

June 20-24, 1977

WORKSHOP ON MULTIDISCIPLINARY RESEARCH RELATED TO THE ATMOSPHERIC SCIENCES

Workshop Coordinators:

Michael H. Glantz,
Environmental and Societal Impacts Group
Maurice Blackmon, Chairman,
Advanced Study Program

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MULTIDISCIPLINARY RESEARCH RELATED TO THE ATMOSPHERIC SCIENCES

The National Center for Atmospheric Research, Boulder, Colorado, is sponsoring a workshop organized by the Environmental and Societal Impacts Group (ESIG) and the Advanced Study Program (ASP) to be held June 20-24, 1977.

The workshop will discuss the impact of human activities on the environment (with special emphasis on the atmosphere) and the impact of the environment on human activities. The broader objective of the meeting will be to discuss both formally and informally the prospects

for possible interaction between the atmospheric sciences and other disciplines.

During these sessions invited participants will present 30-minute papers on their selected topics. Discussion will be concerned with mutual benefits which might result from interactions among the disciplines.

A publication based on the papers presented will be available in the late fall of 1977.

The meeting has been organized into the following sessions:

Monday, June 20: Agricultural and Fisheries Productivity

Large-Scale Forcings and Biological Productivity in the Eastern Equatorial Pacific
Dr. Richard Barber, Duke University Marine Laboratories

Planning Strategies for Droughts
Dr. John Dracup, Department of Civil Engineering, University of California, Los Angeles

Social Impact of Innovative Technology in an Isolated Community: The Lumina Indian Aquaculture Project
Dr. Royden Nakamura, Department of Biology, Southeastern Massachusetts University

Managing Fisheries for Optimum Yield: The Need for Integrated Research in Physical, Life and Social Sciences
Professor Bruce Retting, Agricultural and Resource Economics, Oregon State University

Value of Agro-Meteorological Information
Dr. Clarence Sakamoto, Center for Climatic and Environmental Assessment

Tuesday, June 21: Energy and Climate

Problem in the CO₂ Balance: Wood Versus Fossil Fuels
Dr. J. A. S. Adams, Department of Geology, Rice University
Dr. L. L. Lundell, Atlantic Richfield Co., Dallas, Texas

Review of Mankind's Impact on the Global Climate
Dr. William Kellogg, National Center for Atmospheric Research

Minimizing the Environmental Impact of Energy Use by More Effective Utilization
Dr. Jerrold Krenz, Department of Electrical Engineering, University of Colorado

Ocean Thermal Energy Conversion: A Possible Energy/Climate Interaction
Dr. J. Dana Thompson, JAYCOR, Alexandria, Virginia

Energy Policy Options and Climatology: How Fast Must We Move into the Post-Fossil Fuel Era?
Dr. Frank Von Hippel, Center for Environmental Studies, Princeton University

Global Climatic Disturbance Due to Large-Scale Energy Conversion Systems
Dr. Jill Williams, International Institute for Applied Systems Analysis

Wednesday, June 22: Forecast Value Studies

The Economics of Natural Hazards: Quiescence and Crisis
Dr. Harold Cochrane, Department of Economics, Colorado State University

Procedures for Evaluating the Aesthetic and Health Effects of Air Pollution
Professor T. Crocker, Department of Economics, University of Wyoming
Professor William Schulze, Department of Resources Economics, University of New Mexico
Dr. Robert L. Horst, Jr., Los Alamos Scientific Labs, New Mexico

Bayesian Modelling of Improved Climatological Forecasts for Large Agricultural Models
Dr. Lawrence D. Phillips, Decisions and Designs, Inc., (on leave from Brunel University, England)
Dr. Thomas W. Keelin, Decisions and Designs, Inc., McLean, Virginia

Assessing the Value of Weather Forecasts: A Review of Available Methodology and Some Applications
Dr. Allan Murphy, National Center for Atmospheric Research

Thursday, June 23: Regional Meteorology

Legal Aspects of Inadvertent Weather Modification: METROMEX
Professor Ray Davis, College of Law, University of Arizona

The Impact of the Atmosphere on Society
Dr. Barbara Farhar, Human Ecology Research Service, Boulder, Colorado

Ecological Aspects of Precipitation Chemistry
Professor Eville Gorham, Department of Ecology and Behavioral Biology, University of Minnesota

A Systems Approach to the Multiple Cropping System of Nigeria
Dr. Kanti Rawal, Information Sciences/Genetic Resources, University of Colorado

Weather and Death in Three American Cities
Professor Stanley States, Department of Biology, University of Pittsburgh

Friday Morning, June 24: Summary Session

The National Center for Atmospheric Research (NCAR) in Boulder, Colorado, was created in 1960 to provide a focal point for a vigorous national effort in the atmospheric sciences that would draw together scientists from many disciplines and provide the necessary support and facilities for research on important problems of the atmosphere. NCAR is supported by the National Science Foundation (NSF) and operated by the nonprofit University Corporation for Atmospheric Research (UCAR), made up of more than forty North American universities with graduate programs in the atmospheric sciences. Its two broad missions are:

For further information:

- Planning and conducting research programs, in concert with university scientists, Michael H. Glantz

Planning Strategies for Droughts

Dr. John Dracup, Department of Civil Engineering, University of California, Los Angeles

Social Impact of Innovative Technology in an Isolated Community: The Lumi Indian Aquaculture Project

Dr. Royden Nakamura, Department of Biology, Southeastern Massachusetts University

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- Planning and conducting research programs, in concert with university scientists, on selected problems in the atmospheric sciences that are of national and international importance.
- Providing selected research facilities and services to support effective progress in atmospheric research by scientists at universities and NCAR.

For further information:

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