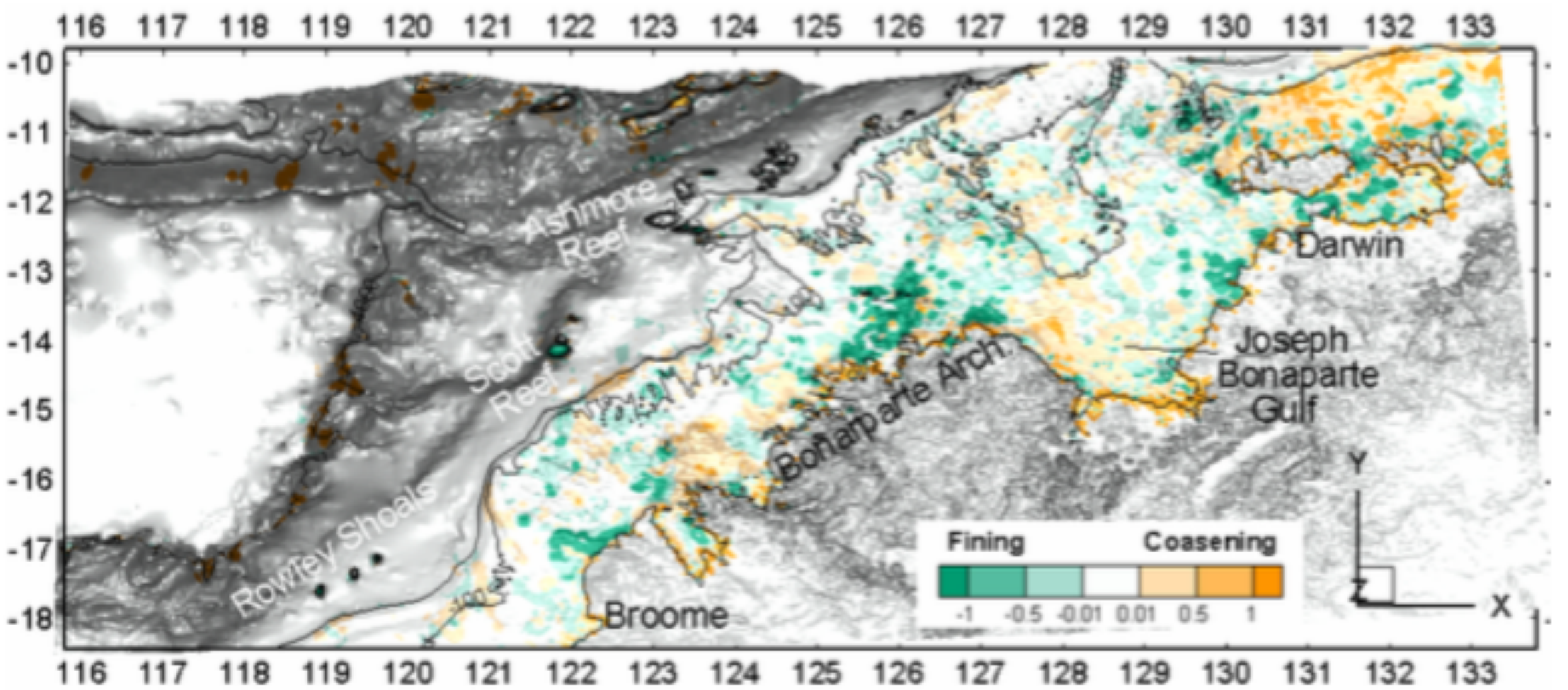
