

## INTRODUCTION

In Queensland over 85% of the population lives near the coast. Yeppoon area is third fastest growing coastal area in Queensland. Number of population growth from 5600 in 1976 to 12,000 in year 2001 and generally the coastal population growth to 17,000 at present. The management of coastal resources is integrally related to country's economy. In developed countries, such as Australia in addition to economic consideration there is also an interest in quality of life. A large influxes of new settlers in coastal areas is because people find the lifestyle associated with the coast to be important. One constraint on the coast is that it is essentially linear; it is a narrow strip of land along the coast. As new areas become popular and open up for development, the additional coastal zone is measured in kilometres. The coastal zone is essentially a scarce commodity. The coastal zone is fragile and there is worldwide tendency for coast to erode. This put high priority on protecting and maintaining what little is there, particularly because real estate values along the coast are so high.

Beach profiles respond to storm – calm cycles by shifting sand in the cross-shore direction. But any beach profile will need additional material during times of high stress, such as during infrequent combinations of high wave action and storm surge resulting from low atmospheric pressures, cyclones, etc. Nature has provided for such emergencies by stockpiling large quantities of sand in dunes. Thus the dunes are a long-term protection against coastal erosion, because they provide adequate elevation of the land contours to prevent flooding and form emergency reservoir of sand. Ideally, a dune-beach system can thus take a care of emergency situations for millennia to come. In modern coastal engineering design and coastal management the fundamental principles are:

- Not disturb existing dune-beach systems,
- Encourage growth of dune-beach systems, and
- Emulate dune beach systems wherever possible

It is in agreement with the general trend in implementation of so-called “soft” shore protection. Greed and ignorance have disturbed many dune-beach systems with the serious and costly consequences.

Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management (Coastal CRC) together with Central Queensland University organised this public workshop to keep open discussion about the matters of beach protection from the researchers and local community points of view. One of the goals of CRC is to recognise coastal ecosystem for its intrinsic value through community participation in integrated approaches to restoration development and management.

During the workshop the speakers covered a wide range of topics:

- Prof Rodger Tomlinson, Director of the Griffith Centre for Coastal Management, Griffith University, topic of presentation is risk of beaches damaging connected with possible storms or cyclones. After so many years of reasonably calm weather along the Capricorn Coast many of us forget what type of damage might be caused by a cyclone. Do we expect some climate changes and more severe weather conditions in the nearest future? Prof Tomlinson is trying to answer this question.
- Jeff Callaghan, the Head of the Bureau's Severe Weather Unit in Queensland, is presenting history of tropical cyclones along the Capricorn Coast. From November to April, 1858 to 2000 there were about 200 tropical cyclone impacts along the Australian east coast. How many of them struck our Capricorn Coast? What is probability to expect in our lifetime a severe cyclone again? What type of damage could be expected? What should we know about cyclones? There are some questions discussed in Callaghan's paper.
- David Robinson, A/Manager of Coastal Services, Environmental Protection Agency, Brisbane presents State Coastal Management Plan recently developed by EPA for Queensland coastal zone. This State Coastal Management Plan delivers a vision and direction for coastal management in Queensland. Presented paper discusses this matter in relation to the Capricorn Coast area.
- Dr Steve Mullins, School of Humanities, Faculty of Arts, Health and Science, CQU, is involved in collection of the historical material about development of Yeppoon region. His presentation remains us about changes which happened to the Capricorn Coast during the last 80 years.
- A/Prof Jurek Piorewicz, the Faculty of Engineering and Physical Systems, CQU, presents a general review of traditional “hard” engineering method of beach protection versus “soft” solution and their potential application to the Capricorn Coast beaches.

The workshop was well attended with representatives of the Livingstone Shire Council, local organisations and private public, total 62 persons. It ended with open discussion to allow expressing public opinions, problems or concerns connected with the management of our Capricorn Coast. The discussion went from a general view to particular problems along the Capricorn Coast beaches. During discussion time Chair of the Livingstone Shire Council, Mr Bill Ludwig, and speakers answered several questions related to the history of the coastal development, current management problems and planning for the future beach protection in the Capricorn Coast area.

Editor  
J. Piorewicz