

## DRAFT 2

### DEVELOPMENT OF A FRAMEWORK OF PRIORITIES FOR CCE

#### Background

The importance of Chemistry Education to IUPAC's mission is evident in the organisation's Strategic Plan, and in particular in the statement:

*IUPAC will utilize 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.*

CCE is required *inter alia* to

*“(i) To advise the President and the Executive Committee on matters relating to chemistry education, including the public appreciation of chemistry.*

*(ii) To maintain a portfolio of educational projects and to coordinate the educational activities of IUPAC.”*

CCE has published its advice on IUPAC's role in the public appreciation of chemistry (*Chem. Int. 2006, July-Aug, p.14*).

At its meeting in August 2008, CCE asked a task group to develop a complementary framework for the Committee's educational priorities and activities.

The outcome will enable CCE to communicate its priorities for chemistry education and to develop and pursue a programme to achieve those aims. It will enable CCE to advise IUPAC as a whole, and provide CCE in particular, with a stronger basis for

- informing the priorities CCE sets;
- considering new project proposals and for determining which existing projects should be sustained;
- identifying gaps in activity and soliciting proposals for suitable projects;
- determining its contribution to the International Year of Chemistry.

The following is the Task Group's preliminary report. It will be sent for comment to the Chairs of CCE, COCI, IYC and CHEMRAWN. It will then be considered by CCE with a view to revision and adoption at its meeting in August 2010.

#### Framework of Priorities

Acknowledging that the quality of an education system cannot exceed the quality of its teachers, the **emphasis** for IUPAC's educational activities should be on **supporting chemistry education in developing countries by building capacity in the teaching force at all levels**.

Within this context, IUPAC should

- Encourage **approaches to learning** from the outset that reinforce students' curiosity **and develop an understanding of scientific method.**
- Promote **co-operative approaches to learning** amongst students, helping teachers appreciate that they, too, are learners and take a co-constructionist approach with their students.
- Advance **responsible stewardship** by promoting chemistry education that relates chemistry to local and global contexts and includes consideration of sustainability and ethics.
- Encourage an approach to curriculum development that focuses on defining the **learning outcomes** to be achieved by the student.
- Promote **assessment methods that match the intended outcomes of the curriculum.**
- Promote the **transfer of good practice and adapt it to the new context**, rather than simply translate materials for use elsewhere.
- Promote **chemistry education among underrepresented groups** and draw upon the **multicultural competences** available within the organisation.
- Promote **public appreciation of chemistry** in accordance with previously published guidance (*Chem. Int. 2006, July-Aug, p.14*).

There is a welcome increase in the contributions made by other bodies within IUPAC and in collaborations with CCE. These bodies are the repositories of expertise in their fields and are encouraged to consider how their areas of science could contribute to the achievement of the priorities.

IUPAC should continue to seek collaborations with other organisations in pursuing its objectives.

Tony Ashmore

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The Task Group comprised Tony Ashmore (Chair), Eva Akesson, Mei-Hung Chiu, MaryKirchhoff and Ram Lamba They would like to acknowledge the contribution made by Nicole Moreau as a guest at its first meeting.