NATIONAL CENTER FOR ATMOSPHERIC RESEARCH
BOULDER, COLORADO

TO:

FROM: "Crazing" - was a reaction of the social and physical conditions existing in Sabai in 1972-73. Describes what actually happened in Sabai, drawing on all available existing sources.

1. Value paper - presents comments received from respondents to the Sabai study. Discusses the questions in the study in Sabai as well as the value of the CF and how they describe the
existing social and environmental constraints and management. The value of much environmental forecast.

2. This study strongly suggests is that only of the problems highlighted by recent drought in Sabai
can be treated as problems.
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BOULDER, COLORADO

3. Whereas respondents for a case were specialists

as well as farmers, they were not reluctant to discuss

issues outside this area of expertise. This

thereby gave a complete picture for the study.

The cases were dealt with as individual

studies. Their responses therefore gave an

encouraging picture of the SP's crop set in 1978.

In addition, more than 2/3 of the town SP's

respondents were passed on to same or area to

determine.

Finally, in spite of the act, 1977 to educate

respondents in regard of SP's crop set in 1978,

several respondents indicated that in past years

drought had taken place, and that they had

made more than 20 percent from spring wheat sales.
TO:
FROM:

DATE:

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH
BOULDER, COLORADO

1. The book is composed of 1465 - 60 500 SCI & 2 Nat SCI.

such as "people in trouble" "Tackle in the course"
"Nomads want to be us + others who are
under consideration but whom are appointed
to any specific sit or often has none as time.

Given that, such sit be often because part of
the problem + 2 get of solution.

3. USSR: This year presents the type problem
with the sociol for me, etc. A for
selecting such instead of the 3
true bet across all. Don't need

problem.
...
Second Status Report to the Trustees of
The International Federation of Institutes for Advanced Study (IFIAS)
on the IFIAS Special Project:
The Impact on Man of Climate Changes

Walter Orr Roberts, IFIAS Climate Project Leader

Prepared by:
Nancy Mikesell
Assistant to the IFIAS Climate Project Leader

INTRODUCTION

The following report on the activities of the IFIAS Climate Project brings up to date the information contained in the first IFIAS Climate Project Status Report of 10 October 1975. Copies of the 10 October 1975 report are available from the IFIAS Climate Project Leader's office.

The purpose of the IFIAS Climate Project, "The Impact on Man of Climate Changes," is to study the social, political, economic, ethical and humanistic dimensions of the effects of climate changes and climate fluctuations on man, with special emphasis on world food production and possible potential for interstate conflict. The project convenes working conferences where specialists explore the effects of climate on the welfare of mankind and determine priorities for further study. It also commissions interdisciplinary studies that analyze and assess the many impacts of climate and formulate policy alternatives that will be of use to the organizations all over the world that deal with the dislocations and suffering caused by adverse climate changes and fluctuations.

The Rockefeller Foundation has contributed both core funding and project support to the efforts of the Climate Project. Project work began officially in May 1974 at the time of the Planning Workshop held at the Meteorological Institute of the University of Bonn, Germany. Since that time work has gone forward on two commissioned studies, one subproject activity in Japan, and other related efforts. Support for this work has come from several IFIAS Member Institutes, international organizations and also private foundations.

The 10 October 1975 Status Report outlines project work beginning with the initial planning and funding stage in the fall of 1973. Described here are IFIAS Climate Project activities during the period of 1 October 1975 - 1 October 1976. Descriptions of activities of
Dr. Roberts that are closely associated with the IFIAS Climate Project are also included. A summary of project expenditures and complete list of documents now available from the IFIAS Climate Project follow the description of activities.

IFIAS CLIMATE PROJECT ACTIVITIES


Dr. Michael H. Glantz, Study Author
National Center for Atmospheric Research (NCAR)

This commissioned study is supported by the Rockefeller Foundation and by the IFIAS Member Institute, the University Corporation for Atmospheric Research (UCAR), the corporate governing body of the National Center for Atmospheric Research (NCAR). Work has made excellent progress and is nearing completion. A three-month extension, from 1 June 1976 - 31 August 1976, was agreed to by the Rockefeller Foundation, NCAR and IFIAS, and the final writing is continuing with no expense to the project. The study will end officially on 31 December 1976, at the same time as the termination of the Rockefeller Foundation grant to the IFIAS Climate Project.

