



The process

Part 2



Stage 5. Compiling & evaluating data

Key data requirements:

- boundaries of the planning region (but note the importance of extra-regional views)
- biodiversity features (or “targets”)
- planning units (for most applications)
- data matrix (features X planning units)

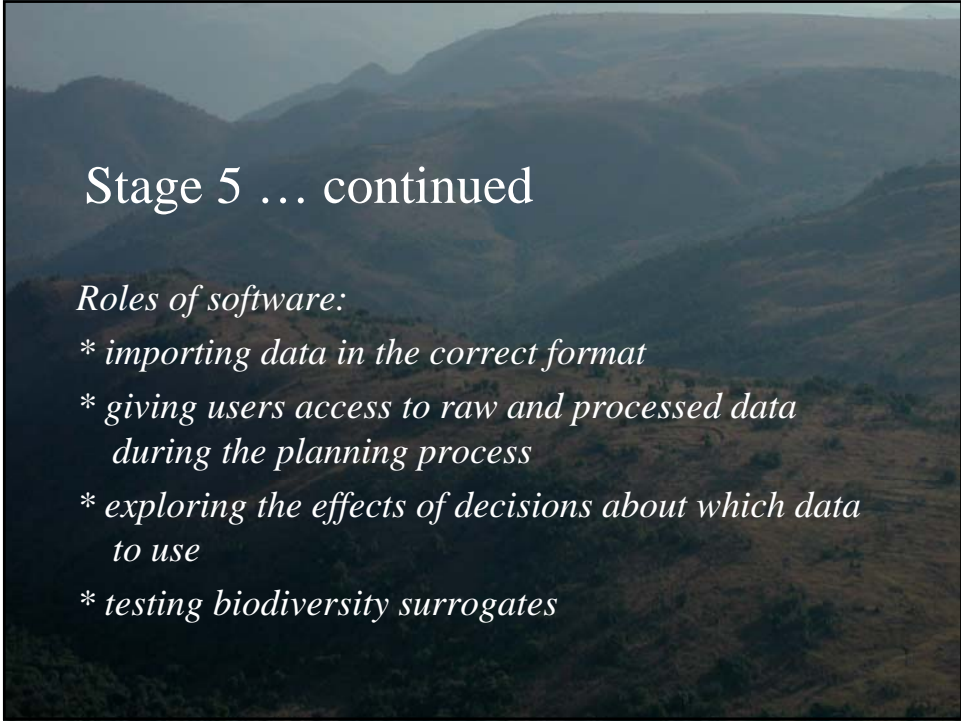
Stage 5 ... continued

Other important types of data (spatially explicit):

- * threats to biodiversity (or “vulnerability”)
- * costs
- * condition (“quality”, “integrity” etc)
- * other data related to implementation (e.g. tenure, importance to local communities)

Stage 5 ... continued

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Stage 5 ... continued

Roles of software:

- * *importing data in the correct format*
- * *giving users access to raw and processed data during the planning process*
- * *exploring the effects of decisions about which data to use*
- * *testing biodiversity surrogates*



Stage 6. Setting conservation targets

Roles of targets:

- * *interpretations of goals through the filter of available data*
- * *limitations*
- * *need for periodic review*



Stage 6 ... continued

Targets for biodiversity pattern

- Land types, species records, species models

Targets for biodiversity process

- Population dynamics and species persistence
- Species interactions (e.g. pollination, predation)
- Movements of animals (complementary habitats, migration)
- Patch dynamics
- Adjustment to climate change
- Evolutionary processes



