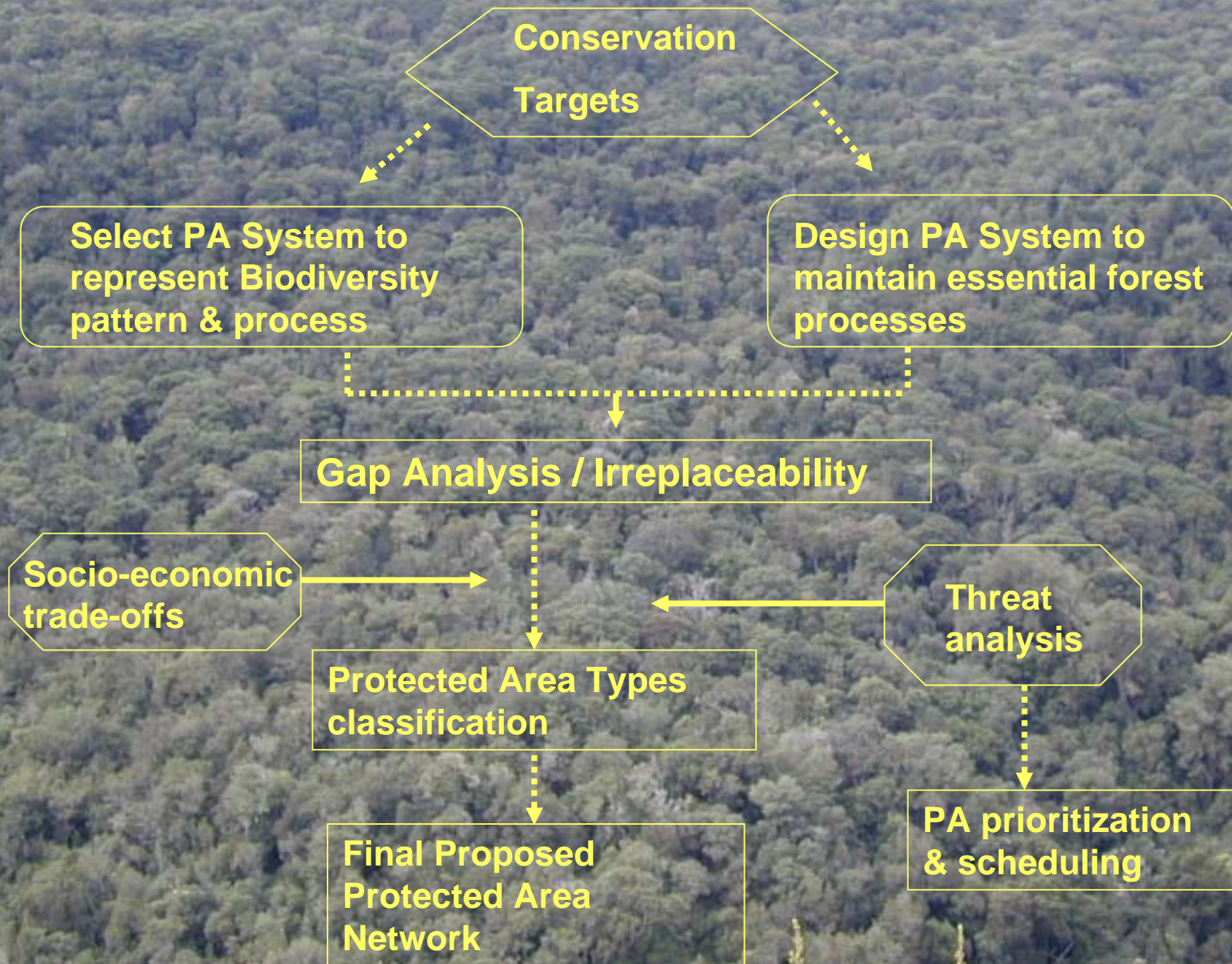# REPORT BACK: PROTECTED AREA SYSTEM PLANNING FOR NATURAL FORESTS
