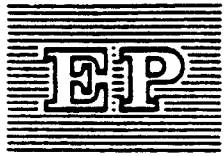




United Nations  
Environment  
Programme



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Coordinating Committee  
on the Ozone Layer  
Fifth Session

Copenhagen 12-16 October 1981

PLANNED WORKSHOPS ON THE EFFECTS OF UV-  
RADIATION

Information by the

Federal Republic of Germany

to CCOL

Planned workshops.

- 1) Biological effects of UV-B radiation  
Munich, F.R.G., May 25-27, 1982  
organized by USA-FRG cooperative research groups.  
First circular is enclosed.
  
- 2) Effects of ultraviolet radiation on plants  
Delhi, India, November 1-5, 1982  
organized by  
Association Internationale de Photobiologie and  
Indian Photobiology Society.  
Copy of the first circular is enclosed.

## FIRST CIRCULAR

The Federal Republic of Germany, represented by the Ministry of Research and Technology, will host a workshop in Munich, May 25-27, 1982. This meeting will continue a previous meeting, sponsored by the US-FRG Cooperative Environmental Research Agreement, which was held at NBS, Gaithersburg, Maryland, in the spring 1981. The NBS-meeting addressed instrumentation and experimental methods for using UV-B-radiation; the forthcoming meeting in Munich will address "biological effects of UV-B-radiation."

The workshop topic areas are listed on the enclosed sheet. Brief presentations will be presented by experts for each topic area and these will serve as a basis for discussions. Those who wish to participate are invited to offer short contributions or to act as discussants or as observers.

Organizing committee: H. Bauer (Munich)  
M. Caldwell (Logan)  
M. Tevini (Karlsruhe)  
H. Wiser (Washington)  
B. Worrest (Corvallis)

For further information, please, write to

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D-7500 Karlsruhe  
FRG

# Preliminary Programme

## Workshop "Biological Effects of UV-B-Radiation"

Munich, May 25-27, 1982

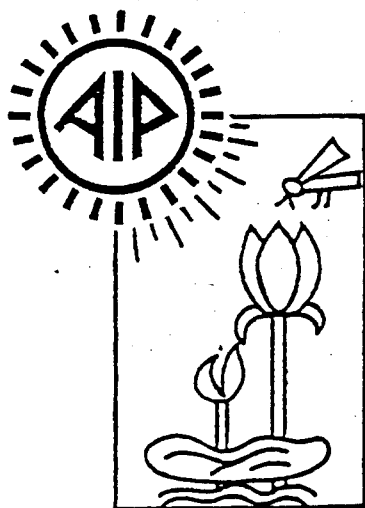
- Topic 1: UV and biological weighting functions
- UV-B-radiation and ozone depletion
  - reference solar radiation
  - Action spectra (development and use)
- Topic 2: Effects of UV-B-radiation on plants
- germination
  - growth and development
  - leaf surface and anatomy
  - leaf composition
- Topic 3: Effects of UV-B-radiation on photosynthesis
- CO<sub>2</sub>-fixation, enzymes of carbon fixation
  - photosystem activity (Hill reaction, variable fluorescence)
- Topic 4: UV-B-radiation and adaptations in plants
- anthocyanins and flavonoids
  - photoreactivation
  - geometrical considerations
  - genetic diversity and ecological considerations
- Topic 5: Effects of UV-B-radiation and other stresses to plants
- water stress
  - mineral stress
  - herbicides
  - interaction with visible light
- Topic 6: Effects of UV-B-radiation on human health, microorganisms and animals
- melanoma and skin cancer
  - microorganisms and animals
- Topic 7: Final discussion
- summary and evaluation of results,
  - directions of further research and cooperation

First Circular

# EFFECTS OF ULTRAVIOLET RADIATION ON PLANTS

DELHI 1-5 NOVEMBER 1982

AN INTERNATIONAL WORKSHOP  
ORGANIZED BY



ASSOCIATION  
INTERNATIONALE DE  
PHOTOBIOLOGIE

INDIAN  
PHOTOBIOLOGY  
SOCIETY

There is concern about the possible consequences for cultivated plants, natural vegetation and aquatic organisms due to depletion of atmospheric ozone and increased UV-B radiation in the biosphere. Much research on this topic has been carried out in recent years, but only in relatively few countries. This meeting is prompted by a need for initiation of research in and collaboration with developing countries, and for discussion of plans for future research.

## LOCAL ORGANIZING COMMITTEE IN DELHI

Anjali Mookerji, Convenor  
Sipra Guha-Mukherjee  
G.S. Singhal  
P. Mohanty  
G.S. Sirohi  
S.C. Maheshwari  
V.K. Jain  
M.S. Sodha

## INTERNATIONAL PROGRAMME COMMITTEE

M.M. Caldwell (USA)  
D. Vince-Prue (UK)  
L.O. Björn (Sweden)  
K.K. Rohatgi-Mukherjee (India)  
A.P. Mitra (India)

THE PROGRAMME HAS BEEN PLANNED TO COVER:

Spectral Irradiance in Nature

Fluctuations in and factors affecting atmospheric ozone

Penetration of solar ultraviolet through the atmosphere

UV penetration into natural waters

UV penetration through plant canopies

Effects of UV-B at the organelle and molecular level

General aspects, nucleic acids and proteins

Plant membranes as UV targets

Effects of UV on the photosynthetic system

UV protection mechanisms

DNA damage, protection and repair

Repair by photosynthetic activity: The effect of photosynthetically active light on UV susceptibility

Internal filters

UV regulation of flavonoid biosynthesis and other biochemical processes

Effects on whole plants and ecosystems

Symptoms of UV-B damage in crops

UV-B effects on crop yield

UV-B effects on plant competition in terrestrial ecosystems

Genetic and adaptive aspects of plant tolerance to UV-B

Methodology

Measurement of UV-B radiation

Determination of action spectra

Use of action spectra for identifying molecular targets

Use of action spectra as weighting functions and estimation of biologically effective UV-B

Radiation sources for research on biological UV-B effects

Planning for the future

Scientific sessions are being planned for November 1-2 and 4-5, while November 3 is reserved for an excursion (to Agra or Jaipur) and informal discussions. In addition to the invited lectures posters will be presented, and we plan to make abstracts of both available in an abstract book at the beginning of the meeting. A post-meeting publication is also being considered. You are welcome with suggestions regarding the programme. The registration fee will be at most ca. \$ 100 and dependent on what money can be raised by the organizers.

Those interested in receiving further information should fill in the slip below and mail it (by air mail if outside Europe) before October 1, 1981, to

Professor L.O. Björn  
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SWEDEN