

had already spent twelve years away from their homes, because the first tests took place in the summer of 1946, one in the air and the other under water. Research teams sent to the atoll by the AEC in 1964 and 1967 observed that the islands had made a striking recovery. Vegetation had sprung up on the islands where the soil had not been disturbed, and populations of birds, fish and animals were back to the levels common before the explosions. Rat populations, which had passed through many generations, showed no abnormalities when dissected, and seemed to be reproducing at a rate limited only by the supply of food. Environmental radioactivity was low enough for habitation, except on a few of the smaller test islands.

But the expeditions also encountered less encouraging evidence. The coconut trees on all the islands had suffered severely and, although a few coconuts had survived on the more distant islands, it was thought that intensive planting would be necessary before the island economy based on coconuts could again become viable. The land crabs, which feed on coconuts, had accumulated large quantities of strontium 90 in their shells. Although the shell is periodically sloughed off, this did not produce any reduction in the amounts of strontium 90, because it was later observed that the crab eats its shell piece by piece after it falls off. In this way, the strontium is allowed to accumulate.

Because of this, the AEC recommends that if people are to go back to Bikini, the population of land crabs should be sharply reduced. Scrap metal from islands near to the test sites should be removed, and any village construction on Bikini Island should involve covering the site with coral rock. (The AEC points out that this is a local custom, in any case.) And, because the greater part of the radioactivity which fell on the atoll still remains on the top of the soil, fruit trees should only be planted after the top two inches of soil have been removed. In the first place, settlement should be allowed only on the islands of the Bikini-Eneu complex, and the first villages and agriculture should be set up on Eneu. After a year of inhabitation, the body burdens of caesium 137 and strontium 90 should be determined, and special efforts should be made to see that the Bikinians get a balanced diet—including, says the AEC, powdered milk to reduce the calcium deficiency which is typical of Bikini residents. When calcium is absent, the body is more ready to take up strontium 90. All this may make life on Bikini rather more hectic than it used to be, but the Bikinians will doubtless be glad to have the chance of going back all the same.

DEMOGRAPHY

Immortality Postponed

THE rapid decline in mortality which occurred early in this century in many countries has now ceased and in some cases the crude death rate has actually increased. A number of recent studies of this phenomenon in the United States, Chile, England and Wales make it possible to try to identify the common characteristics, and a fourth study has just been published on Japan (*Recent Retardation of Mortality Trends in Japan*, US Public Health Service Publication No. 1000, 35 cents). After the Second World War, mortality in

Europe and the Americas declined until about 1950, when retardation of the earlier mortality decline began to show up. In the United States, this trend was observed in infants and most other age groups, both white and non-white; it is suspected that there may be a specific underlying cause. In Chile, there has been a significant retardation in the middle-aged groups of men; this was attributed to infectious diseases because of inadequate public health services. In England and Wales, on the other hand, a retardation of the mortality trend between 1955 and 1961 was attributed to an imbalance between increase of coronary artery disease and diminishing improvements in infectious and respiratory diseases.

In Japan, a study of the mortality figures for certain diseases between the years 1900 and 1963 indicates that the regular rate of mortality decline changed abruptly about 1955 and was especially noticeable in the middle-aged group of males throughout the country, mainly because of infectious diseases; the retardation index was noticeably high for pneumonia, bronchitis, enteritis and nephritis. Possible factors influencing this retardation trend include virus mutation, radiation, cigarette smoking, antibiotics and other drugs, changes in diet, air pollution, urbanization and public health activities. Most of these are of doubtful significance but need to be investigated more fully before being eliminated. It is certainly true that a generally decreasing trend of bacterial and viral infections showed a breaking point about 1953-55 and the increase in resistant bacterial strains seems to have become more rapid since 1955. These factors may be essential for the sudden retardation of mortality, but more work certainly needs to be done.

FOREIGN AID

Change but No Change

DESPITE another grim year for overseas aid, the Overseas Development Institute has contrived to produce a reasonably cheerful annual report. In his last report as director, William Clark (who has now joined the World Bank) writes that British devaluation has meant a cut in British aid of between 8 and 10 per cent. A ceiling of £205 million has been imposed for the next two years. In the United States, the smallest aid Bill since the war was reduced still further by Congress. The UNCTAD meeting in New Delhi was generally regarded as a failure, at least by the countries which were supposed to benefit from it. There is a climate of disillusionment with aid, just at the moment when the need for it is increasing. Unless the Pope's encyclical on birth control has jolted people into a realization of what is at stake, organizations like ODI face several years in which they are likely to face criticism and even hostility.

Mr Clark hopes that this attitude is not shared by the younger generation—"which has never lost an empire, nor yet failed to find a role in the world"—and the ODI has therefore determined to go ahead as before. The report argues that the "conspicuous loss of momentum in the advanced countries' efforts to help the poorer two-thirds of the world is partly attributable to public misunderstanding", an argument in favour of intensifying the efforts to explain the issues to the public. The staff of the ODI have

therefore continued to attend conferences and undertake speaking engagements, as well as continuing research projects. One of the newer research projects involves an attempt to understand the "aid relationship", which involves the problems of how donor and recipient can best work together.

