of vessels, so that the most efficient operators will get the greatest benefit from the new system.

On the whole, catches of white fish were good during the year, particularly in the north-east Atlantic, and landings exceeded those of 1967, but while there were increases in revenue in some sections of the fleet, the gains were affected by a "massive" increase in average operating costs. The authority hopes, however, that the agreed merger between two of the industry's largest companies, the Ross Group and Associated Fisheries, may help to cut operating costs.

The authority is encouraged by its results from its experiments on boxed fish. Trials of a fleeting system involving the transfer of boxed fish on the open sea between three vessels confirmed the practicability of the scheme, although it needs refining. Gradually, the method of boxing at sea is becoming more popular. In Aberdeen, following a trial for which the authority provided facilities on a non-profit-making basis, the owners decided to adopt boxing as a standard procedure, the freshness of the fish already boxed and iced on arrival at ports obviously being the deciding factors. The authority's Industrial Development Unit supports many projects—research on the mechanization of fishing operations, and fishing aids, operational research, handling, processing and distribution of fish, and the like—but its activities are rather hampered by lack of funds. The authority's total expenditure on research and development in 1968–69 was £428,000 compared with £400,000 in 1967, but it reports that it is difficult to undertake projects requiring annual allocations of more than £20,000 at this level of expenditure, and it is anxious to expand the programme and to improve the effort in marketing and distribution.

Several of the developments sponsored by the authority have a strong bearing on the safety of trawlers and their crews, a subject at present being examined by a committee (under the chairmanship of Admiral Sir Derek Holland-Martin) set up by the Board of Trade after the loss of three distant water trawlers early in 1968. The fishing industry has naturally been a little cautious about future commitments for new vessels and equipment, but its wait should soon be over because the committee is expected to report this month.

MEDICAL RESEARCH

Epidemics on Computer

It is more than ten years since the World Health Organization, on the recommendation of the 1958 World Health Assembly, began its "intensified medical research programme". The annual report on the programme points out that the particular tasks of the second five-year programme 1964–68 have stressed the problems of international communication among medical scientists. To accommodate the enormous increase of scientific information, WHO initiated in 1965 the Biomedical Research Information Service so that data could be coded, analysed and stored using the WHO computer at Geneva and then issued in bulletin form as comprehensive and up-to-date information.

The basic aims of the programme have not been forgotten. Medical research is still encouraged by the provision of facilities for research and for training in

research to the tune of £4 million per year. There are now over 700 WHO supported projects in a total of seventy-seven different countries and there are 388 research workers on research grants, half of them for people working outside their own countries. Expenditure has climbed since the first five-year plan. In 1961 annual expenditure was a meagre £1.5 million, of which 45.5 per cent was voluntary contributions. Now annual expenditure (1968) is more than £4 million, but with no increase in voluntary contributions.

The report deals weightily with world wide investigation of nutritional disorders and cardiovascular diseases and with the widespread and more menacing infectious diseases. Over half of the programme is concerned with environmental health and communicable diseases, from influenza and mumps to leprosy and malaria. In 1967, a division of Epidemiology and Communications was established, the idea being to analyse where and when an outbreak of a specific disease might occur. Behavioural sciences, ecology and mathematics have provided tools for accurate assessment of epidemic dangers. A computer simulation model has been developed which can exhibit the general behaviour of a recurrent epidemic situation; a modification of this model will be applied to malaria. Work is in progress on phenylketonuria and haemolytic disease of the newborn where the starting point for the model was provided by the genetic abnormality. The aim is eventually to construct a mathematical model of the disease process by recording observation on man and his biochemical and immunological characteristics and environment.

ARCHAEOLOGY

Ancient Monuments

by our Archaeology Correspondent

IN a country like Britain, stumbling from one financial crisis to the next and looking to science and white-hot technological revolutions for its salvation, it is idle to pretend that the preservation of ancient monuments, or for that matter archaeology as a whole, comes high on the list of priorities for public money. But it is not simply shortage of money that the staff of the Ministry of Public Building and Works complain of. They also say that the feeling that it is somehow harmful to the national psyche to want to preserve as much as possible of the relics of the past is widespread among those who hold the Treasury purse strings. Government policy, as far as there is one, seems to be that it is impossible to let preoccupation with the past cost more than a few hundred thousand pounds a year. The damage to field monuments that is currently tolerated in Britain was revealed in the recent report of the Ministry's Field Monuments Committee (see *Nature*, 221, 1099; 1969), which also showed how a further £200,000 or so spent in the right ways could radically improve the situation. Unfortunately that report appeared too late to be included in the Annual Report for 1968 of the Ancient Monuments Boards for England, Scotland and Wales (HMSO, 3s 6d), which by comparison, makes almost cheerful reading.

