

# Protecting Streams and Slopes with Plants

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# Vegetation assists in the stabilization of creek banks and slopes

## 1. Above ground parts of plants

- grasses, ground covers, ferns,  
protecting and helping slow water flowing over the ground

- Trees and shrubs

helps with splash erosion by slowing the speed of the droplets fall and covering the soil with leaves sticks ground covers





## 2. Below ground parts of plants

Roots and rhizomes

Hold the soil together against

- splash erosion
- Water flowing over the soil
- Through the soil
- Water under the soil





Swimming













































## Mid to Lower Catchment

Flood effects are increased by;

- Increase runoff due to clearing
- Increase sediment load due to poor land management
- Weed impaction affecting native species regrowth
- Low native seed inputs to help regenerate





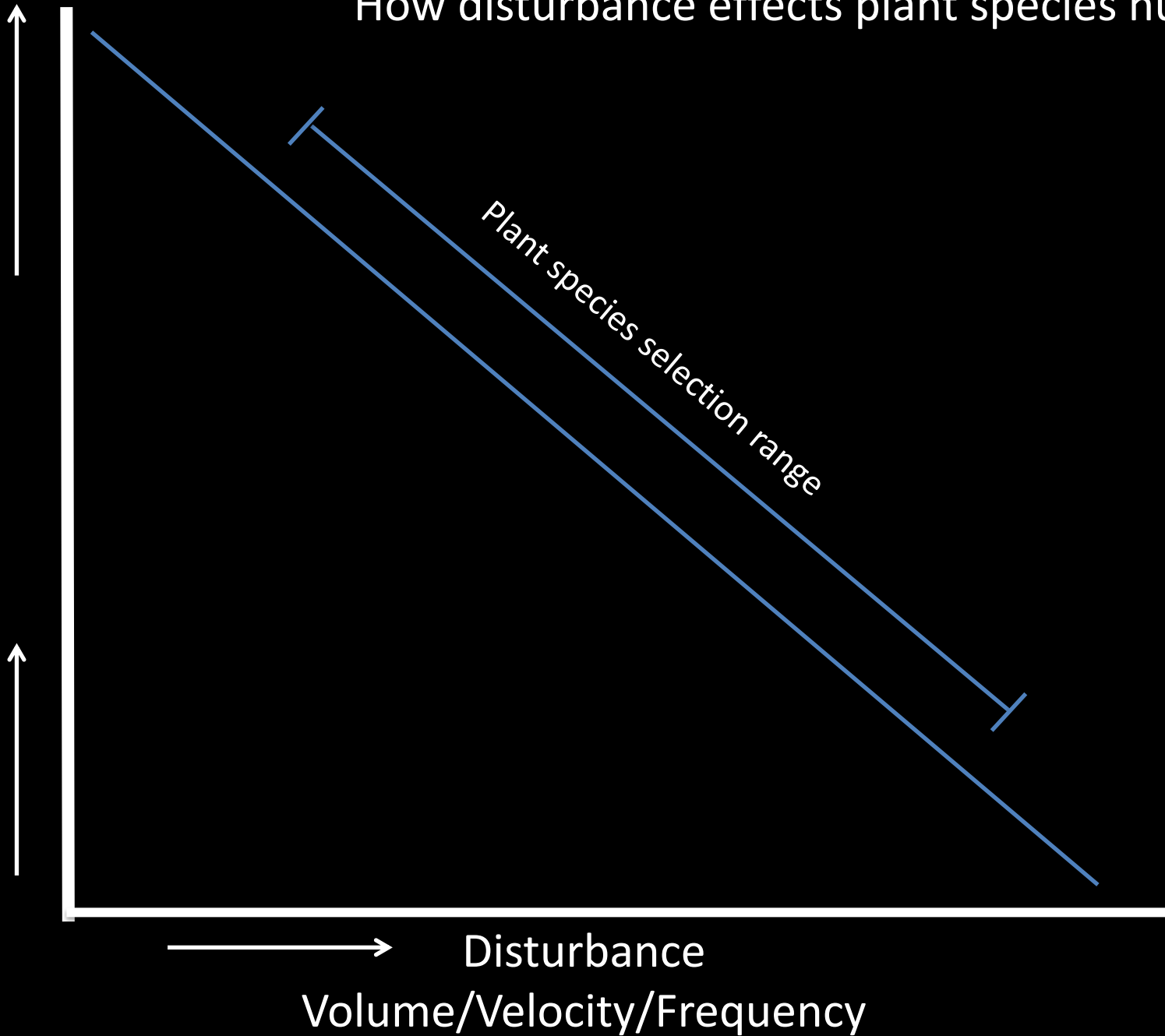
**Do nothing**



# The ultimate Engineering solution



# How disturbance effects plant species numbers













# Mid Catchment Creek Banks

Up stream of Mullumbimby, Corndale, Bangalow, Eltham, The Channon , Goolmang

Streams with developed banks and sediment deposition

Not including well forested, steeper, rocky upper catchment streams

**stream banks with highest velocity flows , possible frosts**

Scientific Name	Common Name	growth rate	
<i>Elaeocarpus grandis</i>	Blue Quandong	f	frost sensitive
<i>Toona ciliata</i>	Red Cedar	f	
<i>Acmena smithii var. minor</i>	Small-leaved Lilly Pilly	m	
<i>Callistemon viminalis</i>	Weeping Bottlebrush	m	
<i>Ficus coronata</i>	Creek Sandpaper Fig	m	frost sensitive
<i>Glochidion ferdinandi</i>	Cheese Tree	m	
<i>Lomandra hystrix</i>	Forest Mat-rush	m	
<i>Syzygium australe</i>	Brush Cherry	m	
<i>Tristaniaopsis laurina</i>	Water Gum	m	
<i>Syzygium francisii</i>	Giant Water Gum	S	
<i>Ficus species</i>	large figs	S	frost sensitive