Mr Clark's successor as director at the ODI is Mr Anthony Tasker, who took over in May this year. Most of his career has been spent as a representative of the Booker Group of companies in Guyana, and from 1957 to 1964 he was a member of the British Guiana legislature. Before joining the Booker Group, Mr Tasker was organizing director of the International Tea Market Expansion Board. He is experienced in the marketing problems of the developing countries, which should be valuable in his new job. Too often it has been glibly assumed that developing countries are willing to accept whatever they were told was good for them, particularly if it is free. Many a protein supplement has foundered because of inadequate marketing. It is true that the ODI so far shows no signs of going into the business of manufacturing protein supplements, but marketing experience is likely to be of increasing relevance in overseas aid. There will be genuine regret at William Clark's departure, because it was he who launched the ODI in 1960 and has sustained it since. As director of information and public affairs at the World Bank, he hopes to continue the work begun at ODI, but translated into the international field.

RESEARCH

Who Does What

THE Department of Education and Science and the British Council have once again produced their guide to *Scientific Research in British Universities and Colleges, 1967-68* (HMSO, Vol. 1: Physical Sciences, £2 5s.; Vol. 2: Biological Sciences, £2 5s.; and Vol. 3: Social Sciences, £2). Like the volumes for 1966-67, this new edition comes at the end of the academic year to which it relates, which means that many of the entries will be already out of date. Nevertheless, the books serve a very useful purpose.

Some of the inconsistencies and irritations in the earlier edition still persist. For example, the character of the descriptions of the research projects varies from one university to another—some spell out what each individual member of a department does, and some still lump all the projects together. To some extent, inconsistencies are inevitable because the compilers rely on the cooperation of the individual institutions, but this is no reason why several archaeological departments are not included at all.

Changes include new sections for Animal Husbandry (Vol. 2) and for Criminology (Vol. 3). The heading Mental Health in Vol. 3 has been altered to Psychiatry. The split between physical geography and human geography (the first is in Vol. 1 and the second in Vol. 3) is now very much clearer for the user.

The principal changes appear to be in the third volume which, like the volume for 1966-67, continues to include several non-university institutions. This time there are new entries for the Advisory Service for the Building Industry, British Institute of Management, BOAC, Heating and Ventilating Research Association, Library Association, Newcastle upon Tyne

Regional Hospital Board, and the Overseas Development Institute, to name a few. The subject index remains a little inconsistent, with some categories defined very precisely, while others are much broader.

POLLUTION

New Laws for Pesticides

THE US Federal Drug Administration announced recently that the amount of DDT allowed to remain on food sent to market is to be significantly reduced after January 1, 1969; for some crops the levels have been reduced by 50 per cent, and more than half of all the fruit and vegetables sold in the US will be affected. In Britain the Ministry of Agriculture has just sent its proposals for a new Pesticides Bill to well over 100 organizations representing the food, agriculture and chemical industries as well as to medical veterinary and animal protection organizations, for their comments. Both steps are indicative of increasing government concern over the accumulation of pesticides in food.

The aim of the proposed new Pesticides Bill is to tighten up controls on the sale and use of pesticides by covering in a single piece of legislation their licensing, use, and permitted limits of residues in foodstuffs. If the proposals become law, all pesticides will have to be licensed by a new Licensing Authority comprising the Ministers of Agriculture and Health, the Secretary of State for Scotland and appropriate ministers in Northern Ireland. The authority will receive the technical assistance of an Advisory Committee similar to the existing Advisory Committee on Pesticides and Other Toxic Chemicals, on whose report the new Bill is chiefly based. (The report of the existing advisory committee on the present safety arrangements for the use of toxic chemicals in agriculture and in food storage is apparently to be published shortly.)

Enforcement of the new licensing regulations would be the responsibility of the Weights and Measures authorities and they would examine about 200 licensed products a year, analysing samples and ensuring they were up to standard. The new Bill would lay down penalties for using pesticides on crops for which they were not intended, deliberately using overdoses or using dressed seed as animal food. All users of pesticides would be required to keep records of the amounts purchased, how much was used and on what crops. All pesticides would have to be stored separate from seed, fertilizer or produce. The Bill would also extend the protection necessary for workers engaged in applying pesticides and include for the first time under these provisions persons involved in food storage and the self employed. The ministers would be able to enforce residue limits in produce, irrespective of any immediate hazard to consumers. This would provide an additional check on the levels of pesticides used in the field.

If these proposals become law, they will provide much more stringent control of pesticides in Britain. Much will hang on how they are enforced, and that in turn will depend on the voluntary acceptance of the legislation by the agricultural industry, but to encourage this the Bill makes provision for the appointment of inspectors with the same powers of entry as those included in the Agriculture (Poisonous Substances) Act of 1952.