CORRESPONDENCE

Whale Conservation

SIR.—You draw welcome attention to the fact that, notwithstanding recent concern about the effects of pollutants like DDT and others on various species of animals, the direct effects of too intensive killing have been the major cause of the observed declines in species of birds, whales or fish, and that more emphasis should be given to the studies of those direct effects (Nature, 233, 79; 1971). However, in doing so, you appear not to be aware of much of the work and progress that has already been achieved. As scientists who have been associated with the work of various international commissions both before and since joining FAO, we should like to make some personal observations.

We would in particular like to comment on the statements regarding Antarctic whales (see also Nature, 232, 80; 1971). It is certainly not true that at least two species of whale have been made extinct in the Antarctic, or indeed anywhere in the world, since the Atlantic grey whale was exterminated many centuries ago. The blue whale might have been exterminated if the slaughter of the early postwar period had continued, but since being protected in 1965 it has almost certainly increased, and now numbers several thousands-not between 100 and 1,000 as stated-and is regularly seen by whalers and research ships in the Antarctic and elsewhere.

While the International Whaling Commission has become a favourite and easy target of attacks, these criticisms do not do full justice to the commission's record in the last six years. While around 1965 the IWC was failing badly to bring the catches down into line with the figures recommended by the scientists, the catches were some three or more times the sustainable yield, and various stocks had declined seriously. the quotas now set by the IWC have been cut to a fraction of these former levels, and according to some scientists are below the sustainable yield of the The result is that, apart from the species which are fully protected, and perhaps with the exception of some local stocks of other species, the fin whale is the only species of which the present stock size is far below the level giving the maximum sustainable yield. The present Antarctic quotas are above some estimates of the current sustainable yield, though the excess is small, and if these estimates are correct the quotas would lead to only a slow further decline on the stocks.

Admittedly, much remains to be done.

and in particular the member countries of the IWC are still failing to implement the international observer scheme, and little or nothing is being done to rebuild the Antarctic fin whale stocks to a level where they can provide a high sustained vield-maintaining them at around the present level is not good Furthermore, problems have arisen from whaling carried out by countries not members of the commission. For example, the 66 blue whales referred to as being killed in 1967, after full protection was given to them, were killed by vessels of countries not belonging to the IWC and over which the member states of IWC had no authority, and certainly some action needs to be taken to cope with this kind of problem,

As regards fish in the North Atlantic, considerable efforts have been made within the framework of the International Commission for the North West Atlantic Fisheries and the North East Atlantic Fisheries Commission to set up international controls of the intensity of fishing in the North Atlantic, including a special meeting of NEAFC at ministerial level in Moscow last December. Progress is indeed slow, but, contrary to the impression given in your journal, limits have been set by ICNAF to the intensity of fishing on haddock in several parts of the North West Atlantic, including the Scotia Bank.

Like the IWC, these and other international bodies concerned with management and conservation of living marine resources need better support so that they can improve their performance, and particularly the speed with which they can react to the rapid changes in modern fisheries. Such support should include better facilities for the collection and analysis of information regarding the stocks, and greater authority to ensure compliance with necessary conservation action.

Yours faithfully,

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Geological Abstracts

SIR,—Joel Lloyd (Nature, 235, 347; 1972) has tidied up some errors of fact in your original comment on this matter, and then gone on to add some unsubstantiated comments of his own. Since the division of opinion between us is deep and is relevant to the current

urge to mechanize bibliographic services in other fields, I hope you will allow me to reply.

I do not quarrel with the suggestion that the American Geological Institute is providing a fairly comprehensive service, and that in the context of high machine costs it is wise to restrict itself to citations and not fill its magnetic tapes with abstracts. I agree that the abandoned USGS services were cheaper than they need have been, but as a runon print from a bibliographic service paid for and justified by the internal needs of the USGS, their marginal cost was never very high. In any case, the price for his own service is also "unrealistic" and incapable of covering its costs at the present price-tag or any other, higher or lower. As in many subjects, the value placed on information does not cover the costs of the complex systems that information specialists dream up these days. Why is it that the consumers are at fault in being reluctant to pay-why cannot the information industry realize that a less sophisticated system that can cover its costs is an alternative worth considering seriously? Comparison with the costs of other more advanced and information-conscious subject fields is irrelevant; services for geologists are only going to be paid for by geologists.

To Dr Lloyd the fact that a service is not comprehensive (that is, subjectwide) and not machine-based destroys all its claims to be a useful service. The fact is that Dr Howie and I can outsell Dr Lloyd just because we each produce (very different) services that people find useful and that people do afford to buy. In time such services may grow and provide a more comprehensive service, and they will gradually become more mechanized as the users find they need more sophisticated services. Last year Geo. Abstracts spent an appreciable sum of money translating and publishing abstracts of the Russian literature, normally very inadequately covered by us. To information specialists this was an obvious and overdue extension of our service. The experiment produced two letters in favour (one of these from another bibliographer hardly counts); the remainder were strongly against. The consumer view was clear; why clutter up the Abstracts with this material we don't want? Professionally I deplore the attitude, but are we right to burden our consumers with expensive services they do not want? It seems to me that this is a central question as expensive and heavily subsidized services bemoan the lack of consumer