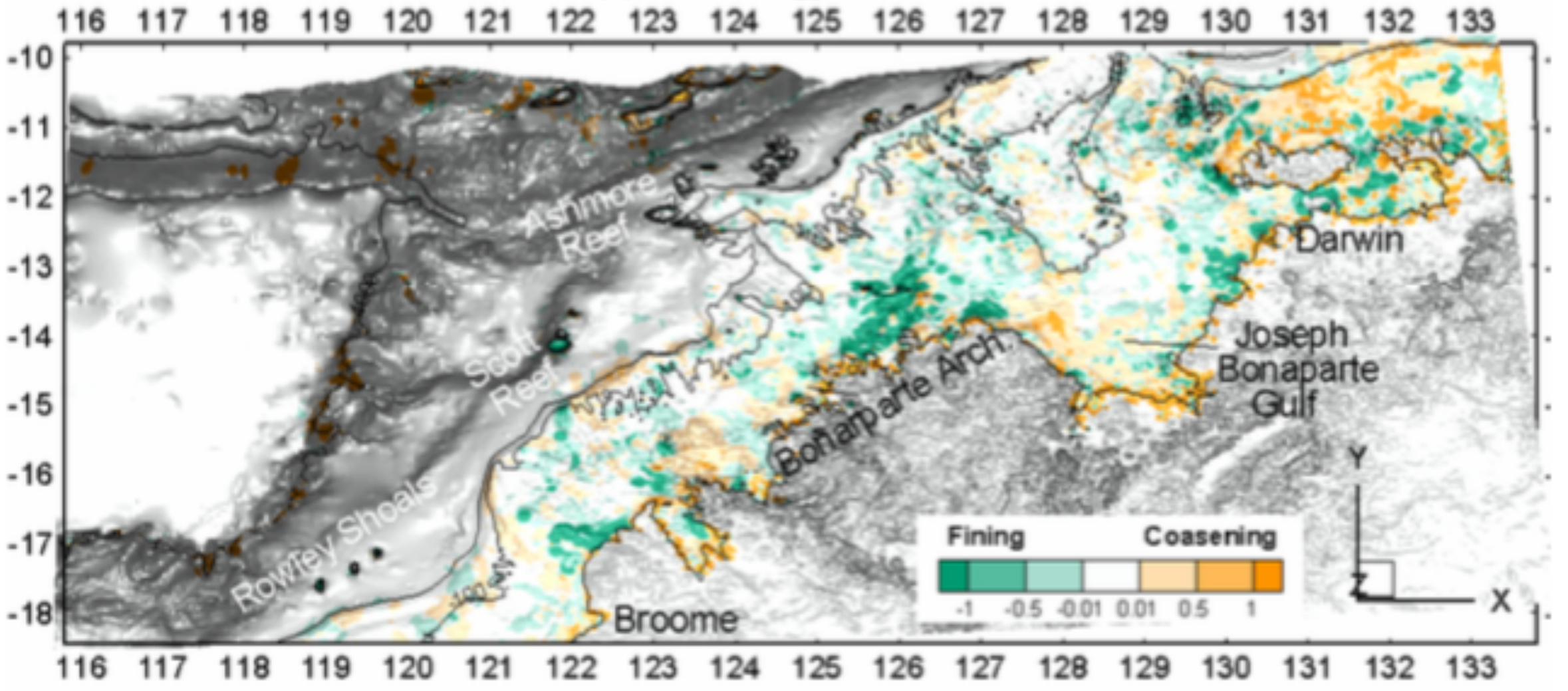
Alternative modelling approaches