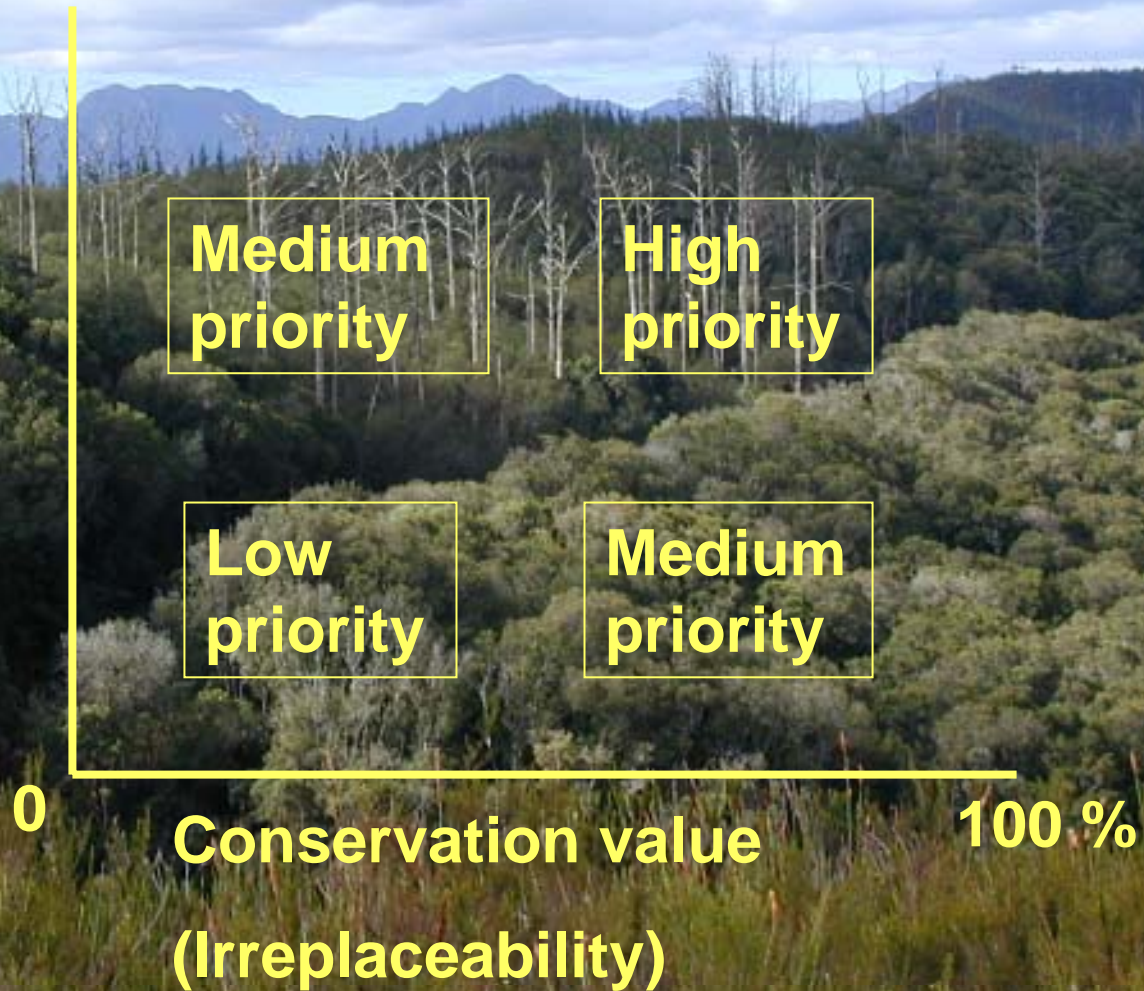
GOAL OF FOREST PROTECTED AREA SYSTEM PLANNING:

