

OCEANOGRAPHY

Oceans Must Be Studied

Academy Committee on Oceanography recommends doubling of present deep-sea research efforts to add to man's "meager" knowledge of the oceans.

► FAILURE TO DOUBLE the intensity of deep-sea research in this country within the next ten years will lead to serious economic, political and military hazards.

This warning is contained in a report by the Committee on Oceanography of the National Academy of Sciences-National Research Council.

Doubling of the nation's oceanographic effort within this period, the report said, would cost more than \$650,000,000 over the present level of support.

The Committee is supported by the U. S. Atomic Energy Commission, the Bureau of Commercial Fisheries, the National Science Foundation and the Office of Naval Research. Its chairman is Dr. Harrison Brown of the California Institute of Technology, Pasadena.

The three main general recommendations contained in the report are that:

1. The Government expand its support of the marine sciences at a rate that "will result in at least a doubling of basic research activity" during the next ten years.

2. The increase in support of basic research should be accompanied by a ten-year program of ocean-wide surveys, which would require a two-fold expansion of the present surveying effort.

3. The Government should expand considerably its support of the applied marine sciences, particularly in the areas of military defense, marine resources and marine radioactivity.

Man's knowledge of the seas is meager, the report stated, when compared to the oceans' importance to him, and progress in the marine sciences in the United States has been slow compared to other areas of scientific endeavor.

The committee stressed that it considered its recommendations minimal ones.

"Action on a scale appreciably less than that recommended," it said, "will jeopardize the position of oceanography in the United States relative to the position of the science in other major nations, thereby accentuating serious military and political dangers, and placing the nation at a disadvantage in the future use of resources of the sea."

Increased research effort, said the report, could help provide answers to how many fish there are in the sea, how they are distributed and what can be done to increase their numbers. It might then be possible to solve some of the acute problems involved in providing animal protein food for the growing number of underfed people in the world.

Research could also result in development of the oceans' vast mineral and food resources, more accurate prediction and possible control of climate, and the improvement of military defenses against surprise

attacks by missile-launching submarines.

Among the report's specific recommendations were the following:

1. Construction of 70 research ships of 500 to 2,200 tons displacement between 1960 and 1970.

2. Development of manned submersible devices that can operate on the bottom of most oceans; mid-ocean research platforms; deep-sea buoys, and ice-breaking submarines.

3. Selection of one agency to have overall responsibility and authority for regulating introduction of radioactive materials into the oceans, and another agency to monitor such introduction.

4. International cooperation through financial support to the Special Committee on Oceanic Research of the International Council of Scientific Unions, and participation in the proposed year-long study of the Indian Ocean.

Science News Letter, February 28, 1959

CLIMATOLOGY

World Warming Trend Confirmed in Antarctica

► TEMPERATURE DATA obtained in Antarctica during the International Geophysical Year seem to confirm the world's long-term warming trend.

Extensive temperature records were collected on the "white" continent during 1957 and 1958 by U. S. Weather Bureau

meteorologists and weathermen from other countries. These records are consistent with the theory that the entire world is slowly getting warmer, Dr. H. E. Landsberg of the Bureau's office of climatology has found.

Concerning the north polar regions, he said, physical evidence and temperature trends both indicate warming. Glaciers are retreating in Alaska and the harbor of Spitsbergen is open twice as long each year as in 1912, for example.

Dr. Landsberg said the warming trend, thought to amount to some two or three degrees each century, started about 1900. Cause of the warming is unknown, but one theory is that a blanket of carbon dioxide given off by the burning of coal and oil retards radiation of heat by the earth. Another suggested explanation is an increase in the sun's radiation.

Science News Letter, February 28, 1959

MEDICINE

Space Helmet Used in Study of Fatty Acids

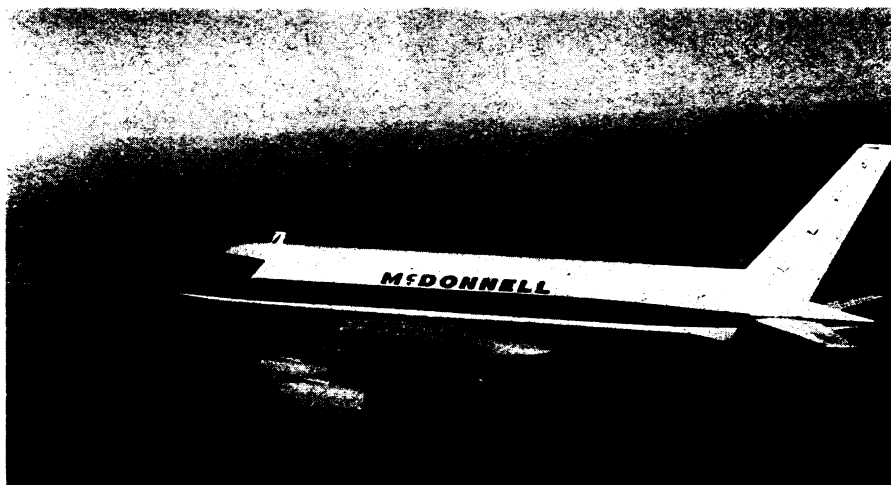
► SPACE HELMETS are helping doctors learn more about the body's fuel system.

Drs. Josiah Brown and Leslie R. Bennett of the University of California at Los Angeles Medical School have used such a device in investigating the way the body utilizes fatty acids.

Fatty acids have been recognized only recently as perhaps the major body fuel in the fasting state, the scientists said. Little is known about how the body burns this energy source.

Fatty acids tagged with radioactive carbon are injected into human subjects. A "space helmet" is placed over the subject's head so that his exhaled breath is captured and carried to a special machine that measures the amount of radioactive carbon exhaled to indicate the rate at which fuel is being burned.

Science News Letter, February 28, 1959



FOUR-ENGINE JET—The nation's first small four-engine jet airplane is designed to cruise at speeds of over 550 miles per hour. It has a normal range of 2,335 miles in still air with normal fuel reserves and was built by McDonnell Aircraft Corporation.