School of Geosciences

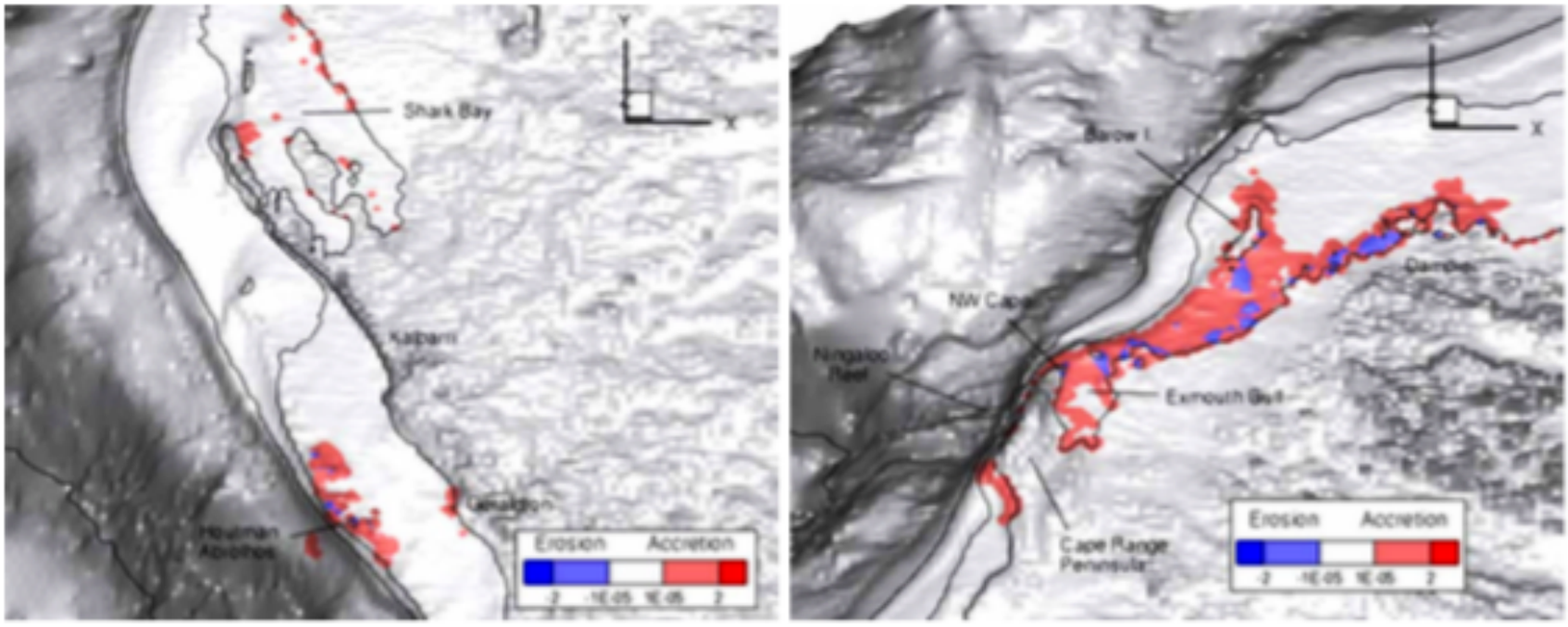
Fuzzy logic



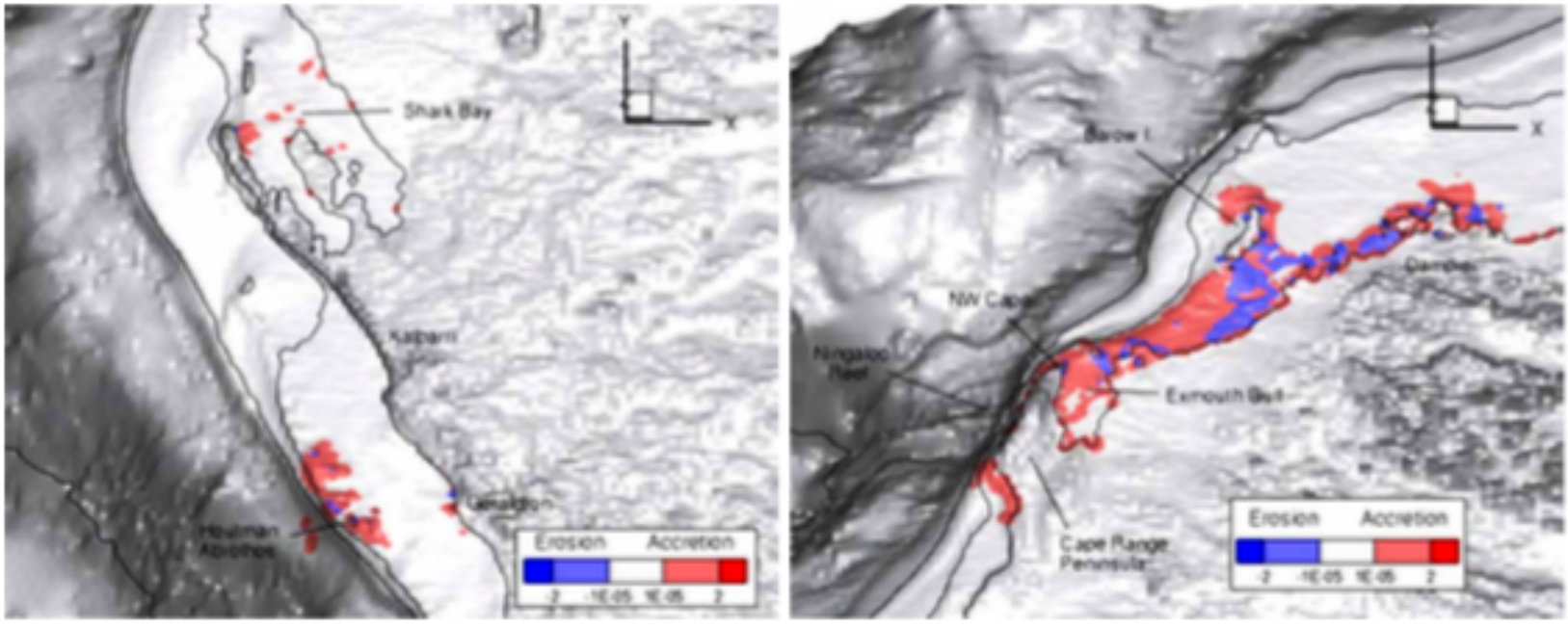
