



# Investing in ecological infrastructure to enhance water security in the uMgeni River catchment



**environmental affairs**  
Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



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# Ecological Infrastructure (Natural & Degraded) for the Upper uMngeni River Catchment



**SANBI** Biodiversity for Life

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## Ecological Infrastructure

- Alien vegetation
- Grassland & thicket (degraded)
- Grassland & thicket (natural)
- Riparian & wetlands

0 1.25 2.5 5 7.5 10 km



Scale: 1:200 000

Projection: Transverse Mercator

Meridian: Lo31

# Dry-season Baseflow Produced from Natural Ecological Infrastructure

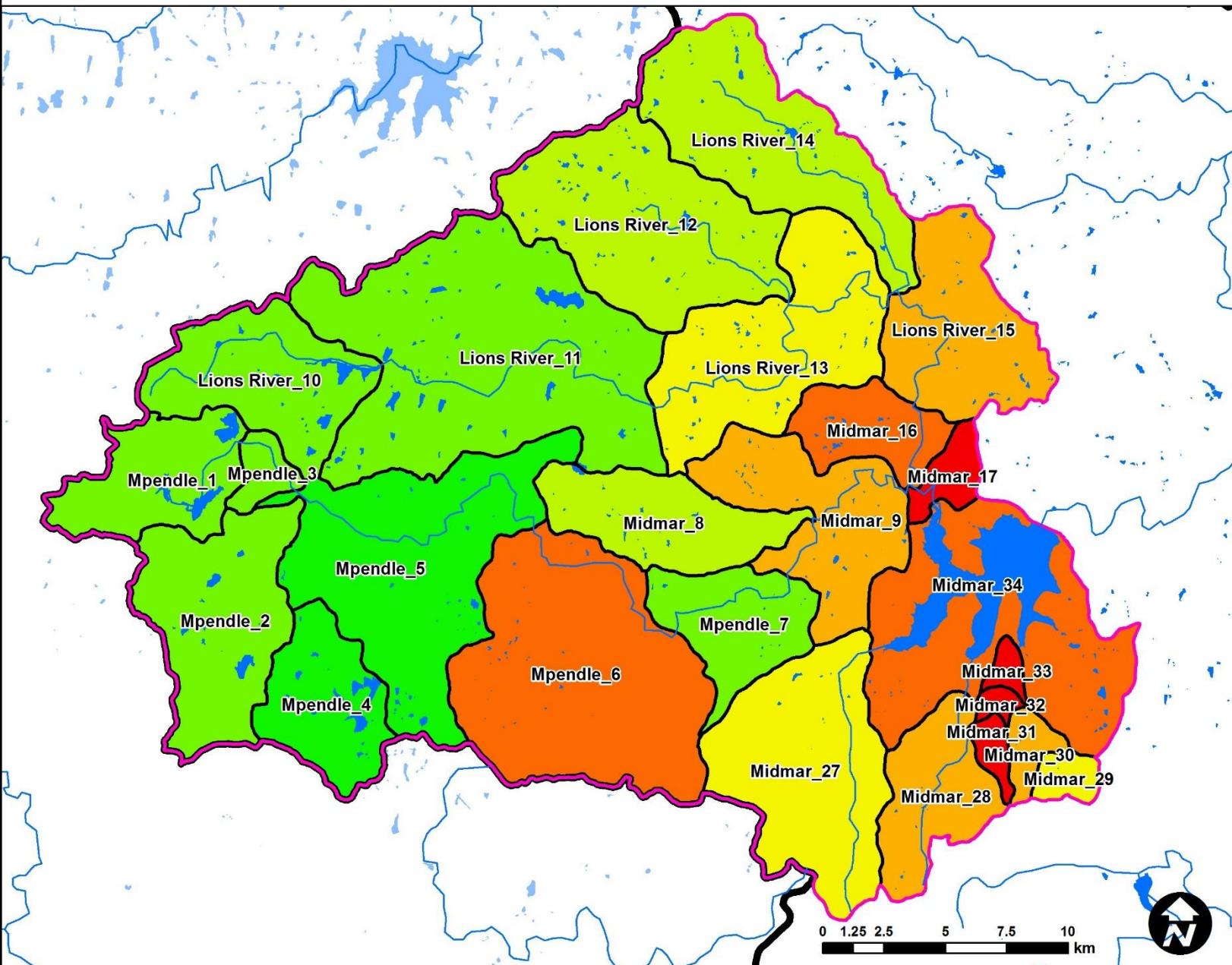


**SANBI** Biodiversity for Life

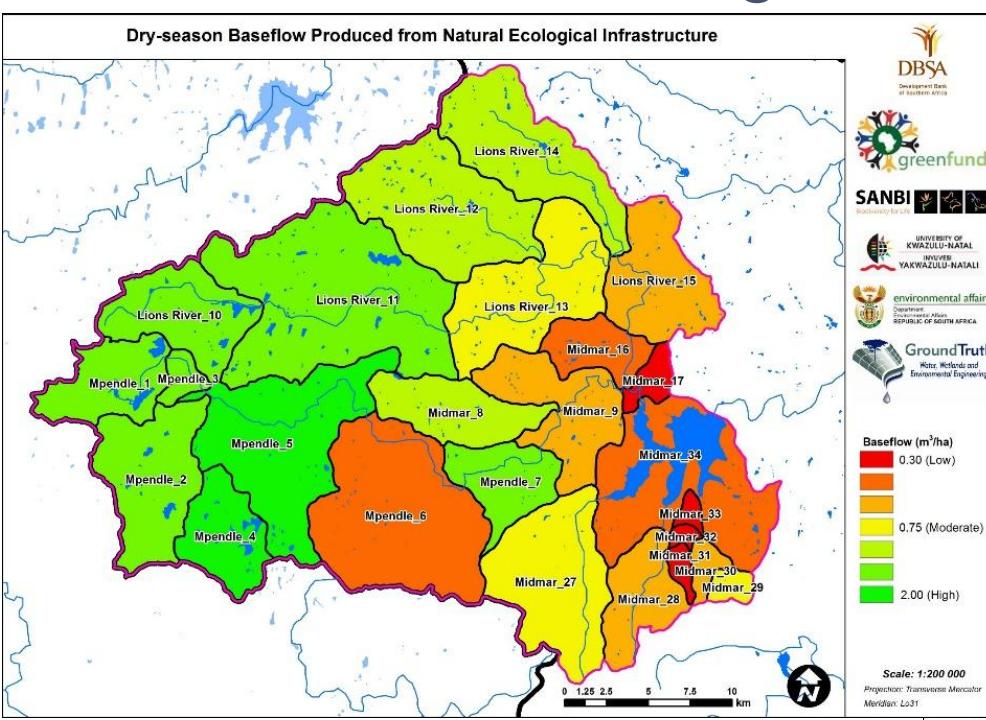
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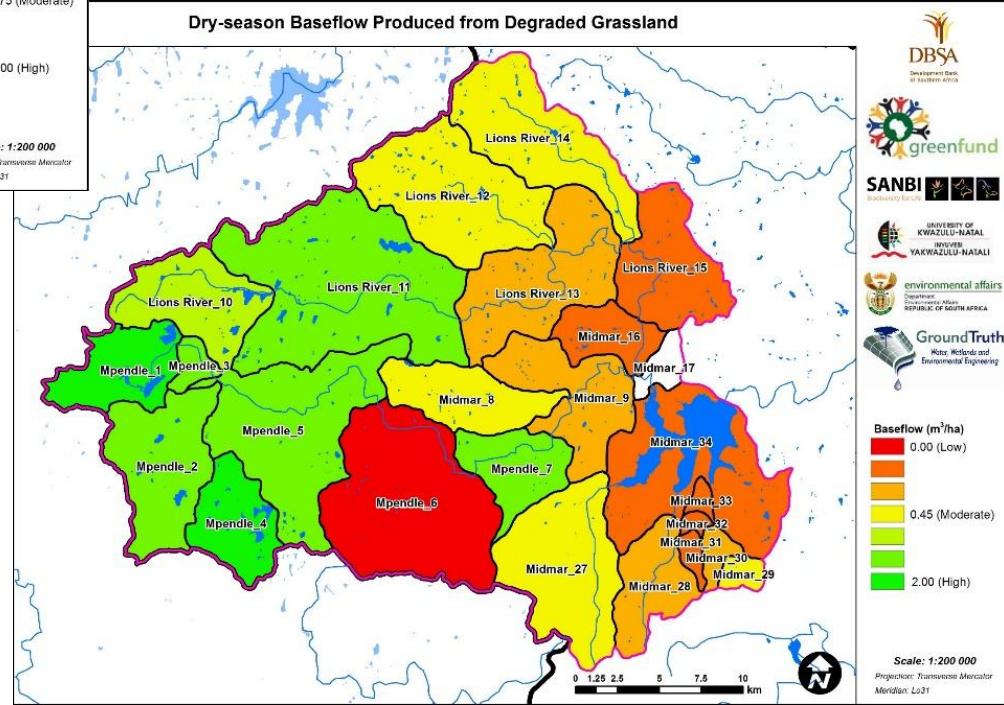
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# Comparison between degraded and healthy ecological infrastructure