Since 1958 the Ancient Monuments Boards have taken their jobs seriously enough to meet five times a year instead of once, and they usually make an annual three day excursion to monuments in selected areas. Last

The vallum (foreground and on right of the road) enclosing part of the land of St Columba's monastery, in which there are plans to build tea rooms and lavatories.

year the board toured Kent and was impressed with what it saw—especially the restoration of a Martello tower at Dymchurch—but the Board for England and Wales sounds some alarms. Cromwellian earthworks in Cambridge are once again threatened by the resurrected plan for an inner relief road scheme and, it says, “even excavation before destruction would be a very bad second to the preservation of such historic earthworks”. At Norwich the 2.25 mile long city walls are threatened with destruction by the local authority's road scheme especially because the authority owns both the walls and houses in some areas and an alternative route would cost a great deal of money chiefly in compensation. And even in remote Iona, as the Board for Scotland points out, the area formerly enclosed by the bank and ditch of St Columba's monastery, a feature of the site that was only rediscovered in 1930, is threatened with a tea room and lavatories. As the report says, to build such things within a unique monastic site “would seem to our successors wholly incomprehensible—if not, indeed, a betrayal of trust”. A plan to desecrate Iona with a urinal will not, of course, come as a surprise to anyone who has read the report of the Field Monuments Commission; progress must be had at any cost, but especially if the cost is only a few old stones or turves, not money from tax and rate payers.

FAMILY PLANNING

Mr Crossman Helps Out

from a Correspondent

THE Family Planning Association is launching a new campaign with the title “Every Child a Wanted Child” as the latest move in its long-standing drive “to make the act of birth control as habitual as the sex act”. The campaign was welcomed by Baroness Birk, chairman of the recently formed Health Education Council, at the opening of the association's annual national conference in London last week. Lady Birk, who has already made contraception first priority on the council's programme, criticized “the heavy aura of puritanism with its lingering overtones of sex for procreation but never for pleasure” which she believed still pervaded British society. This, she said, was responsible for “the half hearted way” the problem was approached.

One of the chief complaints within the FPA is the

lack of enthusiasm with which local authorities have received their obligations under the National Health Service (Family Planning) Act, 1967. The Secretary of State for Health and Social Security, Mr Richard Crossman, said he very much wanted to see local authorities provide a comprehensive service. He said that of 204 local authorities in England and Wales, only 34 at present provided an “adequate” service under the terms of the act. Regretting the fact that the act had come into effect at such a time of “financial stringency”, Mr Crossman—who last month granted the FPA its first-ever Government subsidy of £20,000 a year for five years—pointed out that on purely economic grounds the provision of an effective family planning service would lead to considerable reductions in other areas of welfare spending.

The main problem, however, as speaker after speaker reiterated, was not so much money—the FPA has an annual turnover in the region of £4 million—as the attitude of society as a whole. One of the most disturbing anomalies is the fact that while a doctor can perform an abortion on a girl under the age of sixteen, he is proscribed by law from prescribing contraceptives of any sort. As usual, it is inevitably the person who needs help most who is last to receive it. One doctor at the conference—after requesting that his professional anonymity be preserved—reported the cases of two 15-year-old girls on whom he had performed abortions: within three months they were pregnant again.

Mr Michael Schofield, author of *Sexual Behaviour of Young People*, observed that for most children nowadays formal sex education came too late, and that, especially in schools, such instruction as was given was frequently too erratic and inaccurate.

NUCLEAR REORGANIZATION

Mr Benn Explains

EVEN members of the cabinet are not secure in their jobs, Mr Anthony Wedgwood Benn, Minister of Technology, reminded last week's last public meeting of the House of Commons subcommittee on the nuclear power industry. He was answering questions about the fate of the nuclear scientists of the UKAEA in the reorganization he instigated a year ago. “The scientists whose work has led to major redundancies in the coal industry should be the last to complain about the effects of technological progress”, Mr Benn said, commenting on the reluctance of scientists to transfer to the two companies (TNPG and BNDC) which will be responsible for designing and building nuclear power stations. So far, forty members of the UKAEA fast reactor design office have accepted offers from TNPG and the remaining 100 are working for TNPG on secondment, but the Institution of Professional Civil Servants (the guardian of the UKAEA scientists) is advising against the terms offered by BNDC, presumably because BNDC is held to be the less viable of the two consortia. Mr Benn did not seem unduly worried, however. He did not accept the view that design teams should be kept together at all costs; some of the best teams are those which are brought together for a particular purpose. In any case, the scientists are employees of UKAEA, not of the Ministry of Technology, and it is up to the ministry to make the best use of the resources of the UKAEA.