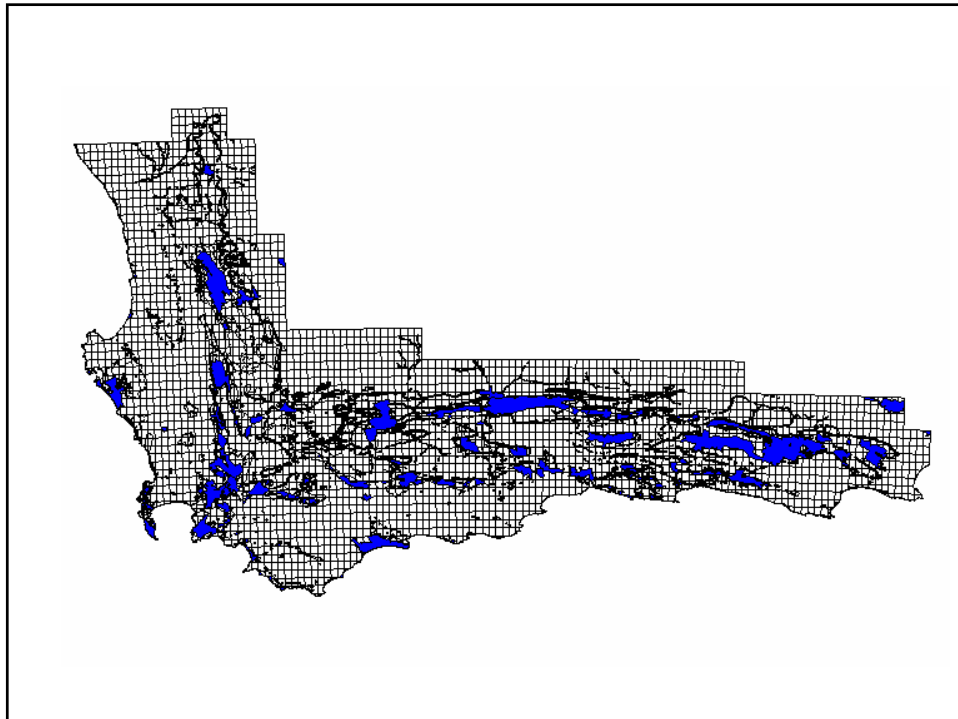
Stage 6 ... continued