During the first months of project work, Dr. Glantz decided to focus on two case scenarios: Grazing in the Sahel Region of Africa, 1973; and Spring Wheat Production in Saskatchewan, 1974.

For the African case, Dr. Glantz wrote the survey paper, "Grazing in the Sahel," and sent this with an accompanying questionnaire to experts in such disciplines as range management, meteorology, livestock management, economics, political science and also government officials in Africa, Europe and other countries. He asked what they would have done had perfect climate information been available one year in advance. Nearly 70 percent of those polled have responded.

The Aspen Institute Berlin generously hosted Dr. Glantz' mid-course project workshop, 26 - 29 January 1976. There participants reviewed and evaluated the responses to the African case study. They helped Glantz define project methodology and encouraged him to prepare a preliminary assessment paper on the African case. This was completed in April 1976 and is entitled, "The Value of a Reliable Long-Range Climate Forecast for the Sahel: A Preliminary Assessment." This paper is now being edited for publication in the Bulletin of the American Meteorological Society.

For the Canadian case, the survey paper, "Spring Wheat Production in Saskatchewan, 1974," was prepared. Questionnaires were sent to experts in agriculture, production, marketing, transportation, as well as government officials, in Canada. There were problems in getting this information to Canada and in receiving responses because of the extended Canadian mail and airline strikes. However, Dr. Glantz has received answers from approximately 50 percent of those polled. In comparison with the African case,
these are very specialized. Glantz is now analyzing them for inclusion into the final study product.

Dr. Glantz has made three presentations on project work in 1976, one at the AAAS annual meeting in Boston, 19 February 1976, in the symposium, "Human Life in Arid Lands: Food and Agriculture," sponsored by the AAAS Committee on Arid Lands. This was entitled "The Impact of a Reliable and Credible Climate Forecast in the Sahel Region of Africa." The second was at the International Geographical Union Working Group on Desertification Symposium, Ashkhabad, USSR, 20-26 July 1976, and is called "Climate and Weather Modification in and around Arid Lands in Africa," and third was in Stockholm. He will also present this paper in Ashkhabad.


According to the final report of this study, Dr. Glantz has chosen to prepare the final report in the form of a book in which the University of California Press has expressed interest. A British publisher has also indicated interest in perhaps publishing the final manuscript simultaneously abroad. The manuscript is scheduled for completion at approximately the end of the calendar year, 1977, with the hope that, subject to the approval of the University of California Press, it will be published in 1978.

It is gratifying that many research groups and organizations are recognizing the CREF study to be of significant value. For example, E.G. Davy, Expert Consultant on Africa to the World Meteorological Organization (WMO), who attended the CREF Workshop in January 1976, wrote in the July 1976 Bulletin of the WMO about the two instances that Dr. Glantz has selected for study: Grazing in the Sahel, 1973 and Spring Wheat in Canada, 1974. He states, "WMO has a keen interest in these studies since they would involve far-reaching applications of meteorology to the solution of many of the problems of mankind if reliable long-range weather forecasting were to become a reality."

We are pleased to report that the CREF project generated a proposal for the study of the social implications of a coastal upwelling forecast. Dr. Glantz will lead this project over the next year supported by NCAR. He will also present a paper at the WMO Technical Conference on Marine Meteorology and Coastal Zone Development, Geneva, 22-26 November 1976, on "The Social Value of a Coastal Upwelling Forecast." This new work is the direct result of the Rockefeller Foundation's and NCA's support of this IFIAS commissioned study.

The 1972 Case - Drought and Man: A Case History

Dr. Rolando V. Garcia, Study Author
Graduate Institute for International Studies, Geneva

We presented a paper on Coastal Upwelling Forecast Value at the second International Forensic Technology Assessment Conference at Texas A&M (Oct 5-7, 1976).
Work on this project began on 15 February 1976. The purpose of "The 1972 Case" is to make a detailed study of the overall social, political, economic and ethical impact of drought on humanity in 1972 and to analyze individual and institutional responses to the droughts that occurred in that year. Project work will cover a global analysis as well as regional analyses of the 1972 drought impacts. It will assess the collective consequences of the 1972 droughts, identify knowledge gaps, and indicate what lessons can be learned from these catastrophes—with a view to clarifying the optimum courses open to national and international bodies as they seek to lessen world tensions, to alleviate or avert human suffering, and to avoid economic dislocations that are the direct or indirect result of major droughts.

