemical industry, and particularly those from developing countries.

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