

## PROTECTED AREAS LEARNING AND RESEARCH COLLABORATION

### OPEN STANDARDS SHORT COURSE

#### EXERCISE #3: TARGET VIABILITY

**SUMMARY:** In your groups, you will develop a short list of **attributes**, then work through the viability assessment steps to develop **indicators** and indicator **ratings**.

##### STEP 1:

For a Target:

- Identify the most important things that make it healthy (Attributes)
- Use the Viability Assessment Tool/s categories (Size, Condition etc) to prompt discussion
- Arrange similar ideas together and shortlist 3-5 really important Key Attributes (looking for spread across the Size, Condition, Landscape Context, Culture categories)

##### STEP 2

- For each attribute identify one indicator that will give the best measure of the attribute

##### STEP 3

- Describe what would constitute “good” status

##### STEP 4

- Define the current status and desired future status for your target

##### STEP 4

- Develop a rating scale for each indicator using the Poor, Fair, Good, Very Good categories

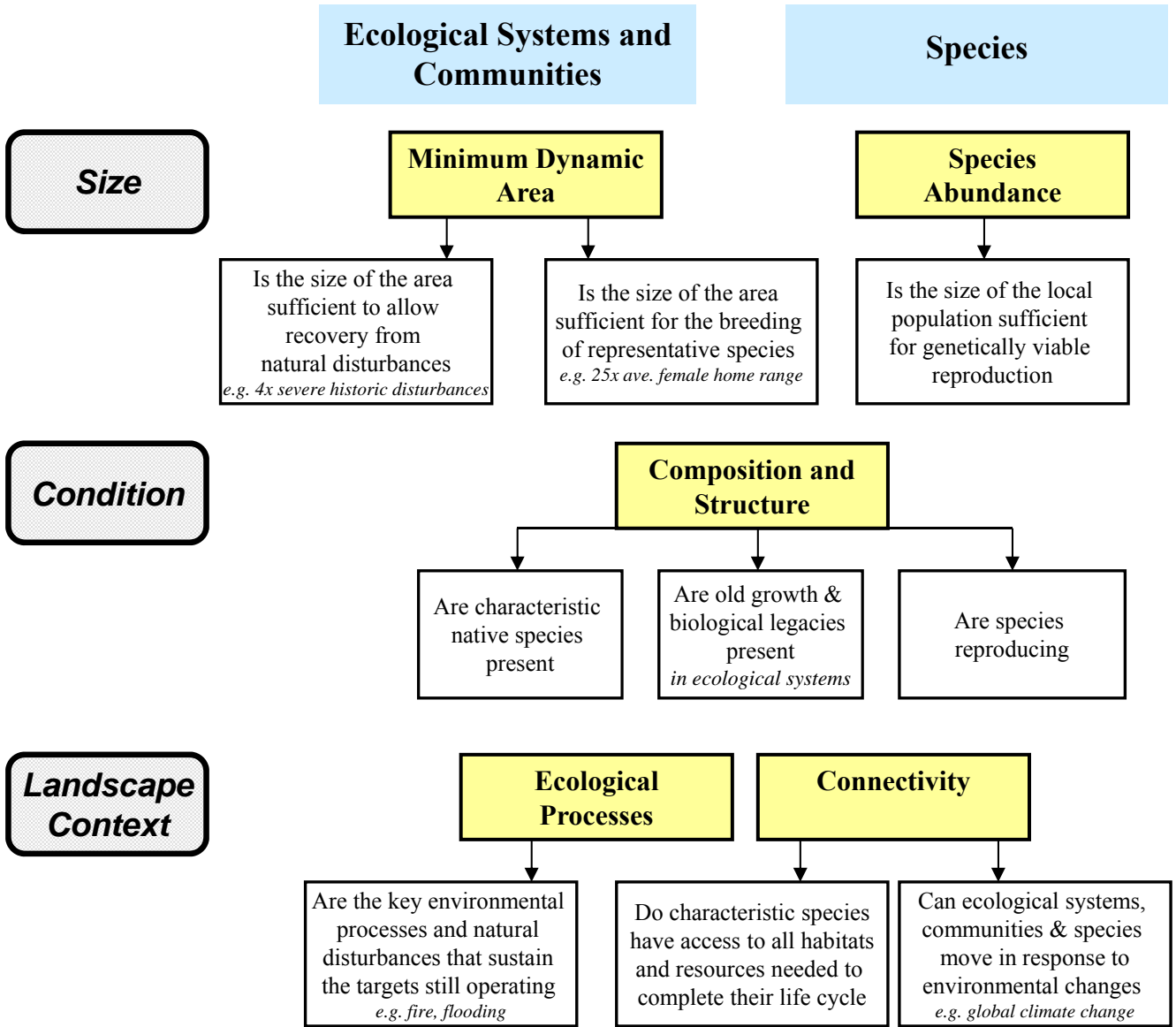
Pick and complete one target, then do the rest. For each Target draw a Table (see next)

Use the information from your discussion to fill in the table. Use the Ratings at the bottom of the Viability Assessment Tool to score the current status, and to ensure a consistent approach

Category	Attribute	Indicator	Rank			
			Poor	Fair	Good	V. Good
Size						
Condition						
Context						
Culture						

# Viability Assessment Tool

## *Representative Key Ecological Attributes*



### Rating Key Ecological Factors

**Poor**  
*Imminent Loss*

*Allowing the factor to remain in this condition for an extended period will make restoration or preventing extirpation practically impossible*

**Fair**  
*Vulnerable*

*The factor lies outside of its range of acceptable variation & requires human intervention. If unchecked, the target will be vulnerable to serious degradation*

**Good**  
*Minimum Integrity*

*The factor is functioning within its range of acceptable variation; it may require some human intervention*

**Very Good**  
*Optimal Integrity*

*The factor is functioning at an ecologically desirable status, and requires little human intervention*

Note: The ecological factors cited are common to many targets, but are not inclusive. Not all factors will apply to a given target.

