

## **Hazard Lines are past their use-by date**

### ***“The simplistic hazard lines have outlived their credibility and hence usefulness”.***

“Coastal hazard lines were the tool developed in the 1970s to delineate the areas expected to be adversely affected by coastal processes and therefore became the basis for coastal zone management”.

“Initially these lines were based on a linear projection of historical trends, a simple, robust and readily explained concept. Progressively the methodology for calculating the location of hazard lines became more complex with the addition of storm cut, escarpment slumping and reduced foundation capacity. The addition of future recession due to projected climate change introduced a new (and most complex) dimension.”

“While the combined effects of these required a probabilistic treatment the simplistic approach of direct addition of each element tended to be favoured.”

“..in calculating hazard lines, the simplistic approach has been to assume that full escarpment slumping immediately follows a 1% event that is also coincident with the specific selected date such as 2050. Clearly the likelihood of this coincidence is so remote as to be hardly credible.

“Hence the traditional methodology became one of compounding conservatism

“The only justifiable continued use of conventional “hazard lines” is as a “first pass” for undeveloped coastal areas in order to determine the information required for a more informed assessment.”

### ***Determining coastal vulnerability and management requires a more sophisticated approach that focuses on risk management.***

“Over the last three decades the market values of coastal properties have escalated dramatically, and hence the potential economic and social impacts of hazard lines that cut through existing development resulted in scientific risk being supplanted by political risk, meaning the simplistic hazard lines of the past have outlived their credibility and hence usefulness.”

“Solutions must present more socially and economically useful information that provides the opportunity for governments and the community to modify either, or both, the likelihood or the consequence components of potential risk so as to achieve practical, fundable outcomes.”

“Communities need to be empowered and equipped to make rational risk management decisions to determine their acceptable risk level for different types of developments, different design/economic lives and different management options, rather than being subjected to the overly conservative risk avoidance regime generated by the traditional “hazard line” approach.

In future “effective and credible coastal management should be based on a more sophisticated and defensible scientific platform that is also sensitive to social and economic considerations.”

“The risk matrix approach allows governments and communities to analyse risk, evaluate and rank options in terms of both the social and economic benefits and costs, and determine the level of vulnerability and risk they are prepared to accept and the options they can afford to fund, or the losses they are prepared to accept at each location.”