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**SOME REMARKS TO THE DISCUSSION OF THE IUPAC'S ROLE  
IN THE CHANGING WORLD**

"During last two decades, people began to realize that we cannot have a healthy society or economy in a world with so much poverty and environmental degradation. Economic development cannot stop, but it must change course to become less economically destructive. The challenge of the 1990s is to put this understanding into action, and make the transition to sustainable forms of development and lifestyles. From the farm field to the board-room, from the shopping cart to the national budget, we will have to make major changes" [1].

Taking into account well-known global changes in the environment and the existing inadmissible socio-economic disparity between the richest and the poorest parts of the world's population, the UN Conference on Environment and Development (UNCED), which took place in Rio de Janeiro in June 1992 declared that the paradigm of development of our civilization should be cardinally changed so as to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.

The Rio Conference produced several documents of international importance. Among them I would like to mention Agenda 21 [2]. Chapter 35 of this document "Science for Sustainable Development focuses" on the role and the use of the sciences in supporting the prudent management of the environment and development for the daily survival and future development of humanity... The sciences are increasingly being understood as an essential component in the search for feasible pathways towards sustainable development.

It is evident that the role and responsibility of the science for the humankind will significantly increase at the entering into the 21st century since global problems connected with the environment and development require global decisions based on scientific achievements, analysis and forecasting. It is also

evident that the globality and complexity of problems recognized by the mankind at the end of the 20th century put forward the requirement to consolidate and coordinate multidisciplinary scientific efforts oriented on global problems in all countries and to strengthen sharply the international collaboration in the most important areas. Therefore, after Rio, all international scientific organizations and unions are revising their priorities, programmes and mode of actions in the light of the new paradigm of development in order to fulfill Rio recommendations and, in accordance with them, to be more actively involved in searching answers to human needs.

The same is true for the IUPAC: the Union is discussing its future scientific policy in the light of Rio discussions.

There are at least four levels where IUPAC could be more active and efficient, answering world needs:

1. The number of IUPAC projects related to the problems of environment and development is impressive (mainly projects of the Analytical Chemistry and Applied Chemistry Divisions), but it seems desirable to define more precisely priorities of each Division and Commission, taking into account global problems of the mankind, and to select and coordinate projects in accordance with these priorities.

In my opinion the titles of some Divisions and Commissions should be directly addressed to the priority areas:

- New Methods and Horizons in Basic Chemical Research,
- Chemistry and New Materials,
- Chemistry and Cleaner Technologies,
- Chemistry in Saving Resources and Energy,
- Chemistry and Sustainable Agriculture,
- Chemistry and Renewable Resources,
- Chemistry and Environment,
- Chemistry and Food Products,
- Chemistry and Human Health.

2. It is necessary to broaden sharply collaboration with international organizations (UNEP, FAO, WHO, ICSU, SCOPE, CODATA, IIASA, etc.), with international programmes (IGBP, WCRP, IGAC, IRPTC, IPCS, etc.) and with industry-based international

organizations, bearing in mind, among other criteria, this goal during selection of commission's projects. IUPAC members should be involved in most problems, programmes and projects in which chemistry should play an important role from the point of view of the expert assessment or providing a solution. I represent IUPAC in SCOPE, and it is my experience that in some cases it is quite difficult to draw IUPAC people to SCOPE projects with important chemical components (RADTEST, Mercury Cycling, etc.) if scientists have already approved IUPAC projects.

3. I believe that we should highly estimate the provisional proposal of US NAO in 1973 relating to the organization of the CHEMRAWN series of conferences and to Bryant Rossiter, the first Chairman of the CHEMRAWN Committee, who breathed life into this idea.

Terms of Reference of the CHEMRAWN (CHEMical Research Applied to World Needs) Committee are particularly important in our time with regard to the Rio recommendations [3]:

- "to identify human needs amenable to solution through chemistry with particular attention to those areas of global or multinational interest,
- to serve as an international body and forum for the gathering, discussion, advancement, and dissemination of chemical knowledge deemed useful for the improvement of man and his environment,
- to serve as an international, nongovernmental source of advice for the benefit of governments and international agencies with respect to chemistry and its application to world needs,

and to be responsible for organizing IUPAC activities in these areas as approved by the President and the Executive Committee".

In my reading the underlined part of the text means that there should be more tight linkages between basic and CHEMRAWN activities of IUPAC.

4. For strengthening the IUPAC image as an international union actively working for human needs it seems desirable, in addition to "Chemistry International" (review of current activity)



and "Pure and Applied Chemistry" (basic problems) journals, "that have a rather low visibility among environmental chemists" [4], to issue under aegis of IUPAC a specialized journal devoted to problems of chemistry relating to the environment and development. Such international journal "Chemistry and Sustainable Development" was launched in 1993 by the Siberian Branch of the Russian Academy of Sciences as a follow-up to the CHEMRAWN-VIII Conference "Chemistry and Sustainable Development - Towards a Clean Environment, Zero Waste and High Energy Efficiency" held in September 1992 in Moscow. It seems advisable to consider a possibility of publishing this journal under aegis of IUPAC and using it more actively for the publication of papers of CHEMRAWN Conferences, international symposia and workshops relative to the title of this journal, and, also, of reviews on priority areas of IUPAC Commissions.

In conclusion it is to be emphasized that my remarks are in line with the document "Future Scientific Policy of the Union" distributed by Prof. G. den Boef, Secretary General of the Union, among the Division Presidents in May 1995.

#### References

1. Agenda for Change. A plain language version of Agenda-21 and other Rio Agreements. Michael Keating. Published by the Centre for Our Common Future, 1993, p. VII.
2. Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), vol. I (A/CONF.151/26/Rev.1), p.9-480.
3. IUPAC Handbook 1994-1995, Published by Blackwell Science, 1994, p.46.
4. Jack G. Calvert, Review of the Activities Related to Environmental Chemistry within IUPAC, 1995.