

# ASSESS

## A System for SElecting Suitable Sites

ASSESS - a system for selecting suitable sites is an interface based on the GRID and Arcplot modules of Arc/Info. The interface is a menu-based set of functions that allows the user to model the relative suitability of areas for a particular land use. This is achieved by reviewing information relevant to the land use, as characterised by many spatially coincident grids, and then assigning numeric suitability classes to the characteristics. The suitability classes can be varied interactively to investigate the spatial consequences of different interpretations. A scenario is created by using the add and slice functions of GRID to provide a categorised rank sum of suitability.

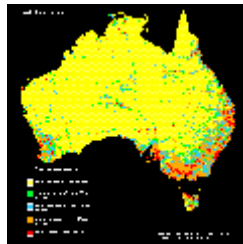
### Determining a Location's Suitability

In determining the suitability of a location for a particular land use, a number of criteria, or *attributes* or *themes* are required. The total suitability of a site is a weighted sum of these themes.

In the example below, the site has to be close to major transport infrastructure, away from major population centres and in a dry area.



This map shows the distance from major roads.

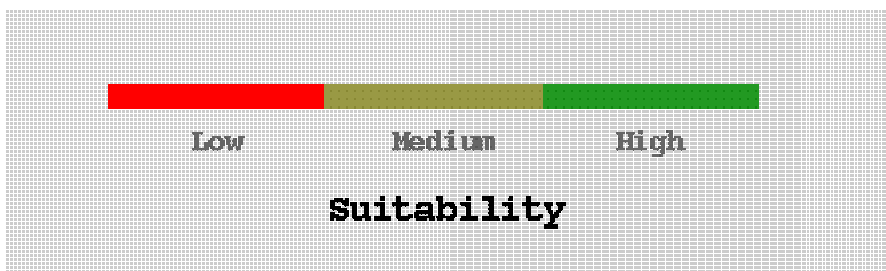


This map shows proximity to major population centres.

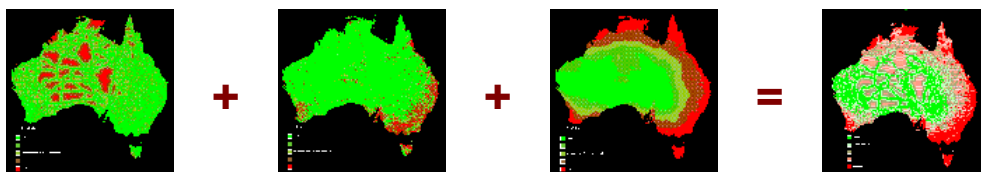


This map shows the ratio of precipitation to evaporation.

Because the units of all these attributes are different, we need to make them dimensionless. We do this by converting them to a suitability scale, and colouring unsuitable regions red, suitable regions green and in-between values as amber.



After converting each layer to a suitability value, we can produce an overall suitability measure for each site:



Attribute weighting can be altered to obtain a different suitability index.