

Setting the BLM

The following method for determining an efficient Boundary Length Modifier (BLM) is taken from Stewart and Possingham (2005).

1. Keeping all other parameters the same parameters, repeat the Marxan analysis using a series of different values for the BLM, e.g. 0, 0.0001, 0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000, 100000, 1000000.
2. In a spread sheet, record the BLM for each scenario, and the total reserve system boundary length and the average cost of solutions in adjacent columns. If reserve area is more important than cost, or is being used as a surrogate for cost, record the average reserve area of solutions.
3. Plot total reserve boundary length versus total cost/area for all the different BLM values, as shown below.

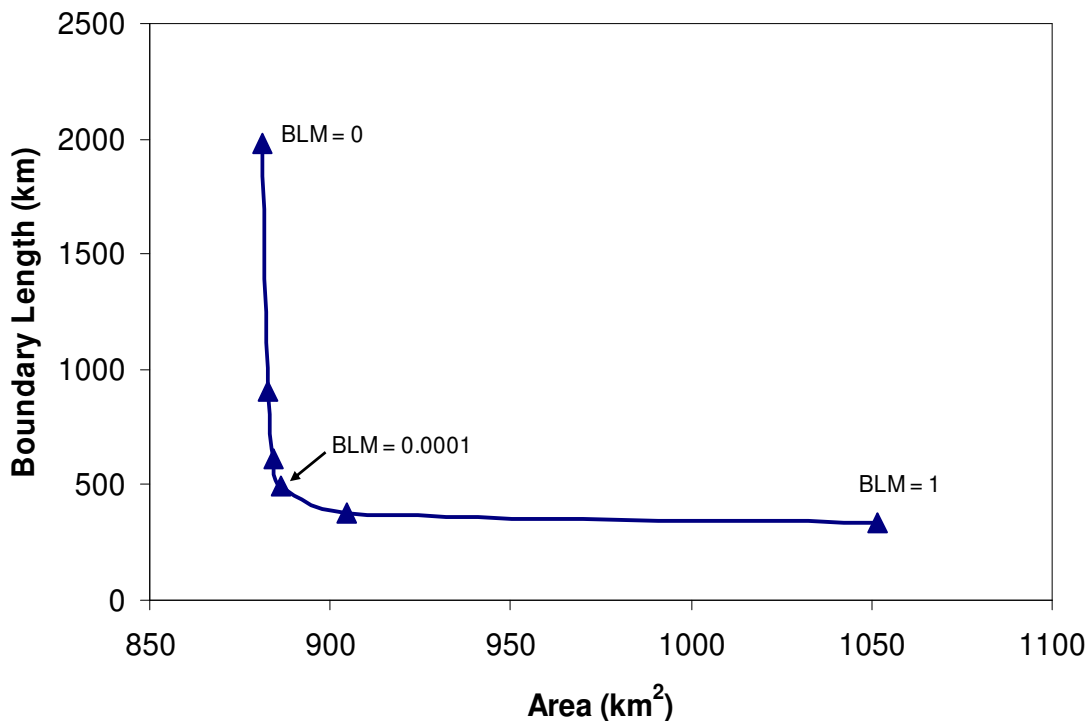


Fig 1 The trade-off between reserve system boundary length and the total area of the reserve system (modified from Stewart and Possingham 2005, figure 1).