



*International Union of Pure and Applied Chemistry*

A member of the International Council of Scientific Unions

Prof. V.A. Koptug  
Coordinator of Chemistry and Environment  
Programme

6th February 1992

Dear colleagues,

I am sending to you some information on the VIII<sup>th</sup> SCOPE General Assembly and recommendations relating to areas where it is possible to organize collaboration between IUPAC and SCOPE

With best regards

V. Koptug

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**Prof. Irina P. Beletskaya**

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**Prof. Oleg F. Vasiliyev**

Siberian Branch of Russian Academy of Sciences

INFORMATION  
on the VIII<sup>th</sup> SCOPE General Assembly  
(Sevilla, Spain, 20-25 January 92)  
and  
on possibilities of IUPAC/SCOPE  
collaboration

Prof. Valentin A. Koptuyug, Coordinator of the IUPAC Chemistry and Environment Programme, participated in VIII<sup>th</sup> SCOPE General Assembly as the official representative of IUPAC to SCOPE.

At the beginning of November 91 he was nominated by IUPAC as a candidate for election to the SCOPE Executive Committee. A month later he was also nominated by the Swedish Committee for SCOPE as a candidate on the post of Vice-President of SCOPE. The VIII<sup>th</sup> SCOPE General Assembly has elected him as the Vice-President.

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The new composition of the SCOPE Executive Committee (1992-94):

President:	Prof. J. W. B. Stewart	(Canada)
Past-President:	Prof. F. di Castri	(France)
Vice-President:	Prof. V. Koptuyug	(IUPAC)
Treasurer:	Dr. B. Moldan	(Czechoslovakia)
Secretary General:	Dr. Ph. Bourdeau	(Belgium)
Members:	Dr. E. Hajek	(Chile)
	Dr. B. J. Huntley	(IUBS, South Africa)
	Dr. B. D. Jansson	(Sweden)
	Prof. J. Lubchenko	(USA)
	Prof. Y. Oshima	(Japan)



At the beginning of October 91 Prof. V. Kopt'ug has sent to Prof. Francesco di Castri, President of SCOPE at that time, a letter with indication of possible areas for possible collaboration between IUPAC and SCOPE. This letter (Supplement I) was disseminated among participants of SCOPE General Assembly as an official document (WP 14) for discussion by Working Groups.

The set of Working Groups included:

- WG-1 Sustainable Development
- WG-2 Biogeochemical Cycles
- WG-3 Global Change and Ecosystems
- WG-4 Health and Ecotoxicology
- WG-5 The International Sustainable Biosphere Initiative.
- WG-6 Publications and Communications
- WG-7 Inter-Assembly Involvement of Member Countries and Adhering ICSU unions

Working Groups 1-4 corresponded to four Clusters of SCOPE Scientific Programme\*, Working Group 5 - to the discussion of a new initiative.

The mode of consideration of new proposals in the framework of SCOPE General Assembly includes the following stages:

- consideration by corresponding Working Groups with formulation of recommendation;

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\* ) see "Compilative Information on International Organizations and Programmes Relating to Chemical and Bio-chemical Aspects of Environmental Problems" (1991, IUPAC/SB AS USSR)

- consideration of Working Groups' recommendations by General Assembly and formulation conclusions for the Resolution of the General Assembly;
- taking executive decision by the Executive Committee in the frame of the Resolution that has rather general character.

Fragments of Working Groups' Reports relating to areas interesting for IUPAC are given as Supplements II A, B, C and of the Resolution - as Supplement III.

Minutes of the Executive Committee meeting (25th January, 82) will be officially disseminated later.

Some results of discussion of projects and proposals interesting for IUPAC are summarized below.



### SCOPE Water Contamination project

Project Coordinator is Prof. (Mrs) C. Shoemaker  
Department of Civil and Environmental Engineering,  
Cornell University, Ithaca,  
NY 14853, USA  
Fax: 1-607/2559004

Project is oriented mainly on organization of workshops in various places of the world (predominantly in developing countries). The first one was held

at Stanford (USA) in July 1989. Lack of funding has restricted development of this project. However, funding was secured and support provided for a South-East Asia regional workshop in Chiang Mai (Thailand) on June 24-28, 1991.

