

Recommandations de l'IUPAC

destinées aux délégations gouvernementales présentes à la Conférence de Rio

Dans le cadre de la préparation de la Conférence de Rio, l'Union Internationale de Chimie Pure et Appliquée (IUPAC) a organisé à Baltimore (Maryland, Etats-Unis), du 2 au 6 décembre 1991, une conférence internationale sur le thème "La chimie de l'atmosphère : son impact sur le changement du climat de la Terre : perspectives et recommandations"

Cette conférence, désignée par l'acronyme Chemrawn VII, a conclu ses travaux par la rédaction de "recommandations" destinées aux délégations gouvernementales à la conférence de Rio. Nous reproduisons ci-après, dans leur version originale, ces recommandations.*

With Respect to All Aspects of Global Change Chemistry

1. Recognize that all atmospheric problems are interrelated and connected with biospheric processes so that an integrated, multidisciplinary approach must be taken for their solution.

2. No major experiments aimed at mitigating global change, that have regional or global consequences, should be undertaken without first securing broad international agreement

3. Research and develop the means for full social environmental costing for energy use.

4. Develop ecological balance sheets (life cycle analyses) for comparison of different processes leading to similar end products.

5. Apply incentives/disincentives to direct the huge innovative potential of public and, especially, private R&D organizations for the development of more energy-efficient industrial processes and more productive, but sustainable, land use.

6. Provide incentives/disincentives and accelerate development of alternative energy technologies, especially solar and safe nuclear, subject to strict environmental safeguards.

7. Encourage corporations to continue the trend toward increased participation of environmental scientists in decision-making positions.

8. Forge a partnership between governments, industry and academia in establishing global change research priorities and programs and in formulating responsible policy.

With Respect to Education

9. Foster the education and professional development of atmospheric chemists worldwide, especially in developing countries.

10. Increase environmental literacy by encouraging environmental chemistry instruction as an important part of general education at all levels (elementary school through university).

11. Improve understanding of global change issues at the political level so that due account is taken of them in policy making.

12. Transfer experience and skills in atmospheric chemistry and monitoring techniques to developing countries through a continuing program of training workshops such as the one held in conjunction with the Chemrawn VII Conference.

With Respect to Global Monitoring

13. Implement means of establishing adequate quality control in atmospheric measurements worldwide.

14. Encourage government and industry to cooperate with the atmospheric chemistry community in developing global inventories of emissions to the atmosphere.

15. Explore with industry the possibility of strengthening and expanding the existing international efforts to establish a high quality global monitoring network in developing countries.

Such networks would enhance our understanding of atmospheric chemistry and global change by :

a. Establishing chemical sources and deposition patterns for acid precipitation.

b. Obtaining trends and variability of tropospheric ozone.

c. Characterizing the global distribution of carbon monoxide and the oxides of nitrogen.

16. Monitor UV radiation and its effects on living organisms and their ecosystems, especially in the vicinity of the Antarctic.

17. Accelerate the development of both research and routine monitoring instruments.

With Respect to Stratospheric Ozone Depletion

18. Maintain a vigorous scientific research agenda.

19. Continue high priority attention to developing new substitutes and replacements for chlorofluorocarbons (CFC) and encourage increased emphasis on recycling and recovery of CFC, hydrogen-containing chlorofluorocarbons (HCFC), hydrogen-containing fluorocarbons (HFCs) and bromine-containing compounds.

20. Be advised that proposed new fleets of supersonic aircraft could result in large changes in stratospheric ozone concentrations and climate.

With Respect to Climate Change

21. Promote international discussion and agreement about controlling future emissions of greenhouse gases.

22. Obtain a detailed understanding of the global carbon cycle.

23. Identify and quantify the sources and sinks of greenhouse gases and aerosols.

24. Assign high priority to understanding and quantifying the many feedbacks involved in climate change.

25. Quantify the effects of aerosols on climate, including both direct radiative effects and changes they induce in cloud albedo via their role as cloud condensation nuclei.

26. Utilize available proxy records of climate change (e.g., tree rings, ocean and lake sediments, ice cores, pollen records) to obtain a better understanding of the causes of climate change in the past and to validate climate models.

With Respect to Oxidant Formation and Acid Precipitation in the Troposphere

27. Establish regional networks for the early detection of "cleaner" air resulting from emissions control strategies.

28. Elucidate how local emissions influence regional- and global-scale chemistry.

29. Encourage research to achieve better understanding of acidification processes, including dry deposition, in natural ecosystems, and their interactions with other human influences.

30. Strongly enhance research efforts to increase scientific knowledge of tropical atmospheric chemistry, including biotic interactions.

* Les conférences plénières et les recommandations de la conférence Chemrawn VII ont été publiées par l'Agency for International Development - Washington D.C. 20523, Etats-Unis, qui a bien voulu autoriser la présente publication.

En 1993, l'IUPAC va faire paraître les proceedings à Chemrawn VII, chez Blackwell Scientific Publications, Oxford, sous la direction de Jack G. Calvert.