Whales

UN scientist takes a hand

WHALES and other marine mammals have found a new (objective) champion — the Yugoslav marine scientist Stjepan Keckes, for long director of the United Nations' "regional seas" programme. That programme, one of the most effective of the United Nations Environment Programme (UNEP), is now to extend its work from environmental protection to a study of fisheries and marine mammals.

Thus earlier this month, Keckes convened a meeting in Geneva of all agencies supporting marine mammal research, and had armed himself with a list of 36 research projects already mounted at a cost of $6 million and of 30 new projects, potential claimants on UNEP, which has $390,000 to spend on marine mammals this year. The environmentalist group Greenpeace proposed a project to clean up an island fouled by nets where the rare Hawaiian monk seal breeds, but most proposals were for research.

Research is sorely needed, according to British fisheries scientist Sydney Holt, who represents the Indian Ocean islands of the Seychelles on the scientific committee of the International Whaling Commission (IWC). IWC, which is a group of whaling nations and of others opposed to whaling, has proposed a ban on whaling from next year. Holt supports the ban, but says that IWC whale population models, on which catch quotas are based, are "not worth the computer tape they are stored on". In the UNEP regional seas magazine, *Siren*, he says that the survival rate of juvenile whales is a key factor in calculations but that it cannot yet be measured. Thus the models simply assume a figure, which remains constant as a function of population and population density. "In other words, we ignore it ... all our calculations are based on models in which we ignore changes in nearly every important factor."

Holt claims, for example, that there is no certainty that right whales are increasing in the Southern Ocean, as has been claimed. And humpbacks seemed to be increasing rapidly in the North-West Atlantic only because a lot of them were seen on the coast and in fishermen's nets. "But the whales were coming inshore for food because the offshore fisheries were depleted."

Keckes believes his research programme will breathe life into the floundering "global action plan" for marine mammals which has been planned over seven years by UNEP and the Food and Agriculture Organization. One objective is to help coordinate the work of bodies such as the World Wildlife Fund and the International Union for the Conservation of Nature. Governments are to meet on the issue in Nairobi next month. **Robert Walgate**

European telecommunications

Commission plans ahead

Brussels

THE European Commission has announced plans for the preparatory phase of a major research and development programme to modernize European telecommunications. Known as Research in Advanced Communications in Europe (RACE), the programme will be considered by Community research ministers at their meeting on 4 June.

Over the years, research in telecommunications has been a central part of the Community's industrial strategy. In the late 1960s, for example, a commission under Dr Pierre Aigrain singled out telecommunications as a fruitful field for collaboration but was unable to devise a workable programme. More recently, however, the Commission has been able to develop common specifications for equipment, plans for the coordination of licensing procedures and, last October, partial liberalization of European markets for equipment (see *Nature* **311**, 697; 1984).

The new programme has been put together by the Commission with the advice of national experts drawn from industry and academic life. The first objective of the preparatory phase will be to pave the way for the infrastructure needed both to support existing services and to develop new services for voice, data and video transmission. The Commission intends that there should be close collaboration between the RACE project and the Community's advanced information technology research programme, known as Esprit.

Between 1986 and 1991, work under the new programme will concentrate on integrated broad-band communications systems, when there will be some precompetitive development of equipment and services. The Commission also intends continuing the development of international standards in telecommunications.

If the first phase of the programme is agreed, the Commission would push on with a second phase between 1991 and 1996 and would then expect to invest at least 150,000 million European Currency Units (ECU) in advanced telecommunications equipment including colour telecopiers, newspaper transmission, voice-driven telecopiers and mobile videophones.

Large though this estimate may be, the Commission points out that it is small compared with the size of the telecommunications market, which is expected to amount to $500 million a year by the turn of the century. Europe is estimated to invest 20 per cent of total expenditure on telecommunications equipment, but the Commission hopes that its programme will help Europe to break into foreign markets on a substantial scale by the next century.

Meanwhile, the Commission is planning to hold a second demonstration of video-conferencing techniques in Europe in June this year and hopes that by May it will have developed a single standard for second-generation mobile telephones to replace the three standards now in use.

Anna Lubinska

European biotechnology

Brussels

THE governments of the European Community have now given the formal go-ahead for a four-year programme of research and training in biotechnology. As in other fields, the Community hopes to encourage transnational cooperation between academics and industrial interests in the ten member states.

Belatedly, 55 million European Currency Units (ECU) has been allocated for the period between 1985 and 1989, of which 9.5 million ECU are specifically earmarked for research in the collection of information, the modernization of databanks and the provision of access to existing facilities. As part of this effort, the Community hopes to improve existing collections of biological material and to develop better methods of storage and recovery.

Although the scale of support for the four-year programme falls one-third short of the sum originally sought by the Commission, the new programme is broader in scope than the first proposals, which concentrated on biomolecular engineering. While research in genetic engineering will still be supported, the new programme will also involve research on protein design as in the construction of artificial enzymes and the potential industrial applications of gene transfer. Applied research will include the development of reactors for converting waste lignocellulose into ethanol, from which the research directorate of the Commission has hitherto fought shy because of the uncompetitive prices of raw materials in Europe.

The underlying objective of the programme, according to the Commission, is to create a series of interlocking biotechnology research centres across Europe. But the cut in the research budget means that fewer contracts can be awarded, while it has been necessary to drop the study of the genetics of higher plants and the application of cell biology to the prevention of human disease, although work on the development of vaccines will continue.

Although the application of biotechnology in public health is an important aspect of the new programme, the chief focus of the research to be supported will be the use of agricultural products for industrial purposes, not for eating. The hope here is to find a solution to the problem of food surpluses in the Community.

Anna Lubinska