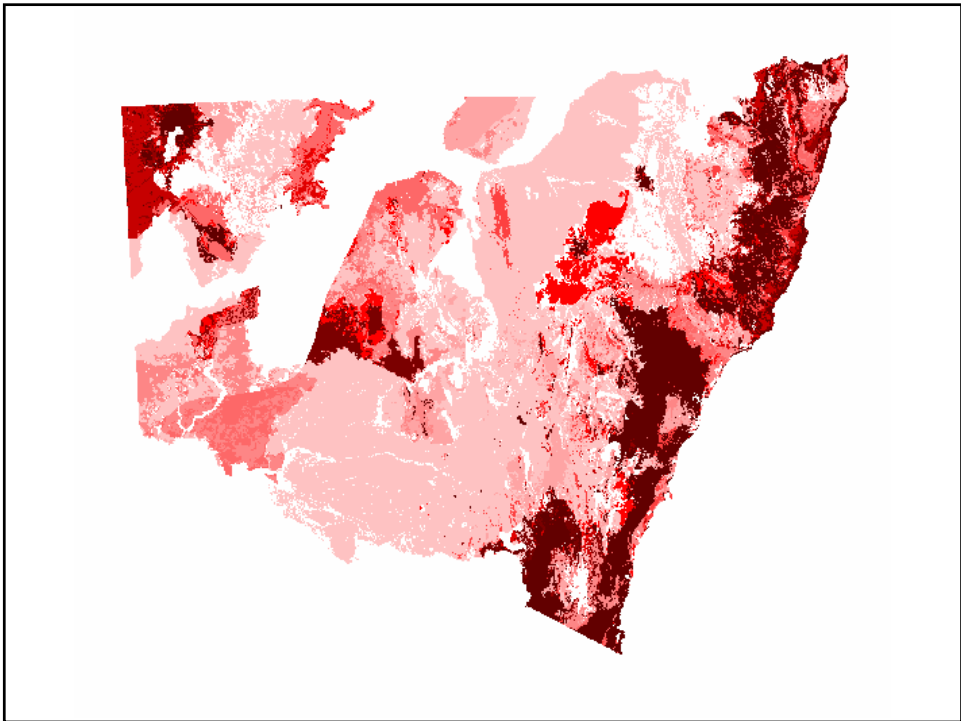
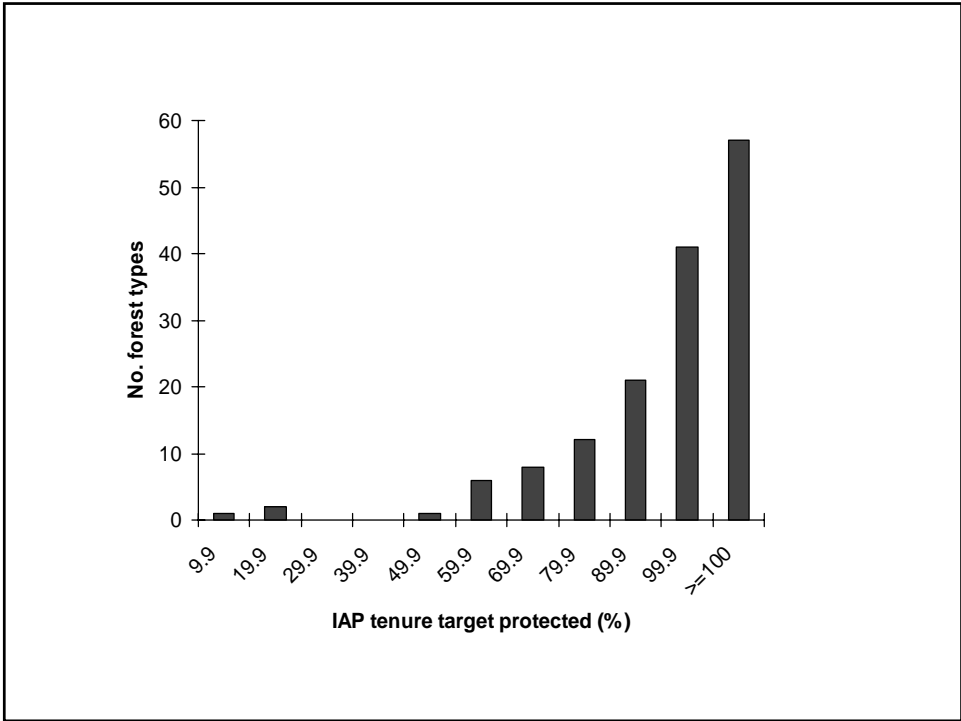
Roles of software:

