Monitoring rips, hazards and risk on beaches

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ABSTRACT

Rip currents are the major cause of beach rescues and drowning in beach-going countries. In Australia they are responsible for 95% of surf rescues and most surf drownings. In an effort to substantially improve our ability to detect, monitor and assess rips, as well as associated waves and other hazards CoastalCOMS is developing technologies that will provide real time and forecast hazard and risk assessment on Australian and USA beaches. During the past year CoastalCOMS has collaborated with Coastalwatch, Surf Life Saving Australia, Surf Life Saving Queensland and Griffith University in the CoastSAFE Alive project that seeks to extend the utility of the camera imagery. CoastalCOMS, the R&D spinout of Coastalwatch, utilises information from 140 Coastalwatch beach cameras in Australia, Hawaii, California and Texas. Imagery from these cameras is analysed to provide information on breaker wave height and period, beach state, including presence and location of rips, shoreline position and number of people on the beach. The CoastSAFE Alive project is integrating camera information with WW3, waverider and ANNA wave characteristics, weather condition, tide and lifeguard observation to provide both real time and forecast beach hazard and risk assessments. In September 2009 the hazard and risk assessments were critically reviewed by beach managers and senior lifeguards at an International Workshop on the Gold Coast, Queensland. This paper will present an overview of the CoastSAFE Alive project and application of the hazard and risk assessments to Australian and US beaches.