(a) Low energy climate



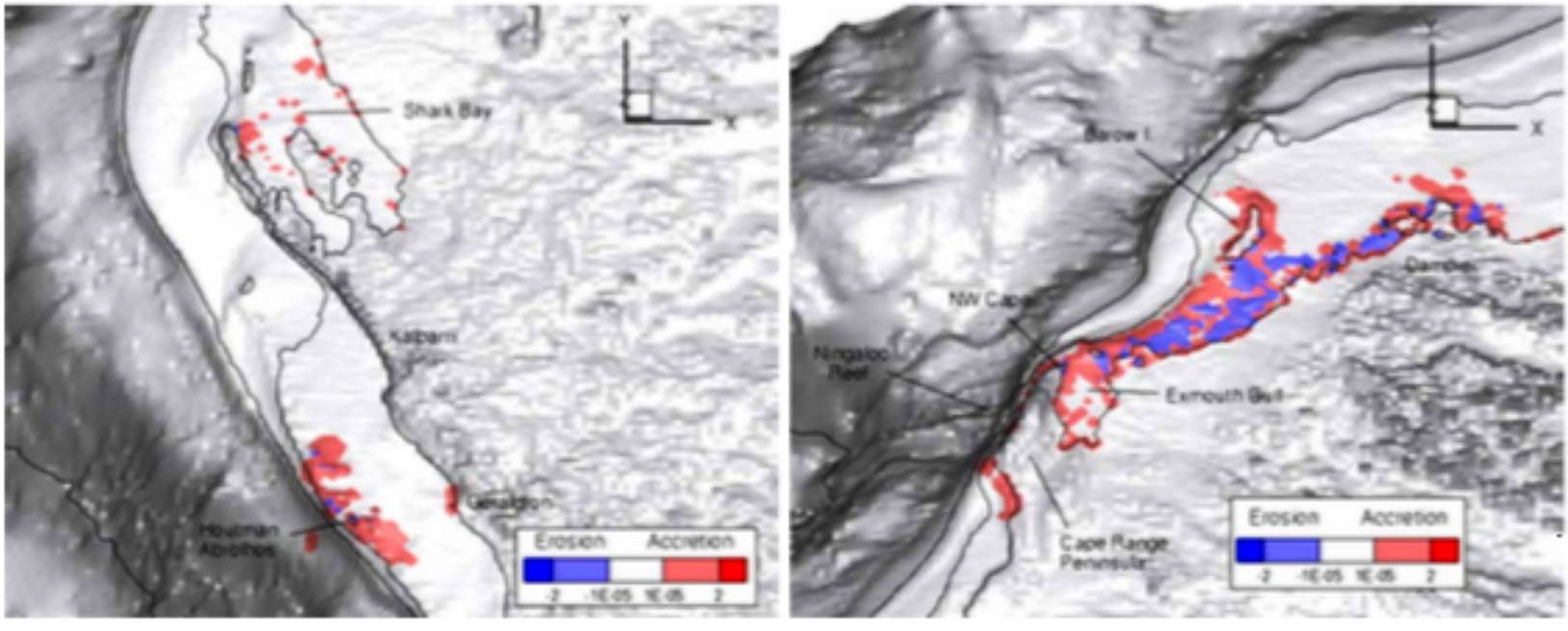
(b) High energy climate



(a) Stationary climate