- * *allow users to import (and perhaps later vary) one or more sets of targets for use in the planning process (more than one set might be required by policy makers)*
- * *testing the effects of targets on the effectiveness of biodiversity surrogates*

Stage 7. Assessing existing conservation areas

- Usually necessary to build on existing conservation areas, not begin from scratch
- Identifies fixed points for consolidation
- Measures the achievement of targets in existing conservation areas (gap analysis)
- Can extend gap analysis by identifying the relative vulnerability of “gap” features
- Can consider forms of protection





	Strict reserves	Off-reserve 1	Off-reserve 2	Off-reserve 3	...
Species 1	1.0	1.0	0.2	0	
Species 2	1.0	0.8	0.2	0	
Species 3	1.0	0.6	0.5	0	
Species 4	1.0	0.7	0.8	0.5	
Species 5	1.0	0	0.4	0.2	
...					
...					
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Stage 7 ... continued

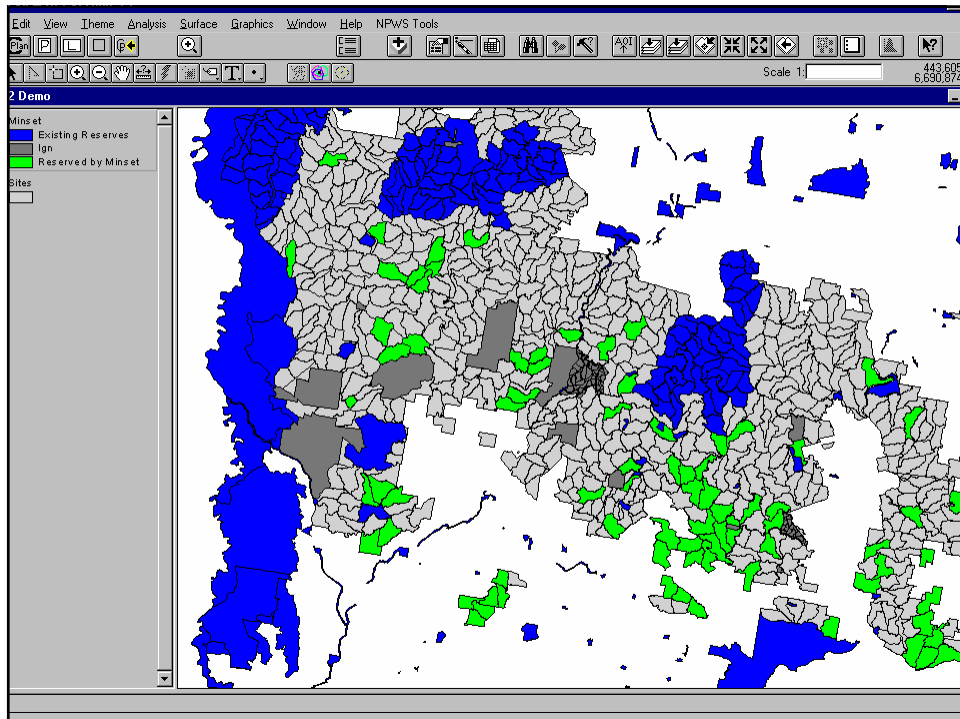
Roles of software:

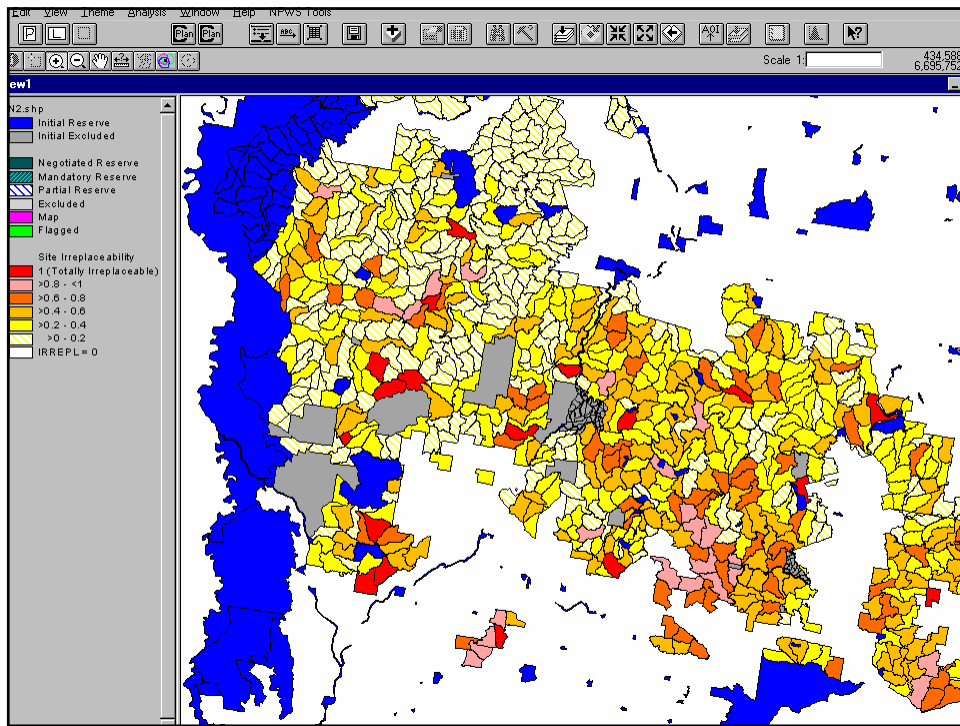
- * *recognise the contributions of existing conservation areas to targets*
- * *map existing conservation areas as a basis for designing an expanded system*

Stage 8. Selecting new conservation areas

Two basic problems:

1. Finding sets of areas that achieve targets
 2. Deciding which targets to achieve if limits on resources for conservation management do not allow all targets to be met
- * making decisions about location & design
 - * applicable to strict reserves, off-reserve management, restoration





