

THE HAWAII CORAL REEF ASSESSMENT AND MONITORING PROGRAM (CRAMP)

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The Hawaii Coral Reef Assessment and Monitoring Program (CRAMP) was designed to detect changes on coral reefs and increase our understanding of the controlling factors (natural and anthropogenic) influencing reef stability, decline and recovery. The major environmental problems on Hawaiian coral reefs (ranked in order of importance) include: overuse (overfishing, anchor damage, aquarium trade collection, etc.), sedimentation, nutrient loading, coastal construction, urbanization, catastrophic natural events (storm wave impact, lava flows), global warming (bleaching), introduced species, and disease outbreaks. CRAMP is a University of Hawaii (UH) system-wide research program that includes scientists and managers from the State of Hawaii Division of Aquatic Resources (DAR), East- West Center, Bishop Museum, Waikiki Aquarium and other organizations in an ongoing collaborative program. CRAMP is working with various federal, state and local agencies in the development of a shared Geographic Information System (GIS) that will allow analysis of complex geographic data and the rapid dissemination of information required by managers and scientists. During the initial phase, sampling priority is focused on areas where relevant baseline data was previously collected. Initial resurvey work must initially utilize the methods employed in particular studies, but we are simultaneously developing and implementing “standard” transecting techniques to quantify fish, coral, algae, and invertebrates at each site. CRAMP research sites (including all management “hot spots” designated by the DAR) were chosen from throughout the State of Hawaii based on information provided by a wide spectrum of managers and scientists. These sites represent a full range of reef habitats subjected to various degrees of anthropogenic influence ranging from severely impacted to relatively pristine sites held in conservation status. An initial assessment suggests that Hawaiian coral reefs generally remain in better condition than reefs in many other geographic regions, but destruction and degradation continues in localized situations due to increased human population and activity. There is widespread agreement that overfishing and overuse impact reefs throughout the State. (Key words: *Hawaii*)