Under discussion are workshops in India or Sri Lanka (1993) and Australia (1994) (see. Sup. II A, III and SCOPE Newsletter N38, November 1991). Prof. C. Shoemaker believes that it is desirable to try to organize a workshop in one of east European countries.

In conversation with Prof. V. Koptuyug Prof. C. Shoemaker has mentioned nothing on the synthesis workshop in Netherlands (May 1993) announced in SCOPE Calendar of Meetings for the period 1991-93.

It seems that situation with the SCOPE project on Groundwater Contamination is rather difficult. Lack of funding does not permit to elaborate core strategic line for the project.

Recommendation (To Prof. P.S. Steyn and Dr. A.J. Dobbs)

The current state of SCOPE Groundwater Contamination project and the attention payed to water pollution problem by the ASCEND-21 Conference and by the UNCED Preparatory Committee prompts that it will be timely for IUPAC Commission on Water Chemistry to initiate a joint project (with SCOPE and other organizations



working on the water problems) on preparation of a special conference on groundwater pollution that will be able to synthesize\*) information on methods of analysis, transfer and chemical transformations of pollutants and technologies of their removal (of course, if such initiative is not realizing by some other bodies)

The initial phase of a project of this type could be supported from the site of IUPAC by a sum of USD 2000-3000 in the framework of Chemistry and Environment Programme.

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### SCOPE RADPATH project (Biogeochemical Pathways of Artificial Radionuclides)

This very efficient project managed by Sir Frederick Warner (UK) had in accordance with earlier taken decision time of operation till to VIII<sup>th</sup> General Assembly. The final synthesis volume (8 chapters) will be presented for publication in the nearest future. Representatives of IUPAC - Prof. J. P. Adloff, Prof. H. R. von Gunten and Prof. E. Steinnes - are invited to review some chapters.

The Working Group 2 has stressed (Sup. II B) a great interest of many countries to problems

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\*) One of the requirements to SCOPE projects: to synthesize existing data and information.

of the environment pollution by radionuclides, their migration and impact on the health of population. The Group put the question on the organization an ad hoc group of experts for elaborating new project proposal relating to this area of interests.

The General Assembly supported the formation of such ad hoc group.

The Executive Committee is waiting proposals on the composition of the ad hoc group (3-4 persons) and on the main areas of activity of future project for detailed consideration.

Unfortunately, it is not clear at the moment if Sir Frederick Warner will be agree to be the leader of this group

Recommendation (to Prof. G. P. Adloff)

It is desirable to consider this new situation having in mind a possibility for the Commission on Radiochemistry and Nuclear Techniques to participate in launching ~~at~~ a new SCOPE project.

The corresponding proposals have to be sent:

- to Sir Frederick Warner

SCOPE Unit

Essex University, Wivenhoe Park,  
Colchester, Essex CO4 3SQ

UK

Fax: 44-206/87 35 98

-to Prof. A. Ryaboshapko\*  
Institute of Global Climate and Ecology  
Glebovskaja 20-b  
107258 Moscow  
Russia  
Fax: 7-095/288 95 02

and a copy to Prof. V. Roptug.

If any additional information will appear,  
it will be transmitted immediately.

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### Proposals on Heavy Metals project

A Metal Cycling project existed in the framework of the SCOPE Biogeochemical Cycles Cluster till to 26th meeting of the Executive Committee in Santiago (July 1990) when it was suspended as not enough successful.

