been part of the federal network on climate information since 1954. Throughout the Midwest they give farmers relevant data on drought, rainfall, and humidity; in seaboard states, they help the tourist industry; in the northeastern corridor, they study pollution.

On 29 January, all NOAA personnel learned in a message from White that the climatologic program was to be ended, and NOAA sources state that the rationale was that if these programs were locally useful, the states would pick up the bill. A total of $1.1 million was saved, and although the amount is small, this decision brought NOAA and Congress more mail than any other. Regardless of the merits of the decision, J. Murray Mitchell, Jr., project scientist for the NOAA Environmental Data Service, believes discarding the program was a mistake. "The state climatologists were one of the best links to the public that NOAA has ever had," says Mitchell. Regardless of the wisdom of the decision, he adds, its timing was poor: NOAA brass could at least have given the climatologists a grace period in which to find new employers.

OMB had told NOAA—perhaps partly as a result of the devastation of Hurricane Agnes last year—that its environmental monitoring and natural hazard prediction activities should receive high priority. Also, it said, satellite programs, radar systems, major computer projects, and international programs should receive increases. A major Western cloud seeding experiment was moved (where else?) to the Department of the Interior. Cut by a third was the Data Buoy Program, which collected data concerning the sea surface and atmospheric conditions by means of instrumented buoys placed in remote locations such as the southwestern Pacific. Project Stormfury, which has been attempting to modify Atlantic hurricanes, had its aging airplanes grounded for fiscal 1973. However, it received money toward the eventual purchase of new equipment for work in the Pacific, a condition which provoked the memorable remark from one official, "They have some money, it's just that they can't do any research. . . ."

All in all then, with the beefing up of NOAA's hardware (satellite, radar, and computers) and the corresponding cuts in service programs such as the state climatologists, the atmospheric programs changes are more extensive—and controversial—than the rather small amounts of money involved might suggest.

If there is rhyme or reason to the changes detailed above it would seem that the Administration has been beating a fast retreat from prior commitments to the oceans, or as Malone said NOAA's oceans role has been "truncated." Officials emphasized that this latest marine budget fight was part of a long-standing reluctance by OMB to have a U.S. ocean "presence" in the form of a strong federal agency. Since the early 1960's when the mission agency approach was successfully applied to outer space, the oceanographers, congressmen (70 percent of all U.S. states border on the coasts or Great Lakes—a fact which helps explain the historic popularity of ocean programs in Congress), and eventually a presidential commission headed by Julius Stratton, then chairman of the board of the Ford Foundation, urged creation of a "wet NASA" or some similar body. NOAA was first heralded as that group when it was assembled from other agencies in 1970. But, says Townsend, "Each Administration has said, 'Yeah, but oceans aren't as important as race relations,' or 'Oceans aren't as important as Vietnam.' Now they're saying. 'Oceans aren't as important as inflation.' "

Now, however, that the energy crisis is upon us, and the public is aware that much badly needed oil comes from beneath the sea floor, and the food shortage could be attenuated by more knowledgeable harvesting of fish, the oceans might finally become recognized as a legitimate place for Uncle Sam to set sail. The latest intelligence from NOAA's and OMB's sessions on the new budget indicates that the antiocean trend of the last two budgets, which has caused the agency so much grief, may be changed.

—DEBORAH SHAPLEY

Foreign Scientists in U.S.

The postwar migration of foreign scientists into the United States may not match the importance of other intellectual exoduses, such as the dispersal of Greek scholars after the fall of Constantinople or the flight of Jewish ones from Nazi Germany, but it is nonetheless a movement of more than passing interest. A sociological profile* of the emigré scientist has been compiled by the National Science Foundation. It discloses, among other things, the value placed by their countries of origin on expatriate alumni—more than a third of the immigrant scientists and engineers questioned by the NSF had been approached by foreign employers with offers for re-emigration.

The most common reason given for emigrating to the United States is a higher standard of living (cited by 64 percent of those answering the NSF questionnaire), followed by the less material motives of "curiosity about the U.S." (46 percent), better opportunities for research (42 percent), and more opportunity for one's children (33 percent). Emigrés from Cuba and Eastern Europe commonly cited the political environment as a reason for leaving, and some 430 English scientists, possibly with tongue in cheek, told the NSF that their dislike of the weather was an important reason for emigrating.

The immigrants tend to be well qualified. In mid-1970, when the survey data were gathered, 28 percent of the foreign scientists and engineers held doctoral degrees (compared with 10 percent of American scientists) and 29 percent had master's degrees. An index of their contribution to technological development is that more than a third hold foreign patents and 8 percent have also been issued U.S. patents.

Scientists who decide to stay in the United States find that intellectual stimulation, opportunity for professional advancement, and the "respect of society for science" are generally better than in their home countries. But most discover they have less leisure time than before. Many of them "find the pace of our society faster than abroad," notes the NSF study, but not so fast that it makes them want to go back home.—N.W.

* *Immigrant Scientists and Engineers in the United States* (Government Printing Office, Washington, D.C., 1973); $1.25.