In the fall of 1975, before actual project work began, the Climate Project Leader secured support of $112,500 from the United Nations Environment Programme to match the $125,000 already in hand from Deere & Co., Lilly Endowment and the Rockefeller Brothers Fund. The Steering Committee was appointed, and we are fortunate to have the following leading scientists guiding the work of this study:

Asit K. Biswas
Office of the Science Advisor
Environment Canada

A.F. El Kassas
Faculty of Science
University of Cairo

Victor A. Kovda
Director, Institute of Agrochemistry
and Soil Science of the Academy of
Sciences of the USSR
Moscow State University

Thomas R. Odhiambo
Director, The International Center of
Insect Physiology & Ecology
Nairobi

S.R. Sen
International Bank for Reconstruction
and Development

Gilbert H. White
Institute of Behavioral Science
University of Colorado

Following a six-month search and screening effort, the Committee unanimously approved Dr. Roberts' recommendation of the distinguished meteorologist, Dr. Rolando V. Garcia of Argentina, to serve as study author. Dr. Garcia's background as Director of the Argentine Meteorological Service and Dean of Physical Sciences, University of Argentina give him excellent qualifications for this post. In addition, it is agreed that his work as Secretary of ICSU/IUGG Committee of Atmospheric Sciences, which formulated the Global Atmospheric Research Program (GARP), and his contributions as Director of the GARP Joint Planning Staff, Geneva, will be invaluable to the work of this study.

Garcia is very generously hosted by the IFIAS Member Institute, The Graduate Institute for International Studies, Geneva.
In February 1976 project work began with planning meetings at the American Association for the Advancement of Science (AAAS) annual meeting in Boston and also at NCAR, Boulder. Many specialists who had expressed interest in this project talked with Dr. Garcia and the Climate Project Leader and offered to help. During this time, Garcia also conferred with Dr. Mostafa Tolba and others involved in the preparations for the UN Conference on Desertification, being planned by the United Nations Environment Programme, one of the project sponsors. The project will, of course, have an input to the UN Conference in August 1977.

Garcia has now refined project plans and outlined the study methodology and working arrangements. He has decided to strengthen the work of the project's regional studies and additional funding is being sought for this purpose. So far he has received substantial local support in Buenos Aires, Caracas and Nairobi for regional studies and regional efforts are already underway in Africa and Latin America.

In Africa, the regional teams are coordinated by Dr. Richard Odingo, an economic geographer from the University of Nairobi, Kenya. Those working on the project in Nairobi are: Professor Mbithi (sociologist), Dr. P. Kiangi (meteorologist), and Mr. M. Ogalo. In Lagos, Professor Obasi (meteorologist and hydrologist) and Chief Advisor to the Director of the Meteorological Service of Nigeria will work with Dr. D.O. Adefolalu (geographer). Contributions are also being sought from Ethiopia and Sudan. A working meeting of all African regional groups is scheduled for 1-6 November 1976, in Nairobi.

In Latin America, the regional work is coordinated by Professor Oscar Maggiolo, former Rector of the University of Uruguay, at present consultant to the Consejo Nacional de Investigaciones Cientificas y Tecnologicas (CONICIT). Professor Leon, former Dean of the Faculty of Agriculture of a large Latin American university, will also join the group in Caracas for short periods.

In Buenos Aires, Dr. R. Green (political scientist), Lic. C.A. Troksberg (economist), and Lic. J.N. Perez (agriculturalist) will work together.

The Institute of Geophysics, University of Mexico, Dr. J. Adem, Director, will establish a group to do the subregional studies for Mexico and Central America. Dr. Adem's group will also cooperate with Dr. Garcia on the study's global analysis.

A regional workshop for the Latin American groups is tentatively scheduled for January 17-22, 1977.

In addition, planning is underway for work in India and Pakistan. Garcia has also had preliminary discussions with Dr. Y. Israel, Director of the Hydrometeorological Service, USSR, and he hopes that USSR regional participation will be forthcoming.

Steps are also being taken to secure the consulting services for six months of the eminent agro-meteorologist, Dr. James D. McQuigg, retired Director of the Climatic Environmental Assessment Group, NOAA, Columbia,
Missouri. Dr. McQuigg's contributions to the impact assessment of large-scale climate anomalies on world grain production in 1972 will be invaluable to the study's global assessment. Modest additional funding is being sought for this work.

