Science and Man in the Americas

Consejo Nacional de Ciencia y Tecnologia Mexico City

Mexico City 20 June to 4 July 1973

AAAS American Association for the Advancement of Science Washington, D.C.

20–23 June

Nonnuclear Energy for Development

The United States is currently in the throes of fuel shortages and is facing a national debate on energy policy. Western Europe and Japan are dependent on supplies from the Middle, Eastern, and African nations. Collectively these developed nations, plus Canada and the United States, account for nearly three-quarters of the free world's petroleum consumption and their consumption is growing rapidly.

What does this mean to the less-developed nations of the world—Latin America in particular? The 3-day session "Nonnuclear Energy for Development," to be held on 20–23 June in Mexico City, will consider both the relationship of the world energy situation to Latin America and the technological options available to developing nations.

The opening day will look at the broad policy picture. S. David Freeman (Energy Policy Project, Ford Foundation) will discuss U.S. energy problems and a representative from the European community will give the European perspective on the world situation. Representatives from Canada, Mexico, and the major South American nations will then discuss the energy developments in their countries. Gordon McNabb (Assistant Deputy Minister for Energy Development of Energy, Mines and Resources) will outline Canada's energy supply and demand situation. Particular attention will be focused on those energy sources which are concentrated in the respective areas.

The future outlook will be emphasized during the remaining sessions—especially the technical options open to nations without a massive technological base. Unfortunately for the developing nations, nuclear power plants and synthetic fuel production facilities come in large units—$200 million to $500 million apiece. So, too, with most of the approaches to nuclear fusion. Both the costs and outputs of these technologies run beyond the near-term needs of fundamentally agricultural economics. Several technical areas relevant to rural and less-developed countries will be covered—bringing energy, primarily electricity, to rural communities, hydroelectric possibilities, solar energy, and geothermal energy.

The session on energy from rural areas includes Thomas M. Venables (Coordinator, International Programs Division, National Rural Electric Cooperative Association) who will discuss the organizational aspects of bringing electric power into rural communities and the electric generating options available to these areas. Neal Thompson (U.S. Rural Electrification Administration) will highlight some of the recent technological developments for low cost, reliable electric power system design. A representative from Mexico, F. Monteverde Z., will present another perspective on rural electrification.

Solar energy is a particularly attractive option for developing nations because many of them are in tropical areas where the solar intensity is greatest. Peter Glaser (Arthur D. Little Company), a leading U.S. proponent of solar energy, will present a broad range of solar energy applications—from existing heaters to new large- and small-scale applications. Robert C. Axtmann (Princeton University) will discuss the production of chemical fuels from solar energy. J. Herschmann (Chile) will conclude the solar sector of the program.

The hydroelectric potential of South America is large and relatively untapped. It is planned to have discussants from Venezuela present a paper on this resource.

Geothermal energy, already a limited source of commercial energy, is a subject for two conference symposia: "Volcanism in Mexico and Central America" and "Nonnuclear Energy for Development." A joint session under the direction of Robert W. Decker (Dartmouth College) will enable participants in both symposia to review recent geothermal developments.

J. FREDERICK WEINHOLD
Energy Policy Project, Ford Foundation, Washington, D.C. 20036

20–23 June

Transfer of Technology and National Economic Development

In order to establish sound civilian technological policies, governmental and industrial decision-makers require an understanding of the potential effects of those policies, of the instrumentalities they seek to influence, and of the constraints on their policy alternatives. In a series of six interrelated working sessions (noon, 20 June to noon, 23 June), we shall try to develop the roots of that understanding. Our primary target, since this meeting is addressed primarily to decision-makers in less-developed countries, is the process of transnational technological transfer.

Because the technological transfer that we address takes place between developed and less-developed economies, the first two ½-day sessions review the effect of technological change itself—in the locale of the exporter and of the importer of that commodity. The first session concentrates on economic impacts, while the second focuses on social

consequences. In each session, a group of discussants will analyze the differences in impact between the two locales.

The second two sessions deal with those current vehicles of international technological transfer in which technology is most clearly manifested as a good entering international trade. "Transactions in multi-national companies," "The import of capital goods," "The international patent system," and "Licensing and technical support" will each be addressed and discussed.

The final two sessions are concerned with the limitations on policy imposed by local conditions in the less developed countries. "The educational system," "The environment for entrepreneurial development," "Structure of the private sector," and "Governmental activities" are the specific subjects to be covered.

Because we view these 3 days as working sessions, the talks and formal commentary will occupy less than half the time, with the remainder devoted to audience participation. In order to take advantage of global experience with this subject, speakers and discussants will come from outside the Western Hemisphere as well as from within it.

