- Purpose
- How to apply the tool
- Context of the tool

Introduction to the Wetland Tool

WATER RESEARCH COMMISSION

GroundTruth

BACKGROUND OF THE TOOL

- Throughout history, wetlands have provided a range of ecosystem goods and services to society. These include services such as reducing flood damage, reducing erosion, groundwater recharge & discharge, providing food, shelter and recreation & tourism.

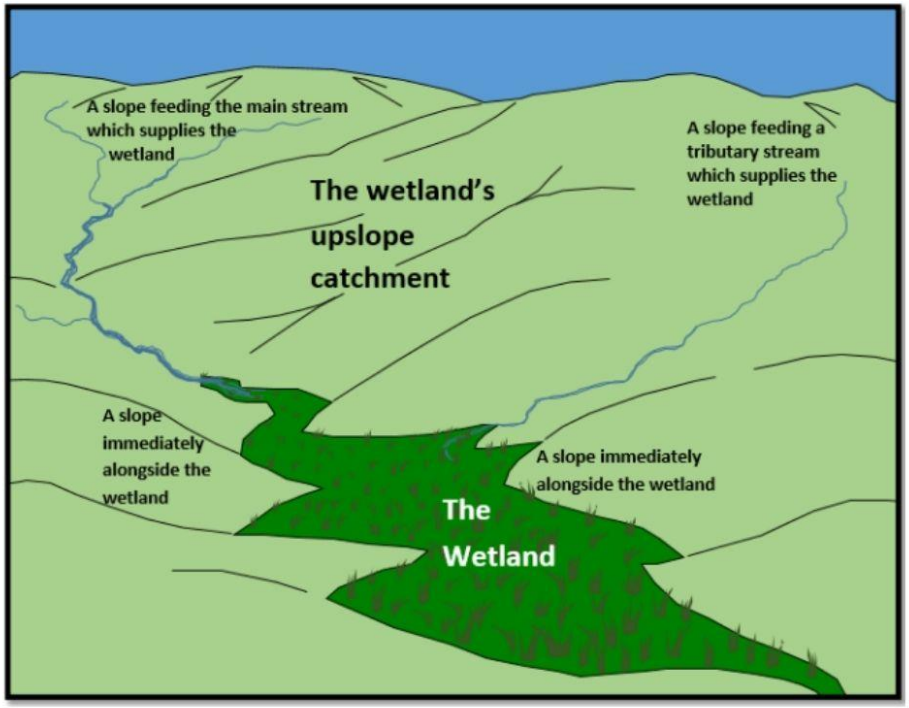
- Wetlands provide food, shelter, breeding and resting places for many plants, mammal, bird, reptile, amphibian, fish, and invertebrate species. Wetlands provide the critical habitat that many such organisms need to survive.

- Wetlands in South Africa are under serious threat, and it is estimated that up to 50% of wetlands in South Africa may have already been lost or degraded. Threats include activities such as channelization, crop production, effluent disposal and water abstraction.

BACKGROUND OF THE TOOL

- Land-cover within the wetland has the potential to result in the greatest impacts to the wetland. This applies particularly to those land-cover types involving the complete removal of the natural vegetation.

- Major impacts to wetlands lead to a loss in biodiversity, as the plants and animals adapted to wetland habitats are often unable to adapt to new environmental conditions or to move to other habitats.



BACKGROUND OF THE TOOL

- miniWET-Health tool sheets, will be used to record your observations and findings in field. The images below, show 2 tables (1 and 2) which are used to identify the landcover and extent of it.

Table 2: Impact intensities for a range of different land-cover types potentially occurring in a wetland's upslope catchment

Land-cover types in the wetland's catchment	Impact intensity[1]	Extent in the wetland's upslope catchment			
		<5%	5-25%	26-50%	>50%
Tree plantations	Large				
Orchards & vineyards	Large				
Annual crops	Large				
Sugarcane	Large				
Mines and quarries	Critical				
Built up areas, roads, railway lines and airfields	Serious				
Golf courses, sports fields & low density settlements	Moderate				
Semi-natural vegetation, including old lands	None				
Natural vegetation	None				
Eroded areas	Large				
Dams	Large				

Table 1: Impact intensities for a range of different land-cover types potentially occurring within a wetland

Land-cover/disturbance types		Intensity of impact[1]	Extent in the wetland			
			<5%	5-25%	26-50%	>50%
Annual crops, commercial	With artificial drainage[2]	Serious				
	Without artificial drainage[2]	Large				
Annual crops, subsistence	With artificial drainage[2]	Large				
	Without artificial drainage[2]	Moderate				
Sugarcane	With artificial drainage[2]	Serious				
	Without artificial drainage[2]	Large				
Vineyards & Orchards	With artificial drainage[2]	Large				
	Without artificial drainage[2]	Large				
Planted pastures	With artificial drainage[2]	Large				
	Without artificial drainage[2]	Large				
Recently abandoned lands	With artificial drainage[2]	Large				
	Without artificial drainage[2]	Moderate				
Semi-natural areas, including old abandoned lands	With artificial drainage[2]	Large				
	Without artificial drainage[2]	Small				
Tree plantations		Serious				
Dense infestations of invasive alien plants	Trees	Serious				
	Herbaceous invasive alien plants, e.g. American bramble.	Large				
Erosion gullies	Erosion gully with negligible vegetation colonization	Serious				
	Erosion gully colonized with vegetation	Serious				
Infilling and infrastructure, including roads and buildings		Critical				
Mines and quarries		Critical				
Sports fields or gardens		Large				
Recent sediment deposits		Large				

HOW TO USE THE TOOL

Step 1: Identify which land-cover type/s given in Table 1 are occurring **in your wetland.** Indicate with a ☑ the extent of the land cover in the categories given in Table 1.

Step 2: Take a photo of each of the land cover types identified in your wetland.

Step 3: Identify the land cover types occurring in your **wetland catchment**, for each of these indicate with a ☑ of the land cover in the categories given in Table 2.

Step 4: Indicate with a the extent of the buffer zone (natural vegetation)around the wetland.

Step 5: Take any additional notes concerning the land-covers identified in Table 1 and 2.

Step 6: Note any impacts on the wetland which may have not been covered in steps 1 to 3.

HOW TO USE THE TOOL

Step 7: Note the trajectory of the anticipated change in ecological health over the next five years and indicate with a ☑ from the following categories: (1) Large improvement, (2) slight improvement, (3) Remain the same, (4) Slight decline (5) Large decline.

Step 8: Note any urgent actions required to address identified issues (e.g. illegal dumping of solid waste) and who needs to be contacted.

Step 9: Note any other key management actions that are required and relevant parties who you think might need to be contacted.