Climatic Variations and Food Production: The Implications for Humanity

This commissioned study, planned at the IFIAS Climate Project Planning Workshop, Bonn, Germany, May 1974, has as its purpose to assess the consequences of a hypothetical world climate change. The study is to look at the period of the next twenty years until 1995. It would use climate data from 1900 - 1920 as the model climate for the next twenty years, and would consider these climate data, together with data on available energy and current technology, for such matters as irrigation and flood control in order to make estimates of crop yields during this period, until 1995.

The State Committee for Science and Technology of the Council of Ministers of the USSR, the University of Moscow and also the Hydrometeorological Service of the USSR have expressed interest to IFIAS in this commissioned study. Discussions took place in the early spring 1976 among representatives from these organizations and Dr. Sam Nilsson, Executive Director of IFIAS.

Dr. Roger E. Leven, Director of the International Institute for Applied Systems Analysis, Austria, has expressed interest also.

We have still not found financing for this study.

The Impact of Climate Change on Agricultural Production and Socio-Economic Conditions of Rice-Growing Countries in Asia

This project which is now underway at the Center for Southeast Asian Studies, Kyoto University, Japan, was adopted officially as part of the IFIAS Climate Project by the IFIAS Board of Trustees, October 1975. Dr. Roberts was prevented by the train strike in Tokyo from visiting this project in December 1975 as planned. However, Dr. Rolando Garcia has been in touch with Dr. S. Ichimura, Director of the Center for Southeast Asian Studies, about possible input to regional work for "The 1972 Case," and we hope that someone from this project will be able to attend a portion of the IFIAS Board of Trustees meeting in Japan in October 1976.

ACTIVITIES OF DR. ROBERTS RELATED TO IFIAS CLIMATE PROJECT WORK

IFIAS Planning Workshop on Loss of the World's Productive Soils

In June 1976, Dr. Roberts co-chaired with the distinguished Soviet scientist, Professor Victor Kovda, a Planning Workshop for the new IFIAS Special Project on Loss of Productive Soils. The workshop was entitled,
"Soil Resources of the Earth, Their Utilization and Preservation." Soil experts, urban planners, climatologists, health experts and political scientists from some 18 countries met in Samarkand, Uzbekistan, USSR, to plan for this new IFIAS project. The State Committee for Science and Technology of the Council of Ministers of the USSR, and the United Nations Environment Programme sponsored the workshop.

Participants wrote a position statement, "Declaration on Global Threats to Productive Soils," planned for a 30-month commissioned study to lead to a quantitative assessment of the global losses of productive soil and prepared four Working Group Reports on the following subjects:

1) Soil resources of the world, their area and degree of cultivation. Analysis of soil losses and resources for development and regeneration by the year 2000. Methods of the multipurpose evaluation of the world soil resources;

2) Reclamation of low-productivity soils and reclaimed lands loss control;

3) Increase of pasture productivity, dry farming, recultivation of destroyed soils (pollution, erosion, dust storms); and

4) Scientific foundations for the protection of soils and soil-related components of natural environment against chemical pollution.

A complete symposium volume will be available in Russian and English. Planning is underway for cooperative work between this project and the IFIAS Climate Project.

American Association for the Advancement of Science (AAAS)
Symposium: "Human Life in Arid Lands: Food and Agriculture"

Dr. Roberts convened this symposium for the AAAS Committee on Arid Lands at the annual meeting of the AAAS, 19 February 1976, Boston, Massachusetts. The purpose of this symposium was to focus attention on increasing demands to develop marginal arid and semi-arid lands for agricultural production. Emphasis was placed on the impact of human life of fluctuating climate and weather--nowhere more pronounced than in these areas. A number of distinguished speakers offered practical suggestions concerning ways in which effective planning can avoid drought-caused catastrophes and surmount other obstacles to betterment of life in arid regions.

Testimony of IFIAS Climate Project Leaders on Bill to Create a National Climate Program

On 20 May 1976, Dr. Roberts testified before the Subcommittee on the Environment and the Atmosphere, Committee on Science and Technology, U.S. House of Representatives, on a Bill to Create a National Climate Program, HR 10013. For this Committee, Dr. Roberts spoke at length about droughts as a factor in world food production. He then summarized the present state of knowledge about climate changes and climate fluctuations and
called to the Committee's attention the IFIAS Statement on Climate and World Food Production, explaining its origin, purpose and adoption in October 1974, just prior to the UN World Food Conference in Rome. He read this statement's summary and included the document as a supplement to the written testimony.