Among official materials of the VIIIth SCOPE General Assembly there were two proposals oriented on reanimation of SCOPE activity in this area. One was presented by the Swedish Committee for SCOPE. It calls for returning to the study of mercury cycling and its biological effects (Sup. IV, cf. SCOPE Publications, vol. 31). The second proposal mentioned in the letter of Prof. V. Roptug (Sup. I) invites to pay attention to a possibility of estimation of consequences of long-term exposure to toxic heavy metals for the health of population in the frame of joint SCOPE/WHO/IUPAC study

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\*) Coordinator of the Biogeochemical Cluster of the SCOPE programme.

of situation in regions with geochemical anomalies. As the first step in realization of this proposal it seems desirable to organize a workshop devoted to the indicated topic. This project proposal was qualified as interesting for the IUPAC Commission on Toxicology (the letter of the Chairman Dr. Rita Cornelis of November 28, 1991 to Prof. V. Koptug).

The Working Groups 2 and 4 have qualified both proposals as cognate and recommended their further study by a group of expert in the framework of the Health and Ecotoxicology Cluster in close cooperation with the Biogeochemical Cycles Cluster (Sup. II B and II C).

The General Assembly has supported this recommendation.

The Executive Committee has decided to include in the expert group for preparation in the course of 3-4 months more detailed project proposal:

1. Dr. Arne Jernelov (coordinator)  
Stockholm Environment Institute

2. Prof. Claes Ramel  
The Wallenberg Laboratory  
University of Stockholm  
S-106 91 Stockholm  
Sweden

Fax: 46-8/6124004; 46-8/155670

3. Prof. V. Koptug

Fax: 7-095/230 20 43; 7-095/230 26 30

Thus, a good potential possibility has appeared for the IUPAC Commissions VII.4 on Clinical Chemistry, V.2 on Microchemical Techniques and Trace Analysis and on Environmental Analytical Chemistry

Recommendation (to Dr. Rita Cornelis, Dr. D.E. Wells and Dr. J. Buffle)

IUPAC bodies interested in the development of the above mentioned joint project on mercury and other toxic heavy metals (behaviour in the environment and health effects) are invited to send their proposals to the members of the group approved by the SCOPE Executive Committee.

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Consequences of the use of biological and chemical weapons

As a result of the concern of IUPAC Prof. T.S. West presented to the Executive Board of ICSU (Tokyo, Japan, 02-05.06.81) proposals relating to chemical and other mass destruction warfare. In October 1981 ICSU officially requested (letter from M. la Riviere to F. di Castri) the opinion of SCOPE on the advisability and feasibility of an ICSU study on the consequences of the use of chemical and biological weapons.

The SCOPE Executive Committee on its 28th Meeting decided to ask Professors J.W.B. Stewart (chairman), Ph. Bourdeau, M. Kecskes, V. Koptug, H.A. Monney and Th. Rosswall to discuss the ICSU request and to

prepare corresponding recommendations for the 29th Executive Committee Meeting.

The conclusion of the above mentioned working group\*) had three points:

- Taking into account the anxiety of public and governments on large stock of chemical and biological weapons, the developing tendency on disarmament and the necessity to have safe technologies for disposal of toxic agents the working group believes that ICSU can not be outside of the process of discussion, analysis and elaboration of corresponding recommendations relating to this set of problems.
- SCOPE and IUPAC have in their programmes projects relating to toxicity of chemicals and safety of manipulation with toxic substances. This experience can serve as a basis for launching a joint project in the area of environmental and health aspects of de-structuring of toxic agents of chemical weapons. It is desirable to ask leaders of SCOPE Health and Toxicology Cluster (Ecotoxicology and Safety of Chemicals projects) and IUPAC Division of Organic Chemistry to study such possibility.
- Situation with biological weapon is for members of working group much less clear. This

\*) Prof. V. Koptug has sent some project proposals relating to chemical weapons for SCOPE consideration earlier (Supplement V).

topic should be discussed by a special group of experts invited by ICSU (including representatives of the Stockholm International Peace Research Institute /SIPRI/).

The 29th Executive Committee Meeting (January 25th, Sevilla) supported these proposals as a basis for the answer on ICSU request.

Prof. I. P. Beletskaya  
Recommendation (to Prof. N. J. Leonard, and Prof. J. F. Bunnnett; may be to Dr. Rita Cornelis)

It is desirable to prepare preliminary proposals for the potential joint project and send them to Prof. V. Koptug

January 31st, 1992

V. Koptug