

OCEANOGRAPHIC STUDIES OFF BAJA CALIFORNIA: THE IMECOCAL PROGRAM

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ABSTRACT: In 1997, the monitoring program “Investigaciones Mexicanas de la Corriente de California (IMECOCAL)” was initiated by several research and education institutions in Mexico. The program conducts quarterly oceanographic cruises along the coastal waters of Baja California, Mexico (24° to 32°N) to study topics such as ocean circulation, hydrography, primary productivity and plankton distributions, and in general to study the bio-physical interactions of this ecosystem. This same region has been previously monitored by the California Cooperative Fisheries Investigations (CalCOFI) program in the period 1949-1980. In 1980, CalCOFI abandoned sampling in Mexican waters and restricted its long-term observations to Southern California. Thus, IMECOCAL emerged as a need to study the southern portion of the California Current System. The station plan follows closely a subsection of the original CalCOFI plan for Baja California. To further increase our capabilities to understand this marine ecosystem, IMECOCAL quarterly cruises are planned to coincide with those conducted by the CalCOFI program in Southern California. To date, 20 oceanographic campaigns have been conducted to the region. The observations in 1997-2002 have allowed a better understanding of the impacts that basin-wide phenomena (El Niño-La Niña) have on the oceanic conditions, zooplankton biomass and productivity over the northwestern Mexican coast. Data sharing, academic exchanges and transfer of experiences and technology between northern (CalCOFI) and southern (IMECOCAL) programs have been the key parameters for success. Nowadays, high-quality data on both sides of the political boundary let us to look at integrated distribution maps and augment our capability of understanding the coupling between biological variability and physical forces (winds, currents). This talk will present an overview of the program, its past and present research activities, examples of academic exchanges between USA, Mexico and Latin American countries, as well as some of the promising scientific results that have been achieved over these five years.