Roberts outlined several top priority recommendations to implement a national climate program, including, among other things, creation of an operational experimental climate forecasting unit, further research in climate theory, sun-weather relationships and computer technology for the atmospheric sciences. He stressed the hope that efforts under consideration in the National Climate Program encompass the study of the social, political, economic and ethical issues raised by the interactions of climate and food production on the global scale.

United Nations Environment Programme (UNEP) Consultations on Desertification

Dr. Roberts serves as one of several senior consultants to Dr. Mostafa Tolba, Deputy Executive Director of UNEP, whose responsibility it is to plan for this UN Conference scheduled for August 1977 in Nairobi. Four global component reviews in the following areas are nearing completion: Climate and Deserts, Dr. Kenneth Hare, University of Toronto, Senior Author; Demographic, Social, Economic and Behavioral Aspects; Desert Technology; and Ecological Change.

The Conference Plan of Action is now being prepared. This will have inputs from the various case studies and feasibility studies that have been underway for some months.

Living with Climatic Change

During this past year Dr. Roberts has served on a central planning committee for a tri-national program, "Living with Climatic Change," a joint Canada/US/Mexico project of public information about what our three nations need to do in order to avoid the dislocations that are likely to arise from climatic changes. In November 1975 a conference was held in Toronto, sponsored by the American and Canadian Meteorological Societies and several other organizations. Dr. Patrick D. McTaggart-Cowan, past Executive Director of the Science Council of Canada, chaired this meeting attended by leading atmospheric scientists from the three countries. Proceedings from this meeting are now available from the Science Council of Canada. Sponsoring organizations in Mexico are the Geophysical Institute of the National Autonomous University of Mexico and the Mexican Geophysical Union.

This fall, the MITRE Corporation, the Aspen Institute for Humanistic Studies and the American Meteorological Society are sponsoring another Conference to be held in McLean, Virginia, November 1976. The purpose of this meeting is to acquaint industrial, commercial and government leaders with the prospects for significant climate change in the near future and in turn to understand the plans and capabilities of the industrial sector.
to deal with climate change in time periods reaching from a few weeks to a decade. The Conference is designed to deepen the examination of the impacts of climate change on North America and our world.

The Aspen Food and Climate Program

Dr. Roberts has planned a new five-year program for study of food and climate questions, which will involve agribusiness corporations in systematic efforts to: 1) identify the most significant questions related to the problems of climate impact on food production; 2) develop comprehensive assessments of policy alternatives related to the handling of those problems; and 3) relate those assessments to planning and policy considerations of the participating corporations as well as to those of other public and private agencies and groups, both national and international.

Dr. Roberts is now seeking participation from a group of 10 to 20 American corporations. Sponsoring corporations will be represented on a Sponsors Advisory Council which will review specific studies and serve as the vehicle for the intensive dialogue on problems of food and climate interactions. Like the IFIAS Climate Project efforts, this Program will focus on the social, economic, political and ethical implications of climate/food interactions.

CONCLUSION

The work of the IFIAS Climate Project has developed and progressed well during the two and one-half years of actual project work, since the Bonn Symposium, May 1974. Many IFIAS Member Institutes and other organizations involved with the complex problems of the effects of climate on mankind support and contribute to project work. Products from the Climate Project have been widely distributed all over the world. The Climate Project Leader, commissioned study authors and others involved with Climate Project work have participated in many exchanges with research groups working on related problems.

From this will come, hopefully, complementary work by other groups, stimulated by contact with the IFIAS program. It is gratifying that so many specialists are now becoming deeply concerned with this most important area of transdisciplinary research.

-- END --

List of Supplements:

1. 1 October 1976 Summary of Expenditures for the IFIAS Climate Project and commissioned studies, CREF and "The 1972 Case"

2. 8 October 1976 List of Documents of the IFIAS Climate Project
Supplement 1

8 October 1976

Summary of Expenditures for The IFIAS Climate Project and Commissioned Studies: CREF and "The 1972 Case"

The Rockefeller Foundation has contributed $100,000 toward the work of the IFIAS Climate Project. Of this amount, $55,000 has been administered by the IFIAS Secretariat for general support of IFIAS Climate Project work. The amount of $45,000 was transferred from the Rockefeller Foundation to the University Corporation for Atmospheric Research (UCAR) to support the work of the IFIAS Climate Project commissioned study, "The Impact of a Credible and Reliable Long Range Climate Forecast," (CREF), Michael H. Glantz, study author.

