

THE IREP WORKSHOP

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Everyone working on pelagic fisheries is painfully aware of the impact of recruitment fluctuations on the variability of catches, and hence, of the economics - and often the very survival - of fisheries. Until recently, the apparent intractability of the "recruitment" problem seemed to doom fishery scientists to assume steady state conditions forever - against all evidence.

However, there are some lights at the end of this tunnel. One of them is the OSLR Program (Ocean Science in Relation to Living Resources) of the IOC (Inter-governmental Oceanographic

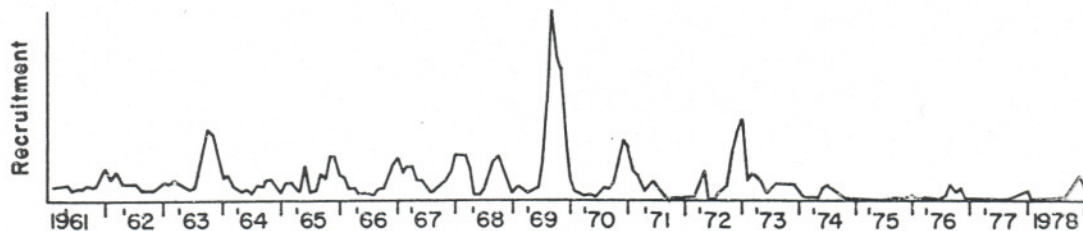


Fig. 1. Monthly recruitment of the Peruvian anchoveta (Northern stock, 1961-1978) as obtained by application of length-structured VPA to catch at length data. Based on work by the author and I. Tsukayama (IMARPE, Peru).

Commission of UNESCO) which, put in broad terms, covers all those aspects of marine science that can be done in support of fishery science without belonging to fishery science sensu stricto (see Bakun et al. 1982).

The OSLR program has, quite rightly, identified the "recruitment problem" as the area where the combined efforts of fishery scientists, marine biologists and physical oceanographers could yield a major advance, and as a result the IOC recently sponsored a workshop on the recruitment problem.

This workshop, held the 26-30 Sept. at the Bedford Institute of Oceanography, Dartmouth, Canada, under the chairmanship of R. Beverton (yes, the Beverton!) was devoted to identifying for IOC the content of a planned International Recruitment Program (IREP for short).

IREP, as it emerged from this workshop, will consist of a variety of subprojects to be conducted in different countries and based on two different but

complementary sets of methodologies:

- "direct approaches," i.e. field and laboratory experiments in which feeding, growth and mortality (i.e. predation) processes are studied where and when they occur, and
- "indirect approaches," in which time series of recruitment indices (e.g. as in Fig. 1) are matched against potential predictor variables.

The complementarity of these two sets of methodologies lies in the fact that indirect approaches can yield hypotheses for testing through direct approaches, while indirect approaches will generally base their selection of predictor variables on hypotheses generated by the direct approaches.

Recent advances, by R. Lasker and collaborators in La Jolla, California, concerning the direct approaches, and by A. Bakun and co-worker in Monterey, CA working on indirect approaches suggest that methodologies developed by these groups of scientists will help unravel at least some of the mechanisms underlying recruitment fluctuations.

A complete report of the IREP workshop will shortly be published by IOC (address: Intergovernmental Oceanographic Commission, UNESCO, Place de Fontenoy, Paris, France). It will contain the addresses of all participants, and thus allow interested readers to communicate with the workshop participants.

Reference:

Bakun, A., J. Beyer, D. Pauly, J.G. Pope and G. Sharp. 1982. Ocean Science in Relation to Living Resources. *Can. J. Fish. Aquat. Sci.* 39:1059-1070.