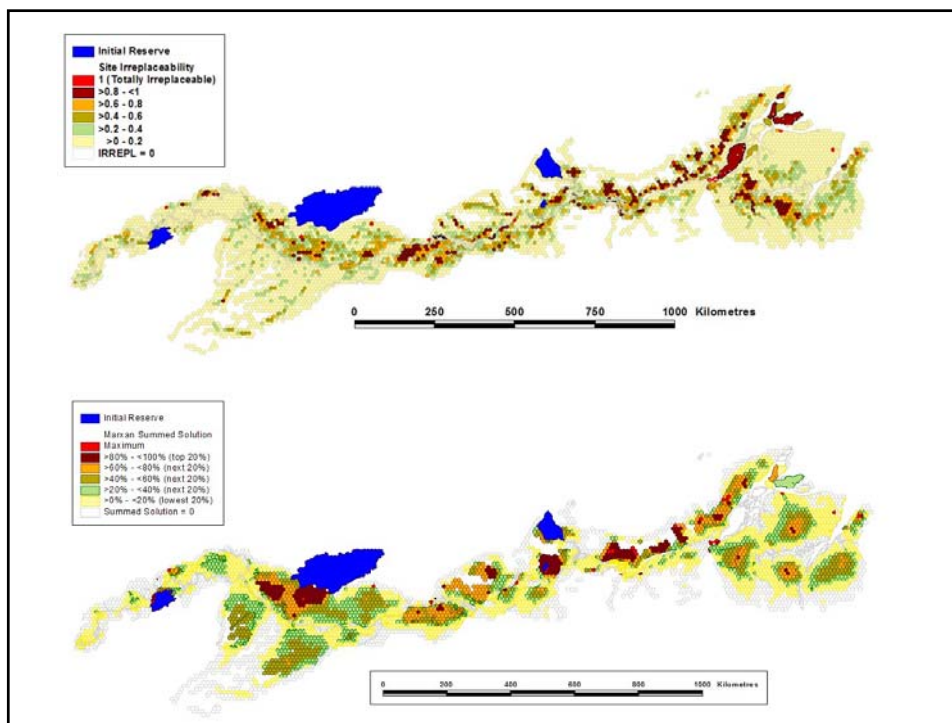
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Stage 8 ... continued

Roles of software:

