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PANEL ON SCIENCE AND TECHNOLOGY
THIRTEENTH MEETING

REMOTE SENSING OF EARTH RESOURCES
USERS, PROSPECTS AND PLANS

BY

DR. W. T. PECORA

PRESENTED TO THE

COMMITTEE ON
SCIENCE AND ASTRONAUTICS
U.S. HOUSE OF REPRESENTATIVES
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REMOTE SENSING OF EARTH RESOURCES
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Paper by

DR. W. T. PECORA
Under Secretary, Department of the Interior

PRESENTED BEFORE

THE COMMITTEE ON SCIENCE AND ASTRONAUTICS
U.S. HOUSE OF REPRESENTATIVES

AT ITS

THIRTEENTH MEETING WITH THE PANEL ON SCIENCE
AND TECHNOLOGY, JANUARY 26, 1972,
AT WASHINGTON, D.C.

Mr. Chairman, Members of the Congress, and Colleagues:

The printed program for this meeting begins with an explanation of the theme: Remote Sensing of Earth Resources, the first sentence of which states: "In recent years it has been increasingly recognized that information about the earth and its complex environment is highly important to the future of man."

This Nation is now undergoing a sharp reassessment of the quality of its life style. For many decades economic development and benefit overrode all other considerations of our land and resources and conservation essentially meant multiple use of our renewable and nonrenewable resource domains. Inevitably, because of its natural endowment, America prospered in material things and the United States led the world in GNP. Our land, water, and air were intensively used, but so misused in many cases that in grave concern the Congress passed the Environmental Policy Act of 1969. Since its enactment into law by President Nixon on January 1, 1970, it has become in my opinion the most significant legislation passed in many years. Environmental protection now shares front stage with economic development. The task now lying before this Nation is how to utilize its science and technology to maintain its economic vigor without unacceptable alternation of its natural environment.

Primitive man on earth found by observation and experience that his pristine environment contained many discomforts and dangers to his health and welfare. He banded together for safety, shelter, and greater success in food gathering. As his numbers increased on earth and as his communal living led to development of cities and major civilizations his uses of the natural environment increased by geometric proportion and his needs created major changes in natural ecosystems.

In this country three people can now supply the food needed by 100; and one penny's worth of gasoline can do the work of 25 men. Life expectancy is greater than in all history. It would be foolish to insist that man return to his primitive existence or to substitute the life style of Thoreau for that of 200 million Americans. Many developing nations are striving to reach the U.S. pinnacle of a standard of living which, for all of its environmental changes, is cause for envy and great admiration.

But what of the future? Land, and resources are not infinite. As the problems relating to mankind's basic needs on earth magnify at an exponential rate the means of solving them must become more sophisticated and the solutions must depend more than ever before on science and technology. The broad gaps in our information system on those four domains of man's environment—the lithosphere, hydrosphere, atmosphere, and biosphere—suddenly loom as intolerable ignorance in preparation for the future. If GNP has any meaning at all then a larger national effort must be expended in acquiring a base line of knowledge to keep GNP from turning into a Humpty Dumpty syndrome.