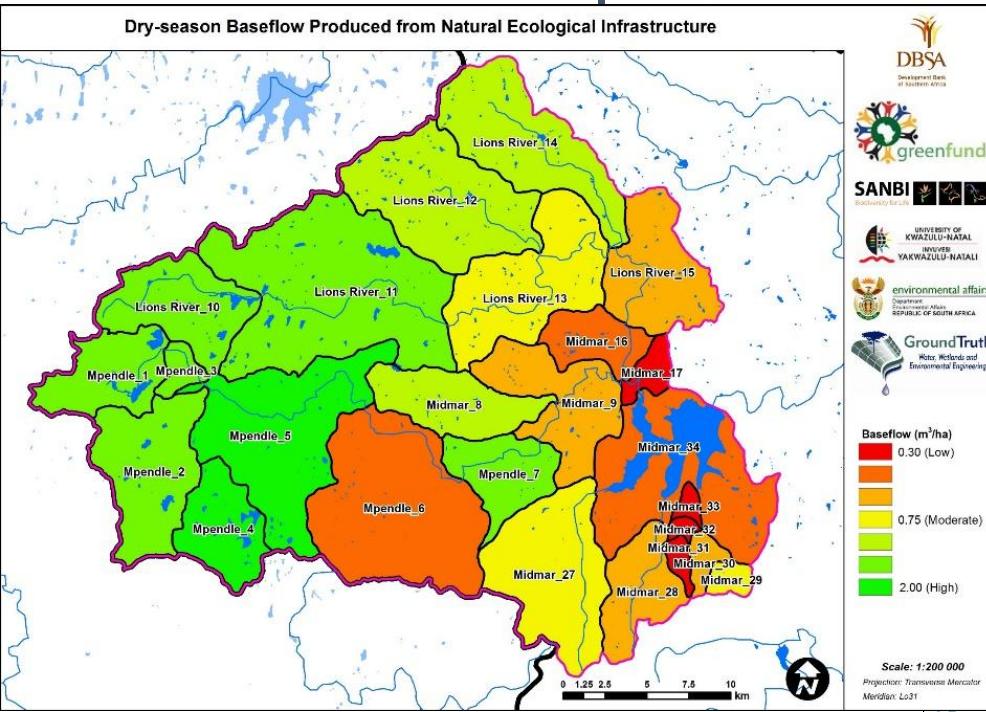


Good condition/natural grassland

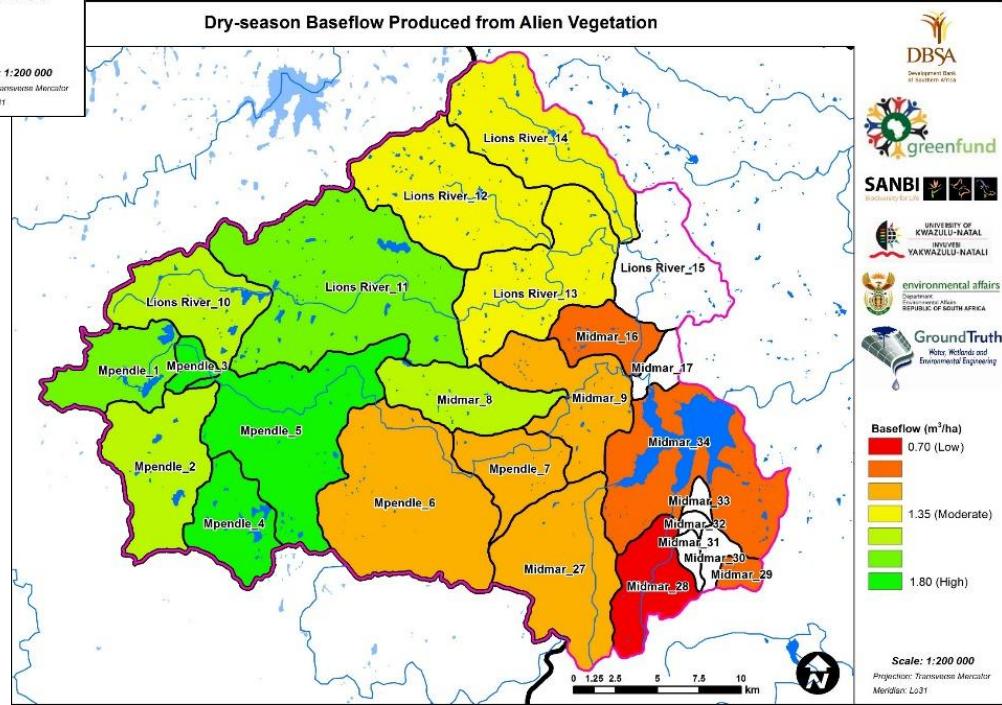


Degraded grassland

# Alien plants vs. no alien



Good condition/natural grassland

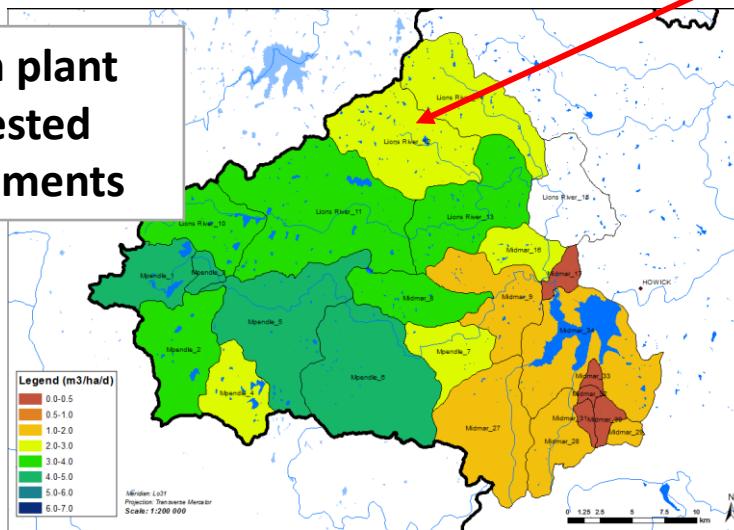


Alien plant infested  
catchments

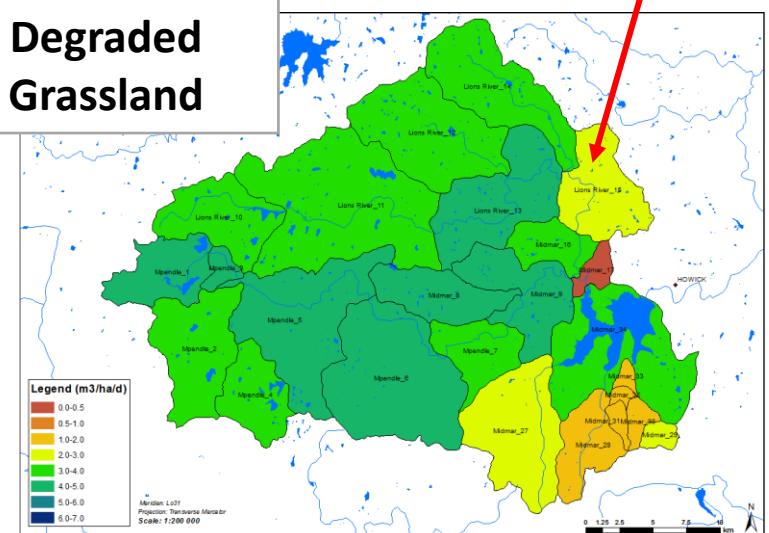
# Investment Guide – Hydro Component

Catchment	Streamflow (m <sup>3</sup> /ha/mon) in wet season				Potential gain per ha rehabilitated (m <sup>3</sup> /ha/mon) rehabilitated to nat veg (assuming full functionality)	
	All EI	Natural Grassland	Wattle	Degraded Grassland	Wattle	Degraded Grassland
LR 10	91		131	99	105	32
LR 11	135		143	99	118	44
LR 12	111		131	66	102	65
LR 13	137		138	98	134	41
LR 14	113		111	69	108	42
LR 15	114		137	137	68	68