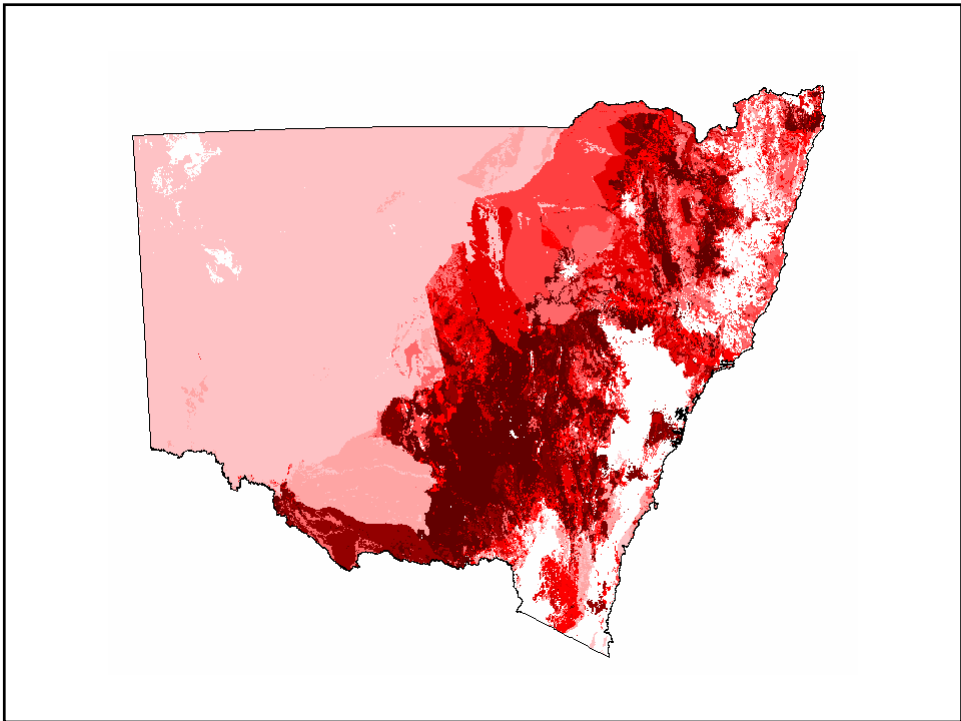
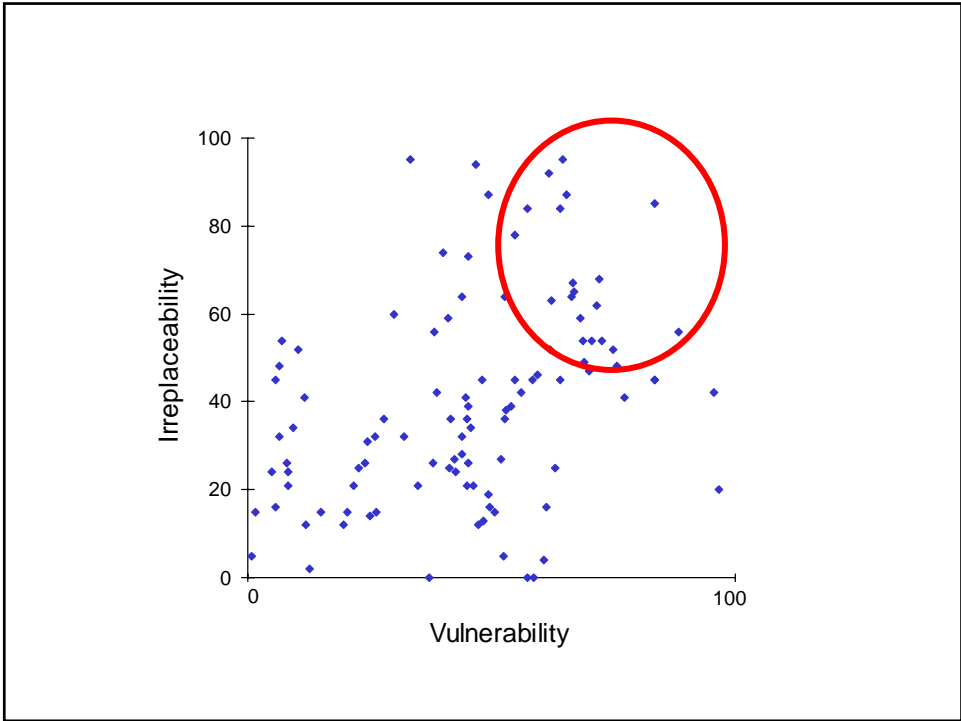
- *producing indicative systems of conservation areas*
- *serving as decision-support for planners (e.g. maps of options, guidance for design, monitoring progress to targets, reporting)*
- *Note the value of interactive decisions*
- *identifying tradeoffs*
- *producing alternative conservation scenarios*



Stage 9. Applying conservation actions

- Turning the plan into a system of conservation areas on the ground
- Preparation should have begun at the start of the process (stakeholders, anticipating constraints and opportunities)
- Issues include: refining boundaries, forms of protection (appropriate and/or feasible), scheduling, managing day-to-day changes to the plan

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...					
...					
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Stage 9 ... continued

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Stage 9 ... continued


Roles of software:

- *costing the plan*
- *estimating time to completion (policy relevance)*
- *guiding decisions about scheduling*
- *guiding decisions about forms of protection*
- *managing day-to-day issues (development applications, unexpected losses, boundary changes, unforeseen opportunities)*



Stage 10. Maintaining and monitoring conservation areas

- Managing established conservation areas to ensure that biodiversity and other values are maintained
- Clear management objectives required
- Management deals with internal pressures (e.g. visitation) and external pressures (e.g. isolation by vegetation loss, invasion by weeds, hydrological impacts)
- Costs and liabilities faced in this stage are at least partly the results of decisions made earlier in the process
- Monitoring of selected indicators necessary to ensure that objectives are being achieved



Stage 10 ... continued

Roles of software:

- *Place individual conservation areas in the context of the planning region, both spatially and in terms of contribution to targets*
- *Guide decisions about internal zoning of activities, recognising regional context*