JORDAN BARUCH
Harvard University,
Cambridge, Massachusetts

21–23 June

Aerial Inventory of National Resources

Recent developments in optical-mechanical and electronic mapping instruments are revolutionizing the search for national resources in the Americas. Such vast areas as the Amazon Valley and the Darien Gap, long hidden beneath perpetual clouds and dense jungle vegetation, are now being penetrated by side-looking radar and multiband sensors that are mounted in high-altitude jet aircraft and earth-orbiting satellites.

At the symposium on "Aerial inventory of national resources" to be held 21–23 June, scientists from a number of Western Hemisphere nations will describe the application of these new instruments and techniques.

The first session on the afternoon of 21 June will be devoted to the Mexican national inventory program under which a nationwide series of soils, topographic, geologic, and land-use maps are in progress.

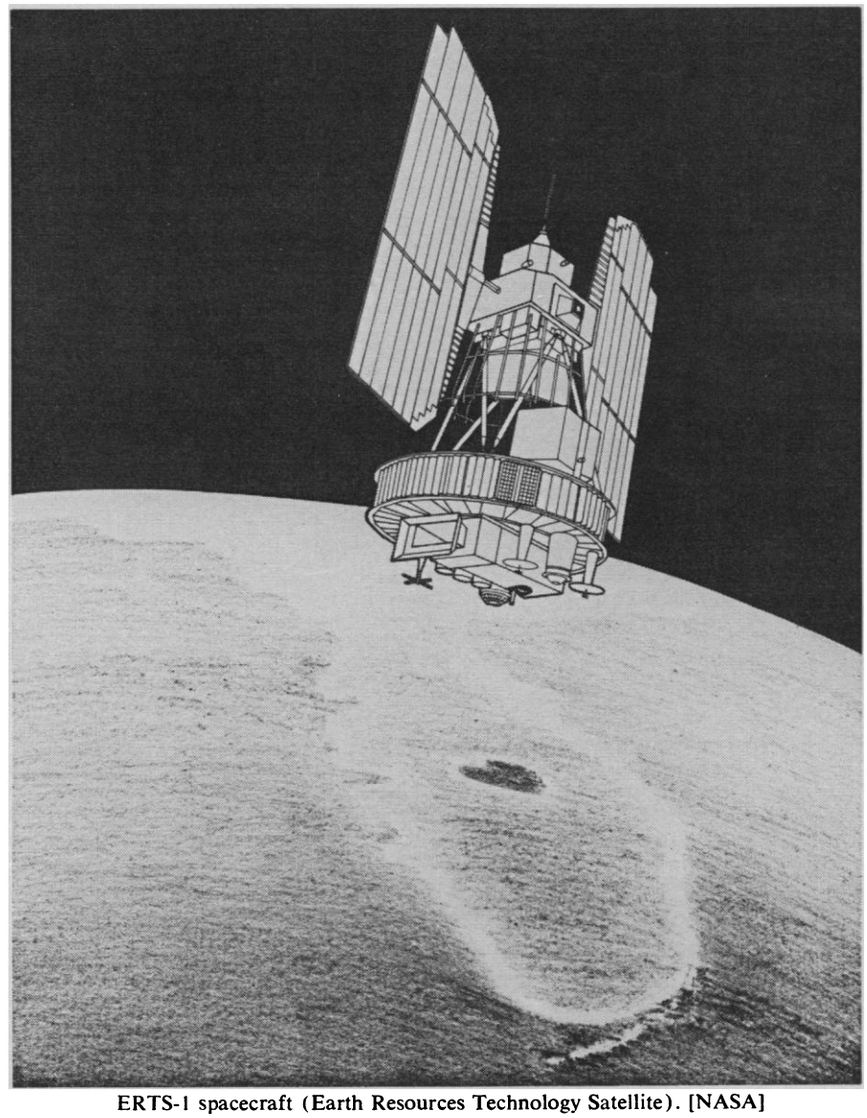
On 22 June, the morning session will cover "Land use and land inventory." Papers will be given on the RADAM project in the Amazon Valley, the statewide inventory program in Arizona, land use systems, and remote sensing in Mexico.

In the afternoon of 22 June the current national inventory programs in El Salvador, Honduras, and other Latin countries will be discussed.

The final session on 23 June will describe the applications of imagery from the ERTS-1 mapping satellite, launched in July 1972. Equipped with four multiband sensors and three return-beam Vidicon cameras, the satellite yields synoptic views of 100-mile-square areas on an 18-day cycle.

All sessions will be basically discussions with reading of formal papers at a minimum.

JOSEPH BURNS
American Society of Photogrammetry,
Falls Church, Virginia 22046



ERTS-1 spacecraft (Earth Resources Technology Satellite). [NASA]

Registration and Travel Forms for Mexico City can be found on pages 326–329