Alien plant infested catchments



Degraded Grassland





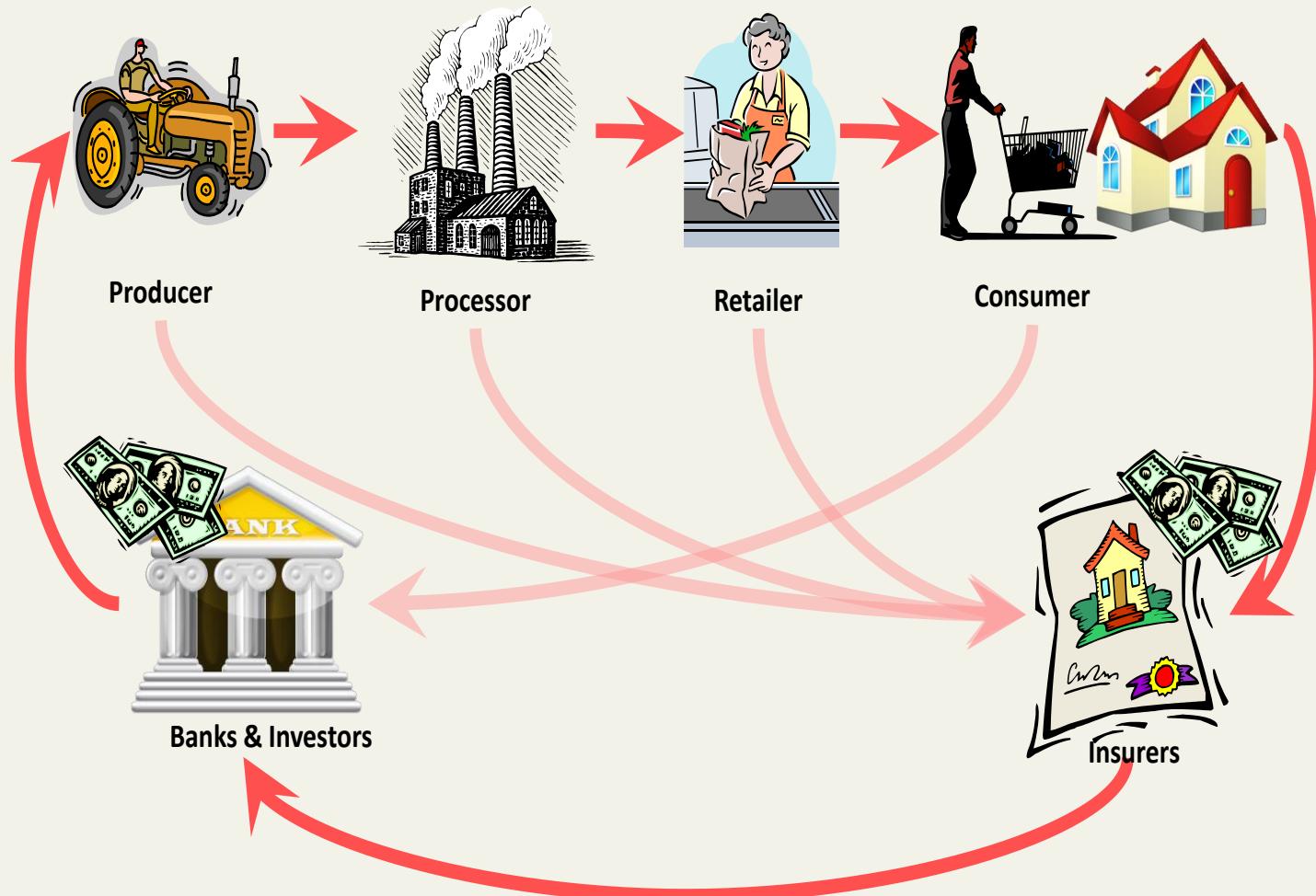
# Enhancing ecological infrastructure in the uMngeni catchment through collective private sector action: The role of private finance and markets

## *Project participants :*

*Christine Colvin (WWF), Margaret McKenzie (FutureWorks),*

*Anton Cartwright (Econologic), Mark Dent (UKZN)*





**Major landuse and landcover types**

Landuse	Other
Plantation	Wetlands
Orchards	Bushland and forest
Sugarcane	Grassland
Mines	Other types
Urban	
Low density settlement	
Subsistence	
Commercial annual crops	
Smallholdings - grassland	
Dams	
Infrastructure	