## Australian Examples: Key Attributes

### Terrestrial Systems

	Key Attribute	Indicator	Poor	Fair	Good	Very Good
Landscape Context	<b>Fire regime</b>	Fire frequency and area burned		Not enough/ too much fire on too little/ too much area	Fire regime may be altered, but is maintaining reasonably "Good" condition and structure	Close to historical fire return interval and area burned
	<b>General vegetation structure and composition</b>	% of vegetation with minimum integrity score (eg. using state-based vegetation condition assessment tool)			>67% of native vegetation has minimum integrity (eg. Habitat Hectare Score >50)	
Condition	<b>General vegetation structure and composition (alternative rating system incorporating system "resilience")</b>	% of vegetation in various condition "states" (see VAST framework)	Most vegetation in "modified" condition, with regenerative capacity limited	Some to most vegetation in "modified" condition, but with generally high regenerative capacity	Most vegetation in "residual" vegetation class (structure, composition and regenerative capacity intact)	
	<b>Presence of old growth legacies</b>	% of total habitat area with old growth legacies such as large, mature, hollow-bearing trees  (or expected age-class ratios)	Old growth legacies largely absent	Old growth legacies absent across some of the total area	Old growth legacies present across most of the total area	Close to predicted age class ratios
	<b>Presence &amp; abundance of characteristic animal species</b>	Suite of species, including common, sensitive & rare (nested targets)	Almost exclusively common species	A number of sensitive species are declining	Most sensitive species &/or nested targets in healthy numbers	Rare species and nested targets in healthy numbers

## Australian Examples: Key Attributes

	<b>Presence &amp; abundance of "indicator" or focal species (eg. declining bird species or guilds)</b>		Indicator species seriously declining or absent	Indicator species likely to be declining slowly	Indicator species generally stable or increasing in abundance	
<b>Size</b>	<b>Minimum dynamic area</b>	Amount of suitable habitat required to maintain viable population/s (or number of viable populations) of focal species	Habitat area and spatial configuration far below that required to maintain focal species	Habitat area and spatial configuration below that required to maintain focal species	Large enough habitat for focal species; Most meta-populations likely to be viable	
	<b>Total area of habitat remaining</b>	% of pre-European extent	Serious habitat depletion  <10%?	Substantial habitat depletion  10-60%?	Minor habitat depletion  60-80%?	Close to pre-European extent; minimal loss  >80%?

Note: Select no more than five attributes for a target.

## Australian Examples: Key Attributes

### *Riparian Systems*

	KEA	Indicator	Poor	Fair	Good	Very Good
<b>Landscape Context</b>	<b>Hydrologic regime</b> (Magnitude, timing, duration, frequency of flows)	Examples:  - Average annual flow volumes  - Number of minor and major flood events per decade		Average annual flow volumes generally outside natural range of variation	Average annual flow volumes generally within natural range of variation	
	<b>Presence of buffering native vegetation in surrounding catchment/ area</b>	% native vegetation cover within 5km buffer zone	Most of surrounding buffer area cleared	Some of surrounding buffer area cleared	Most of surrounding buffer area vegetated	
<b>Condition</b>	<b>Bank stability &amp; integrity</b>	% of stream with expected abundance & diversity of important habitat components	Most reaches have highly modified bank characteristics	Some reaches have highly modified bank characteristics	Bank condition generally intact	
	<b>Instream habitat diversity</b>	% of stream with expected abundance & diversity of important habitat components (snags, biotopes - pools, riffles, runs, instream vegetation)		Some reaches have lower than expected instream habitat abundance and diversity	Most reaches have minimum expected instream habitat abundance and diversity	
	<b>Aquatic life</b>	Aquatic life (native fish and macroinvertebrate species richness)	Key indicator species/groups poorly represented across monitoring sites	Key indicator species/groups moderately well represented across monitoring sites	Key indicator species/groups well represented across monitoring sites	
<b>Size</b>	<b>Extent and condition of riparian vegetation</b>		Riparian vegetation absent or in poor condition across most of waterway	Riparian vegetation absent or in poor condition across some of waterway	Riparian vegetation present and in good condition across most of waterway	

## Australian Examples: Key Attributes

### *Freshwater Wetlands*

	KEA	Indicator	Poor	Fair	Good	Very Good
<b>Landscape Context</b>	<b>Hydrologic regime</b>	Ratio of "good" years to "poor" years (good years are those in which most wetlands are substantially inundated in Spring)		Ratio of "good" years to "poor" years is inadequate to maintain nested fauna populations	Ratio of "good" years to "poor" years is adequate to maintain nested fauna populations	
	<b>Structure and Composition</b>	Index of Wetland Condition	Few wetlands in good condition	Some wetlands in good condition	Most wetlands in good condition	
<b>Condition</b>	<b>Presence &amp; abundance of sensitive "decliner-type" aquatic species</b>	Presence of sensitive aquatic species	Almost exclusively common species		Most sensitive species &/or nested targets in healthy numbers	Rare species and nested targets in healthy numbers
	<b>Key water quality attribute</b>	Select one limiting factor – e.g. sediment, temperature, toxins, nutrients			Attribute is within a range that does not seriously impair health of most nested targets	
<b>Size</b>	<b>Minimum viable populations of selected indicator species</b>	Numbers of selected species			Population numbers appear to be sufficient	
	<b>Pre-European extent of major wetland types</b>		Most wetland types poorly represented	Some wetland types poorly represented	All wetland types at least moderately well represented	All wetland types well represented