(b) Low energy climate



(c) High energy climate

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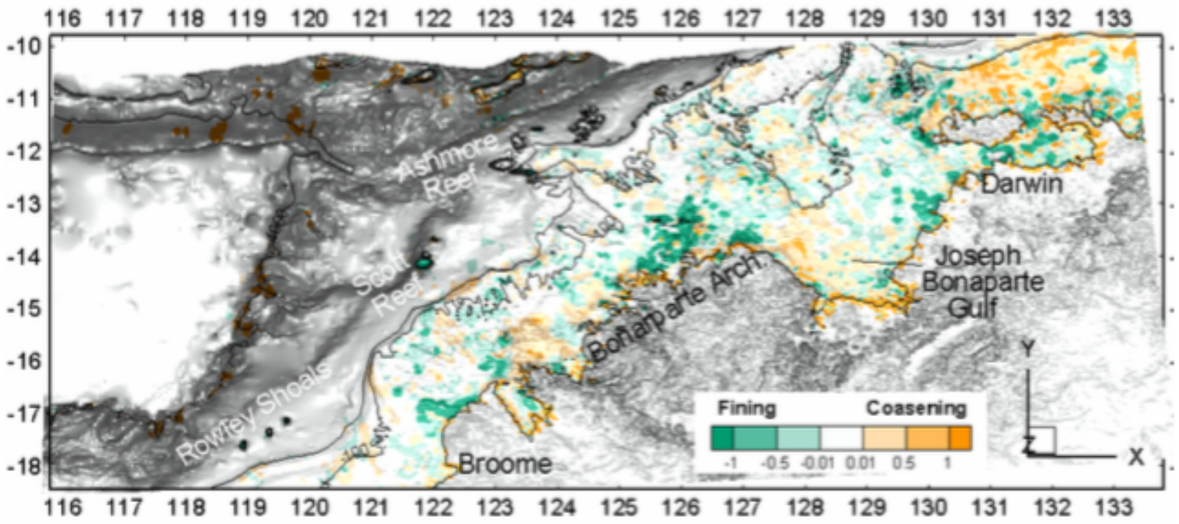
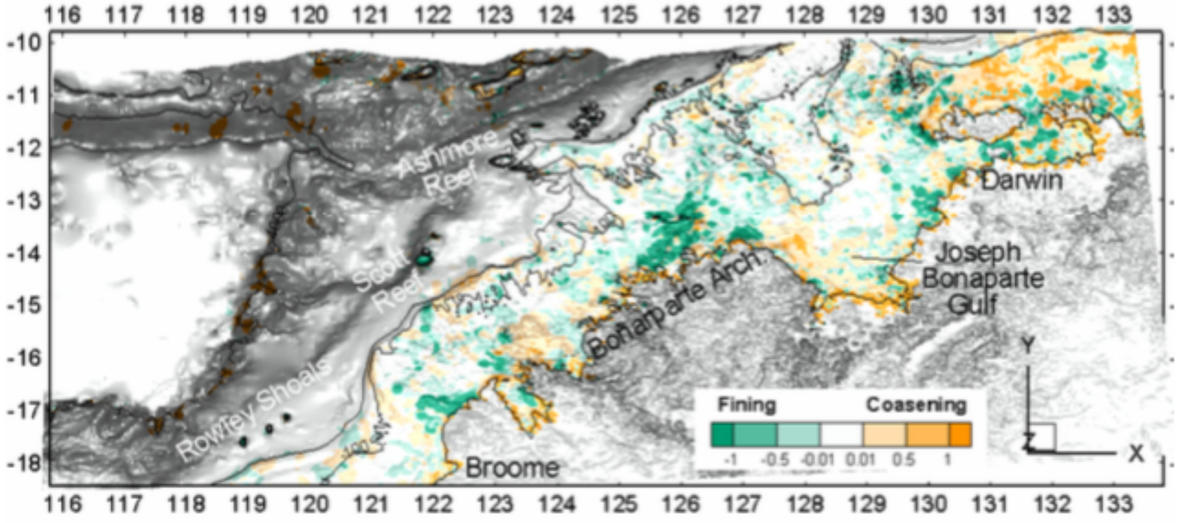
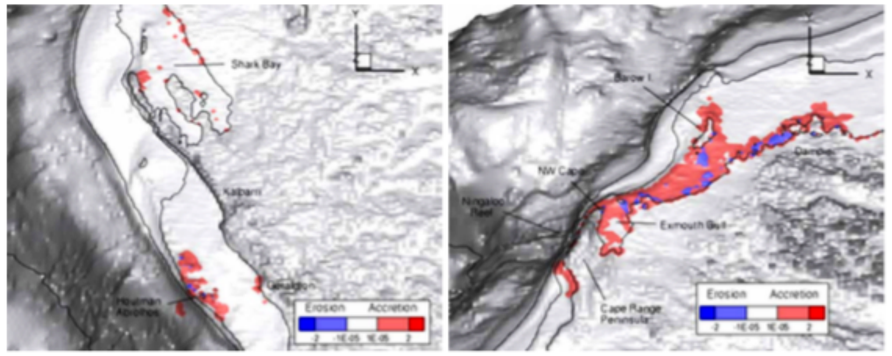
Fuzzy logic



