IN BRIEF

German nuclear problems

The domestic and international aspects of Germany's activity in the nuclear field have both come in for further dispute recently. Following the visit of the US deputy Secretary of State to Germany a fortnight ago, and the visit to Washington last week of Germany's Foreign Minister, the German position on its controversial nuclear deal with Brazil apparently remains one of determination to fulfil its obligations, in spite of US objections.

Domestic developments have proved less restrained. Violent demonstrations occurred at the weekend outside a nuclear plant in Lower Saxony; and news of a third court case on the construction of a nuclear plant, this time in northern Bavaria, followed the decision last week of an administrative court in Baden-Württemberg to withdraw the construction permit for a plant on grounds relating to safety. A Schleswig-Holstein court blocked

construction of a plant at Brokdorf last month.

Press statement

The long-awaited official announcement finally came late last week: Frank Press, Professor of Earth Sciences at MIT, has been named Director of the White House Office of Science and Technology Policy (OSTP) and science adviser to President Carter. The appointment must be confirmed by the Senate, but no problems are anticipated there. Press's appointment has been a certainty for the past month, but the official announcement was delayed by a lengthy series of security and other background checks which President Carter has insisted be made on top officials in his Administration. Press has been working at the White House, however, attending meetings of Carter's advisers and helping select candidates for other top research jobs in the government.

NSF budget change

In an unusual move, the House Committee on Science and Technology has restored some of the cuts in the budget request for the National Science Foundation (NSF) made by the subcommittee on Science, Research and Technology. The subcommittee had voted to hold NSF's budget increase for fiscal year 1978 to about 7% compared with the 11% boost requested by the Administration. The full committee has restored about half the cuts made by the subcommittee in NSF's basic research and Research Applied to National Needs (RANN) programmes, additions which would give NSF a 9% increase.

According to staff aides on the committee, the full committee took the unusual step of overturning the subcommittee's recommendations because of recent projections that the inflation rate will be higher than the subcommittee had assumed.

THE most impressive success story in conservation is the recovery of the population of the Antarctic fur seal, described by Nigel Bonner of the British Antarctic Survey in a recent *NERC News Journal*. Before 1791, when the first sealing expedition went to South Georgia, these animals existed in millions. By 1830 they were so scarce that the fur sealing industry stopped. However, they survived in small numbers, perhaps less than a hundred animals, and were officially protected by the British administration of South Georgia in 1907. Most zoologists thought this action was too late and that the species was doomed. But now estimates for 1976-77 suggest that there are over 300,000 and that the population has increased annually by at least 17% for the past 20 years. The seals should soon reach their former level of abundance.

One reason suggested for this phenomenally rapid increase is the ample food supply. Fur seals feed mainly on krill, the shrimp *Euphausia*. This is also the food of the whales which have been so severely reduced in numbers. Successful whale conservation could leave less food for seals. However it seems more likely that man will soon compete for krill, and this could affect both whales and seals. It is therefore interesting to assess the value of this new human food. Would the gain in human nutrition be sufficient to make it worth putting these marine mammals at risk?

The world catch of marine fish for 1974 was estimated at 60 million

tonnes. Biologists believe that it would be possible to harvest almost as great a biomass of krill—at least 50 million tonnes per annum. This would seem at first to add greatly to the food

Fishing line **KENNETH MELLANBY**

resources available for the growing world population. The ocean's contribution to man's food is surprisingly small. Much of the fish is used to feed livestock and pets. When fed to farm animals, the wastage is considerable, and broiler fowls and pigs yield much less protein and energy than the fish supplied to their diet. Even when eaten by man, much of the carcass is wasted. Probably less than 30 million tonnes of actual fish flesh is eaten by

humans each year. Even with the krill, the actual consumption would be unlikely to exceed 50 million tonnes. In terms of energy (calories or megajoules) the total world fish catch would satisfy some 30 million people—less than the annual increase in global population. Even the krill would be consumed by a few month's increase.

Of course, this calculation is, or should be, absurd. Fish is a rich source of high class protein, and the annual catch could supply the protein needs of a tenth of the world's population, and the krill could meet the demands of a further two hundred million individuals. Unfortunately, it is unlikely that it would do so. It is rare for fish to be eaten except by those whose diet already contains sufficient protein. Those who live on staples low in protein, including cassava, plantains and yams, seldom obtain much fish, and it is unlikely that they would benefit from krill. Fish would almost certainly go to increase the luxury eating of man and beast in the richer countries.

We should therefore be cautious before encouraging the exploitation of krill. We see that many of our traditional fisheries are overexploited, and may be destroyed unless internationally conserved. We are very ignorant about the interdependence of krill, seals, whales and man. As the oceans, in spite of overexploitation, are making such a trivial contribution to feeding the world's increasing population, we must realise that most of the food needed must be grown on dry land.