With regards to the commissioned study, "The 1972 Case," funds supporting this project from Deere & Company and from Lilly Endowment, Inc. are pledged to and administered by the Aspen Institute; funds from The United Nations Environment Programme and from Rockefeller Brothers Fund are pledged to and administered by IFIAS.

Below is information on expenditures for the CREF study from funds administered by UCAR and information on expenditures for "The 1972 Case" study from grants administered by the Aspen Institute. Information on expenditures from grants administered by IFIAS has been prepared at the IFIAS Secretariat and is included separately.

Figures in this summary are given as of 1 October 1976.

Rockefeller Foundation Grant for General Support of IFIAS Climate Project Work Administered by IFIAS

<table>
<thead>
<tr>
<th>Duration of Grant:</th>
<th>1 May 1974 - 31 December 1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income:</td>
<td>$55,000</td>
</tr>
<tr>
<td>Expenditures:</td>
<td>(See summary prepared at IFIAS Secretariat.)</td>
</tr>
</tbody>
</table>

Rockefeller Foundation Support Transferred to UCAR for IFIAS Climate project Commissioned Study, "The Impact of a Credible and Reliable Long Range Climate Forecast," CREF, Administered by UCAR

| Duration of Project: | 15 November 1974 - 31 August 1976 |
Income:
Project support from Rockefeller Foundation $45,000
Additional sum transferred to UCAR from IFIAS for extension of project work, 1 June 1976 - 31 August 1976 $5,000

Expenses:
Salary of Study Author (including benefits)
15 November 1974 - 21 July 1975 Contribution of UCAR
21 July 1975 - 31 August 1976 25,047
Consultants Fees 950
Travel of study author 12,875
Secretarial assistance 640
Office expenses and overhead Contribution of UCAR
Miscellaneous office expenses, graphics, bulk mailings, cables, etc. 1,108

TOTAL $40,620

Balance: $9,379

(This amount is committed for outstanding project expenses, publication and distribution costs for final report, trip of study author to Geneva and IFIAS Secretariat for project follow up, November 1976.)

IFIAS Climate Project Commissioned Study, "The 1972 Case - Drought and Man: A Case History," Sponsored Jointly by IFIAS and by the Aspen Institute

Funds Administered by the Aspen Institute

Duration of Project: 30 Months, 15 February 1976 - 15 August 1978

Amount Pledged:
Deere & Company $60,000
Lilly Endowment, Inc. 25,000
Total $85,000

Amount Received: $45,000

Expenditures:
Compensation for Study Author:
15 February 1976 - 15 August 1976 $15,000
(This expense is now being covered by funds administered by IFIAS)
Secretarial Assistance 900
Travel 278
(Garcia, February 1976 consultations)
Expenditures, "The 1972 Case" (continued)

Aspen support, 15% for period of
15 February 1976 - 31 October 1976
(end of Aspen fiscal year) 3,612
Consultant fee - Dr. Oscar Maggiolo,
1 June - 31 August 1976 3,900

TOTAL 23,690

Balance on hand: $21,310

Funds Committed:
Aspen support for remaining 21.5 months
of project work 9,134

Pledges to be received: $40,000

Balance Available for Project Work: $52,176

Funds Administered by IFIAS Secretariat

Amount Pledged:
United Nations Environment Programme $112,500
Rockefeller Brother Fund 40,000

TOTAL 152,500

(Information on amount received, expenditures, and
balance available for project work is contained in the
summary of expenditures prepared at IFIAS Secretariat.)

-- End --
List of Documents of the IFIAS Climate Project

Additional information about the work of the IFIAS Climate Project is available upon request from the address on the front of this report. Following is a list of reports and products now available:

1. The Impact of Man of Climate Change. Report of the IFIAS Climate Project Planning Workshop held at the Meteorological Institute, University of Bonn, Germany, 6–10 May 1974.


6. 10 October 1975 Status Report of the IFIAS Special Project: The Impact on Man of Climate Changes


From the Commissioned Study, CREP
Michael H. Glantz, Study Author


2. Spring Wheat Production in Saskatchewan, 1974 (February 1976)

   Chapter One, "The Nine Falacies of a Natural Disaster," is Dr. Glantz' contribution to this book. Chapter Fourteen is


8. Rainfall Statistics, Droughts and Desertification in the Sahel, Michael H. Glantz and Richard W. Katz (NCAR), 4 October 1976. (Submitted for publication.) Submitted to Nature