## Lower Catchment creek banks

### Species for Planting in High Flow Stream Banks

below Corndale , Eltham, Goolmangar, Lismore,

Scientific Name	Common Name	rate of growth	comments
<b>ground covers</b>			
<i>Carex appressa</i>	tall sedge	f	fibrous roots
<i>Pennisetum alopecuroides</i>	Swamp foxtail	f	
<i>Lomandra hystrix</i>	Forest Mat-rush	m	fibrous roots
<b>Trees</b>			
<i>Casuarina cunninghamiana</i>	River Oak	f	
<i>Commersonia bartramia</i>	Brown Kurrajong	f	
<i>Eucalyptus tereticornis</i>	Forest Red Gum	f	and othe euc species
<i>Grevillea robusta</i>	Silky Oak	f	
<i>Melaleuca alternifolia</i>	Tea-tree	f	
<i>Melaleuca bracteata</i>	Black ti-tree	f	
<i>Melaleuca styphelioides</i>	Prickly-leaf Tea-tree	f	
<i>Toona ciliata</i>	Red Cedar	f	
<i>Acmena smithii var. minor</i>	Small-leaved Lilly Pilly	m	fibrous roots
<i>Callistemon salignus</i>	Pink Bottlebrush	m	
<i>Callistemon viminalis</i>	Weeping Bottlebrush	m	
<i>Elaeocarpus obovatus</i>	Hard Quandong	m	
<i>Ficus coronata</i>	Creek Sandpaper Fig	m	frost sensitive
<i>Glochidion ferdinandi</i>	Cheese Tree	m	fibrous roots
<i>Lophostemon suaveolens</i>	Swamp Box	m	
<i>Streblus brunonianus</i>	Whalebone Tree	m	
<i>Syzygium australe</i>	Brush Cherry	m	
<i>Tristanopsis laurina</i>	Water Gum	m	
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	m	fibrous roots
<i>Aphananthe philippensis</i>	Native Elm	s	
<i>Castanopermum australe</i>	Black Bean	s	frost sensitive
<i>Cryptocaria obovata</i>	Pepperberry	s	
<i>Ficus sp</i>	large Figs	s	frost sensitive
<i>Syzygium francisii</i>	Giant Water Gum	s	

## Species Recommended for Slips Mid to Lower Catchment

Brunswick, Wilson, Richmond Rivers

indicative only

Scientific Name	Common Name	rate of growth	comments
<b>Ground Covers</b>			
<i>Carex appressa</i>	tall sedge	f	wetter areas
<i>Pennisetum alopecuroides</i>	Swamp foxtail	f	wetter areas
<i>Lomandra hystrix</i>	Forest Mat-rush	m	wetter areas
<i>Lomandra longifolia</i>	Spiny head Mat-Rush	m	drier areas
<i>Poa labillardieri</i>	tussock grass	m	drier areas
<b>Trees</b>			
<i>Alphitonia petriei</i>	Pink Ash	f	
<i>Commersonia bartramia</i>	Brown Kurrajong	f	
<i>Eucalyptus sp</i>	endemic euc sp	f	
<i>Euroschinus falcata</i>	Ribbonwood	f	
<i>Grevillea robusta</i>	Silky Oak	f	
<i>Rhodospaera rhodanthema</i>	Deep Yellowwood	f	
<i>Toona ciliata</i>	Red Cedar	f	
<i>Acmena smithii</i>	Common Lilly Pilly	m	
<i>Acronychia oblongifolia</i>	Common Acronychia	m	
<i>Allocasuarina torulosa</i>	Forest Oak	m	
<i>Callistemon salignus</i>	Pink Bottlebrush	m	
<i>Elaeocarpus obovatus</i>	Hard Quandong	m	
<i>Ficus coronata</i>	Creek Sandpaper Fig	m	
<i>Ficus fraseri</i>	Sandpaper Fig	m	
<i>Glochidion ferdinandi</i>	Cheese Tree	m	
<i>Lophostemon confertus</i>	Brush Box	m	
<i>Lophostemon suaveolens</i>	Swamp Box	m	
<i>Streblus brunonianus</i>	Whalebone Tree	m	
<i>Syzygium australe</i>	Brush Cherry	m	
<i>Aphananthe philippensis</i>	Native Elm	s	
<i>Backhousia myrtifolia</i>	Cinnamon Myrtle	s	
<i>Ficus sp</i>	large figs	s	