DEVELOP A SYSTEM OF PROTECTED AREAS FOR SA FORESTS THAT:

- Is representative of all forest types

- Protects Biodiversity

- Is appropriate & acceptable to stakeholders

- Provides sustainable benefits to communities

Threat

Medium priority

High priority

Low priority

Medium priority

0

Conservation value

(Irreplaceability)

100 %

IDENTIFICATION OF KEY BIODIVERSITY THREATS

- **Subsistence harvesting of forest produce**
- **Commercial harvesting of forest produce**
- **Cattle grazing & deforestation for subsistence agriculture**
- **Commercial agriculture & plantations**
- **Settlement & urban expansion**
- **Tourism development**
- **Fires**
- **Invasive aliens**
- **Mining**
- **Disruption of natural hydrological processes**
- **Land invasions**

SIGNIFICANCE OF THREATS I.T.O. FORESTS AFFECTED

	UNSUSTAINABLE HARVESTING	INFORMAL SETTLEMENT	GRAZING & SUBSIST AGRICULTURE	COMMERCIAL AGRI-CULTURE&FORESTS	DEVELOPMENT	FIRES	INVASIVE ALIENS	LAND CLAIMS	OTHERS (MINING, HUNTING ETC)
NO OF FOREST TYPES AFFEC-TED	18	3	15	8	5	13	12	6	9
% OF FORESTS AFFEC-TED	81	13	68	36	22	59	54	27	40

FOREST BIODIVERSITY THREAT INDICATORS

DRIVERS

- Population pressure (pop density, poverty level & proximity to forest)
- Urban expansion
- Surrounding land use

TRIGGERS

- Land tenure
- Land claims
- Accessibility (topography & access roads)
- Occurrence of valued forest products

MODIFIERS

- Land tenure
- Management capacity
- Break down in traditional authority
- Availability of alternative resources

FOREST BIODIVERSITY THREAT ANALYSIS CONCEPTUAL MODEL

DRIVERS

TRIGGERS

| Poverty level | Population density | Forest patch size | Topo-graphy | Road access | Road penetration |

Population pressure index

Resource access index

MODIFIERS

Management capacity

THREAT ACTIVITIES

Subsistence use pressure index

(Threat of over-harvesting)

THREAT PREDICTION   SCORING RULES EXAMPLE

THREAT ACTIV ITY: SUBSISTENCE HARVESTING OF FOREST PRODUCTS (FUELWOOD)

DRIVERS	CRITERIA	HIGH POTENTIAL THREAT
• Poverty level High • Population density high • Proximity to forest	<R600 per month per household ➢100 people per square km (rural) > 5km from forest	
TRIGGERS • Topography flat • Good access • Deep road penetration	PROBABILITY Base probability of 50% of over-harvesting of forest produce	HIGH PROBABILITY
MODIFIERS • Low level of alternative resources (electricity & woodlots) • Low management capacity	PROBABILITY Add 10% for absence of electricity Add 20% for absence of woodlots Add 20% for low management capacity	FINAL THREAT PREDICTION 100% probability of over-harvesting

AVAILABILITY OF DATA

Population density (census data)	Numeric	Available	Disturbance (pop pressure as surrogate)	Qualitative	Unavailable
Poverty level (census data)	Numeric	Available	Medicinal plant availability	Qualitative	Not required
Tourism demand	Qualitative & Numeric	Partly Available	Coastal forests near urban areas (Nat Land Cover)	Maps	Available
Urban expansion	Qualitative	Partly available	Accessibility - topography	Maps/ model	Available
Surrounding land use(Nat Land Cover)	Maps	Not required	Accessibility – road access	Maps & qualitative	Available
Infestation of alien invader plants	Qualitative	Partly available	Break down in traditional authority	Qualitative	Not available (exp opinion
Alternative land use potential (land capability maps)	Maps	Available	Presence of woodlots	Maps & qualitative	Partly available
Mining potential (Geological data)	Maps & qualitative	Available	Regional fire hazard	Qualitative	Partly available
Land tenure	Qualitative	Not required	Electrification (non-fuel wood source)	Qualitative & Numeric	Not required
Land claims	Qualitative	Available			