

**IUPAC, Environmental Chemistry Division**  
Commission on Atmospheric Chemistry (VI.2)  
Commission on Soil, Water Chemistry Commission (VI.3)

**Workshop on Atmospheric Deposition and  
Impacts on Ecosystems**

With Particular Reference to the Mid-East  
June 5 - 6 2000, Tel-Aviv, Israel

**Second Circular and Draft Program**

16/3/2000

**Scope.** Fresh water lakes and water reservoirs are threatened by pollutants of atmospheric origin. Hundreds of lakes and streams could no longer sustain life, while the threat to forests and watersheds in many parts of the world is growing. In Israel, the fresh water Sea of Galilee is now showing a very unstable quality. At the Eastern Mediterranean Region, wet deposition originating from marine aerosols, local anthropogenic emissions and transport from Europe are compounded by the scavenging of alkaline Saharan desert dust, which have a magnified effect on the cloud physics and chemistry and subsequently on the deposition onto terrestrial and aquatic ecosystems.

**Objectives.** The two days symposium would bring together internationally recognized experts in the field and interested scientists from the Eastern Mediterranean Region, Europe, and members of IUPAC, Division of Environmental Chemistry (VI). Recent findings from the Great Lakes in the USA and by other international and European programs of relevance to fresh water ecosystems in the Middle East will be presented.

**Day One: Monday June 5**

**First Session: Welcome and Greetings (1 hr)**

**Second Session: Fundamentals of Atmospheric Deposition (3 hrs)**

- ◆ Alpert, P., Tsidulko and S. Krichak (Tel-Aviv Univ., Israel). Backward Trajectories of Atmospheric-Parcels in Israel and Cyclone Systems/Tracks
- ◆ C.I. Davidson (Carnegie Mellon University, Pittsburgh, USA) - Fundamentals of Dry Deposition:
- ◆ *L. Spokes, (Univ. of East Anglia, Norwich, UK) - Fundamentals of Wet Deposition.*
- ◆ *J. Slanina (SEC, the Netherland) Characterisation of aerosols*
- ◆ Z. Levin, (Tel-Aviv Univ., Israel) - Atmospheric Dust and Cloud Physics and Chemistry
- ◆ General Discussion

**Lunch Break**

**Third Session: Regional Transboundary & Cause-effect relationship (4 hrs)**

- ◆ Krichak, M. Tsidulko and P. Alpert (Tel-Aviv Univ., Israel) - Modeling dust transport and Deposition over the E. Mediterranean.
- ◆ Rozenfeld, D. (Hebrew Univ. Jerusalem, Israel) - Observation of Detrimental Impact of Particulate Air Pollution from Various Sources on Precipitation

- ◆ *N.O. Jensen (Riso National Laboratory, Roskilde, Denmark) - Atmospheric Deposition Over Europe*
- ◆ Jan Schaug (Norwegian Inst. for Air Res.) Concentrations and trends of Sulphur and Nitrogen Components in Europe.
- ◆ *N. Bazhin, (Russian Academy of Science. Novosibirsk) - Pulse Photolysis of Ferric Ions in Water Solutions.*
- ◆ Kordel, W., (Fraunhofer Inst. Germany) - Exposure of Non-Target Field Boundaries by Pesticides.
- ◆ Lacaux, Jean Pierre (GIP MEDIAS, France) - The IDAF (IGAC DEBITS AFRICA) Program: Atmospheric Deposition in Tropical Africa
- ◆ S. Bernstein (INSERD. Org.) - Joint R&D Opportunities in the Fifth Framework Program between Israel and the EU in the Field of Global Change, Climate and Biodiversity.
- ◆ General Discussion

## **Day Two: Tuesday June 6**

### **Fourth Session: Deposition on Marine Ecosystems (3 hrs)**

- ◆ Herut, B. (Israel Oceanographic & Limnological Res.), - Atmospheric Input of Nutrients to the Southeast Mediterranean: Sources, Fluxes and Possible Impact.
- ◆ Maman, Y. (Israel Inst. of Technology, Haifa, Israel) - Transport and deposition of atmospheric Hg in the Mediterranean
- ◆ Hertel, O. (Nat. Env. Res. Inst. Denmark) - Assessment of Atmospheric Nitrogen Deposition to Danish Coastal Waters
- ◆ Goldsmidt, Y. Israel - Phosphate and Potash dust at Eilat Harbor
- ◆ Van Grieken, R. (Univ. of Antwerp, Belgium) - Deposition of Pollutants over the Southern Bight of the North Sea
- ◆ *Puskaric, E. (Univ. of Littoral, Cote d'Opale, Wimereux, France) - Deposition of Lead over the English Channel*
- ◆ General Discussion

### **Lunch Break**

### **Fifth Session: Deposition on Inland Water & Terrestrial Ecosystems (3 hrs)**

- ◆ *S. Eisenrich, (Rutgers Univ. USA) - Great Lakes atmospheric deposition studies:*
- ◆ E. Ganor and H. Foner, (Ministry of Env. & Geological Survey, Jerusalem, Israel) - Kineret Lake Atmospheric Deposition Studies
- ◆ M. Luria, (Hebrew Univ. Jerusalem, Israel) - O<sub>3</sub> - BrO Interaction over the Dead Sea.
- ◆ Allegrini, Ivo, Perrono, C. & A. Di Menno (CNR-Inst. for Atmospheric Pollution, Italy) - Estimation of Gas phases and Particulate Species Deposition in Rural Sites in Central and Southern Italy.
- ◆ *Lopez, Alain (Laboratoire d'A'rologie, France) - Dry Deposition of Ozone above a Resinous Forest in the South West of France.*
- ◆ *A. Zinger (Hebrew Univ., Israel) - Atmospheric Dust & Aerosol as Sources of Nutrients in a Mediterranean Ecosystem*
- ◆ General Discussion

### **Sixth Session: Panel Discussion: Interactions and synergism between Atmospheric deposition and land/water ecosystems (2 hrs)**

- ◆ **Panelists:** Representatives of: the Israeli Ministry of the Environment, US EPA, IMAP or IGBP, EUROTRAC

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**Sponsors:** IUPAC, Ministry of Environment, Ministry of Science, Israel Chemical Society, Institute of Soil, water & Env. Sciences, ARO.

**Scientific Committee:** Van Grieken - Chairman, V. Klein, T. Tavares, E. Ganor, M. Luria, E. Puksaric, J. Slanina, I. Allegrini, S. Larsen, Y. Shevah.

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