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From : Wilmot N. Hess, Director
Environmental Research Laboratories

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Subject: Dr. Israel's Visit to Washington, D.C. on July 3, 1973

The U.S. working group on the Influence of Environmental Changes in Climate met with Dr. Israel, Deputy Director of the Hydrometeorological Service of the USSR and Dr. Miradonov of the Central Office of the Hydrometeorological Service in Moscow. This did not constitute a formal meeting of this U.S.-U.S.S.R. working group but rather an informal attempt to get this working group started. Dr. Israel had spent July 2 at CEQ with the Chairman of the other U.S. working groups to hear how the other groups were progressing. I think it is only our group that has not had some formal activities to date.

We agreed with Dr. Israel that we would hold a preparatory meeting of this working group in Washington, D.C. on August 27-31. At this time, Dr. Borisenkov, the new Director of the Main Geophysical Observatory in Leningrad and his colleague, Dr. Sazanov, will be in the United States. It is our understanding that Dr. Budyko is still the Soviet Chairman of their delegation, but apparently he is unable to come to the U.S. now. We will plan with Dr. Borisenkov for a formal meeting of the U.S.-U.S.S.R. working group probably to be held in Leningrad later this year.

We had short presentations by the Chairmen of the five U.S. sub-groups on their separate topics. Dr. Joe Fletcher of NSF spoke of the Polar Program and the interest in coordinating POLEX and AIDJAX. Fletcher proposed that a meeting be held in Fairbanks in mid-August at a Conference on Arctic Climate called by the AAAS. Professor Goode of Harvard, who is Chairman of the NAS Committee on Polar Studies will be in Fairbanks at this time. Dr. Israel agreed with this proposal and said he was quite sure Borisenkov would be at the Fairbanks symposium.

Dr. Fletcher said he would make the arrangements for this informal meeting. Fletcher spoke further on the possibility of the exchange of theoreticians of the University of Washington and Soviet Institutions and about matters of specific cooperation during the U.S. field experiment starting March, 1975 in the Arctic.

Environment - Changes in Climate

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Mr. Donald Pack spoke about the U.S. Global Monitoring Station network. He showed a picture of this network and photographs of Mauna Loa to Dr. Israel. Pack suggested that studies be undertaken on: (a) measurement intercomparison; (b) instrument calibration; (c) data averaging problems, and that exchanges of instruments and scientists be considered later. He mentioned the possibility of having a Soviet scientist visit Mauna Loa. We questioned Dr. Israel about the status of USSR global monitoring stations. He said they are preparing one in the northern Caucasus and will probably add several later. Apparently the Hydrometeorological Service is having an expansion now to help work on a variety of pollution problems. Dr. Israel questioned Don Pack at some length about the nature of measurements made at Mauna Loa and the sensitivity of the instruments. He was obviously interested in this area of work. Pack suggested that U.S. and Soviet scientists get together at a forthcoming meeting in Helsinki to discuss this matter of global monitoring stations. Dr. Israel thought that this was a good idea and said he would write Pack to say what Soviet scientists working on this program would attend the Helsinki meeting.

It was obvious at this point that the several sub-groups have quite different interests. I suggested that the working group break up for part of the future meetings into sub-groups that could study separate subjects and travel to separate institutions. Dr. Israel agreed this probably could be done but said it should be discussed later.

Dr. Les Machta discussed briefly the effect of changing levels of atmospheric constituents on climate. He emphasized the importance of the effect of aerosols on global temperatures. We do not know now whether these particles heat or cool the earth, by their presence in the upper atmosphere. This depends on their detailed properties and whether they scatter or absorb radiation more. Machta suggested the U.S. and USSR try to design experiments to measure the scattering and absorption properties of aerosol particles and study this problem theoretically.

Mr. Sam Coroniti of the Department of Transportation spoke about the CIAP program. He said their major interest was in acquainting the USSR scientists with CIAP and learning what the Soviet Union was doing in this general field. Dr. Israel later at lunch said the Soviets had no specific program on this subject in reply to a question by Dr. White. However, they apparently have specialists working on some of the CIAP-type problems. Mr. Coroniti briefly described the CIAP program elements including: (a) measurements of effluence from high-flying aircraft using wind tunnel experiments; (b) determination of reaction rates of important chemical processes; (c) attempts to model the stratosphere; and (d) attempts to determine the ambient stratospheric composition. Mr. Coroniti and Dr. Allen Grobecker of DOT will both present papers at a Baku conference on aeronautics on the general subject of CIAP. They hope at this time to meet Soviet specialists working on similar problems and suggested they would be willing to give seminars at various Soviet institutions on this subject.

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Mr. Joe Smagorinsky of GFDL discussed the problems of climatic modeling. He said that a principal reason for undertaking this activity was to understand secondary reactions of the atmosphere to changes in constituents and to determine climatic sensitivity and possible instabilities in the atmosphere-ocean system which would allow changes in climate. Smagorinsky suggested it might be appropriate to have other sub-groups inside our working group looking at questions such as: (a) the ocean's importance in climate; and (b) past climatic changes; and (c) local climatic changes such as in an urban area.

We asked questions about the nature of the future cooperation between the U.S. and U.S.S.R. scientists. We suggested we would like to exchange scientists for extended periods of time and exchange visits to quite a number of institutions in both countries. We raised the question of the membership of the working group. Dr. Israel said all of these matters should be left for future discussion with Dr. Borisenkov in August. I will write a letter to Dr. Borisenkov and also one to Dr. Budyko raising these questions and trying to get specific answers to them in August. Copies of the draft letters are attached here for information.

Attachments: Draft Letters

cc: Nels Johnson
Lester Machta
Donald Pack
Sam Coroniti
Joseph Fletcher
Joseph Smagorinsky
Allen Grobecker
John W. Townsend