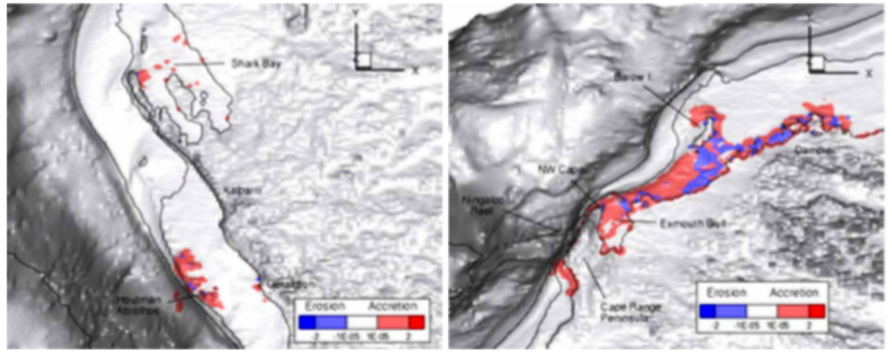
(a) Low energy climate



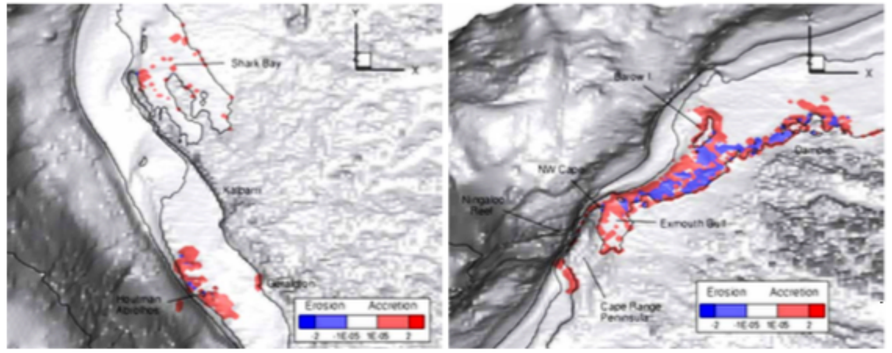
(b) High energy climate



(a) Stationary climate



(b) Low energy climate



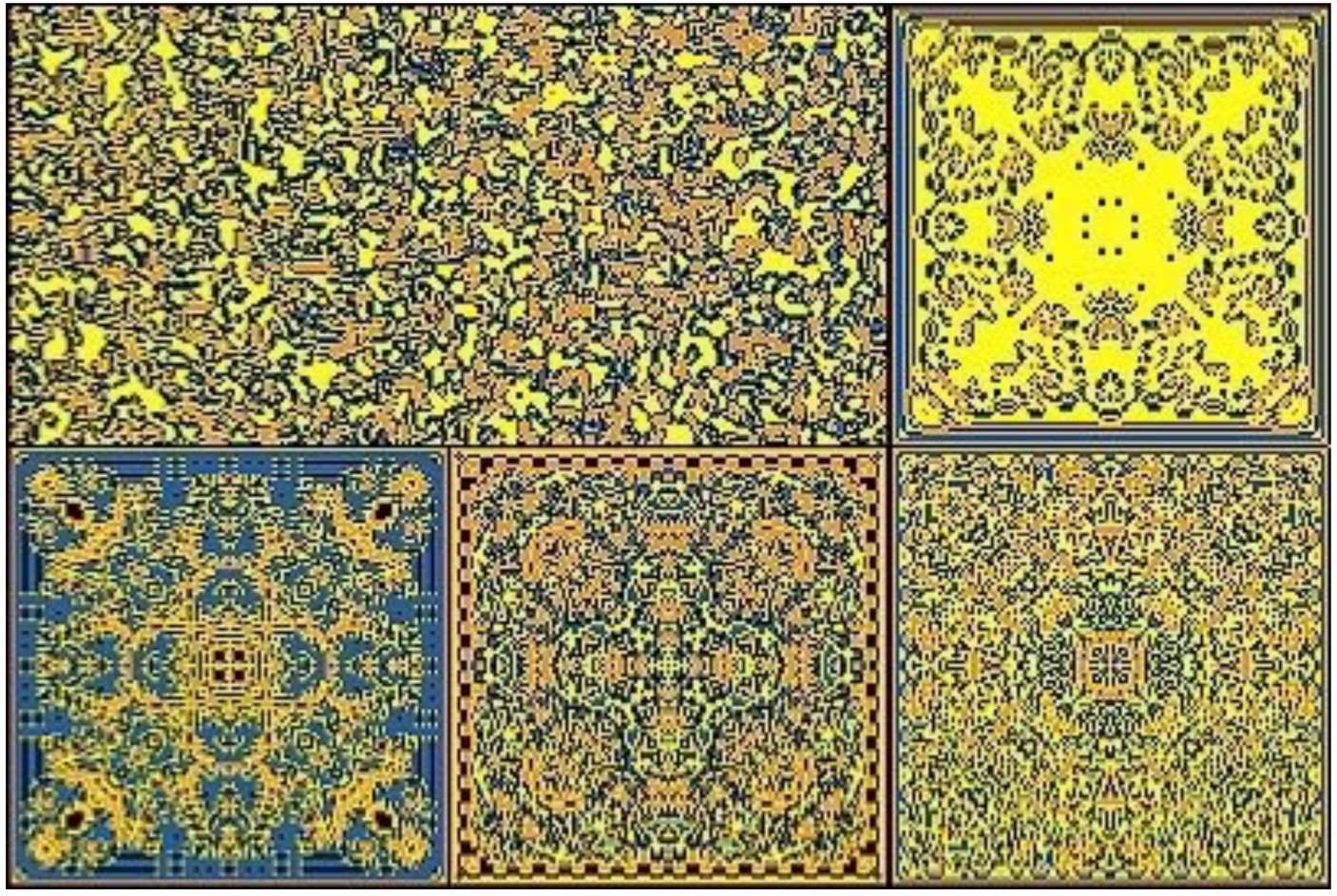
(c) High energy climate

Alternative modelling approaches

cellular automata models

video fragment from Stephen Hawkings The Meaning of Life

Conway was interested in a problem presented in the 1940s by mathematician John von Neumann, who attempted to find a hypothetical machine that could build copies of itself. The Game of Life emerged as Conway's successful attempt to drastically simplify von Neumann's ideas. From a theoretical point of view, it is interesting because it has the power of a universal Turing machine: that is, anything that can be computed algorithmically can be computed within Conway's Game of Life.



game of life

Conus textile exhibits a cellular automaton pattern on its shell.