

Letaba Catchment NWRCS & RQO

**ECOLOGICAL STATUS QUO FOR
SELECTED RIVERS AND
WETLANDS**

**ECOLOGICAL IMPORTANCE
ECOLOGICAL RECOMMENDATIONS**

 **water affairs**
Department
Water Affairs
REPUBLIC OF SOUTH AFRICA

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What is Ecological Classification?

- EcoClassification consists of three processes:
 - - Present Ecological State (PES)
 - - Ecological Importance
 - - Recommended Ecological Category (REC)
- The focus in this presentation is on the status quo, i.e. the PES.
- Information on ecological importance also provided to aid visioning.
- The PES describes river according to ecological status or health compared to natural conditions.

What is Ecological Classification?

- Ecological status described in terms of Ecological Categories:
 - A . near natural,
 - B . largely natural
 - C . moderately modified
 - D . largely modified
 - E . seriously modified
 - F - critically modified.



What is Ecological Classification?

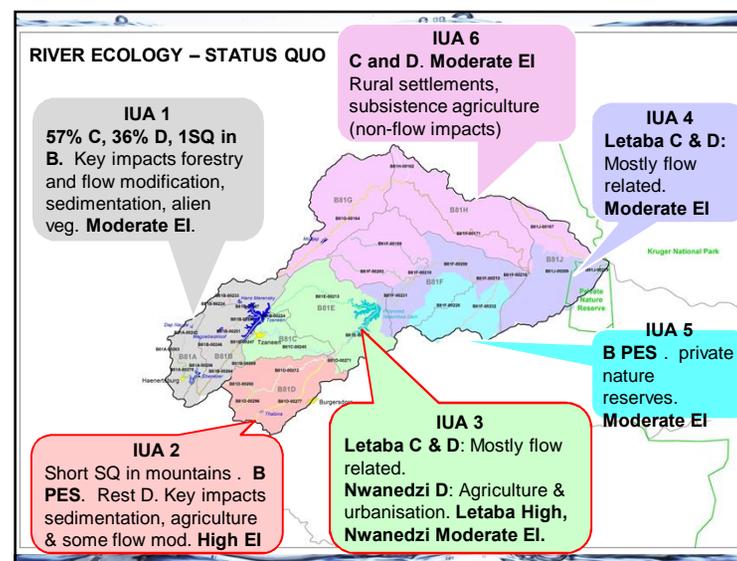
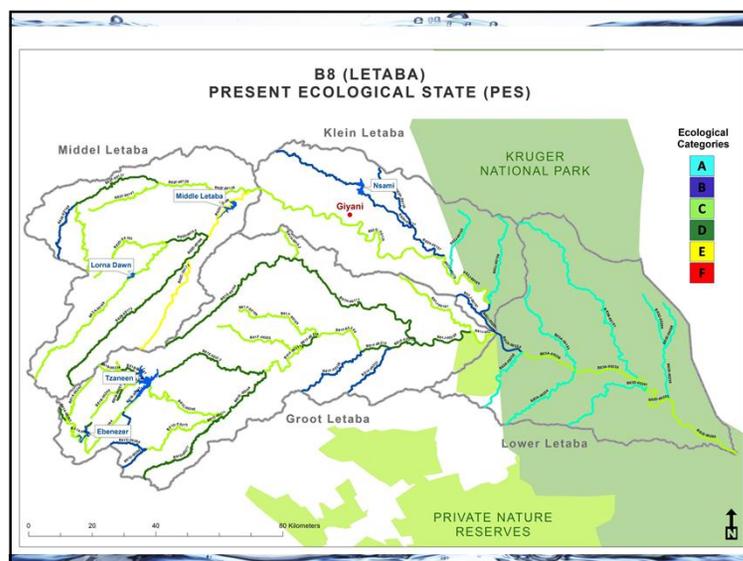
Steps in EcoClassification:

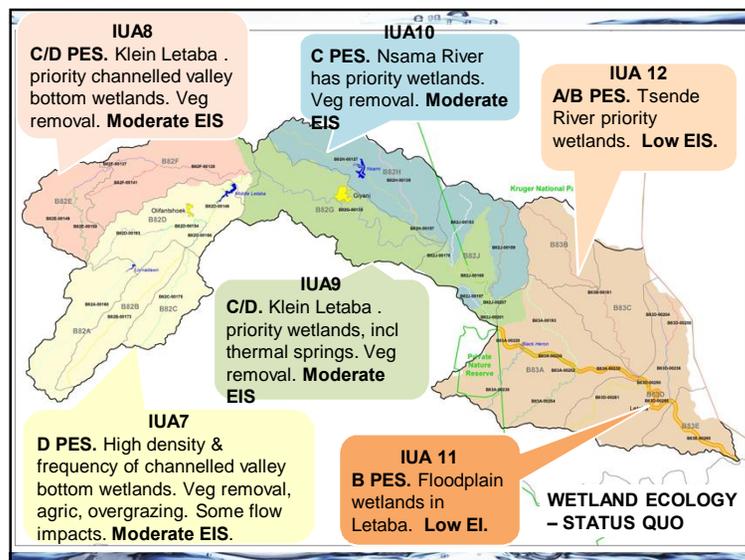
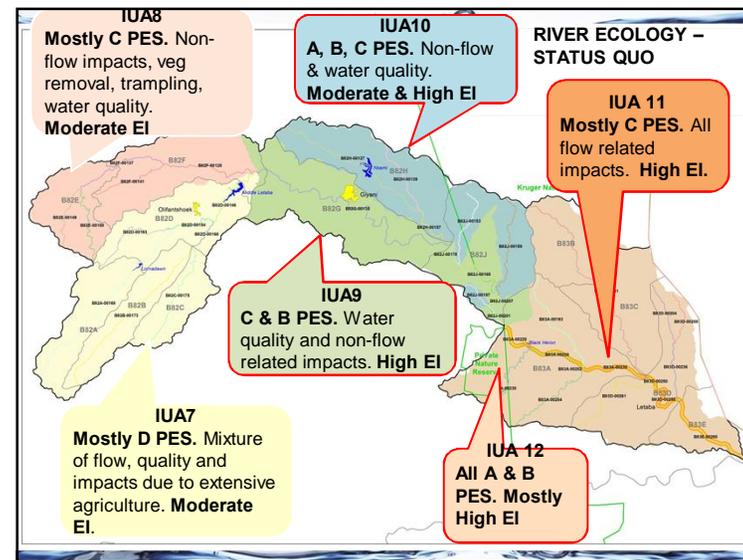
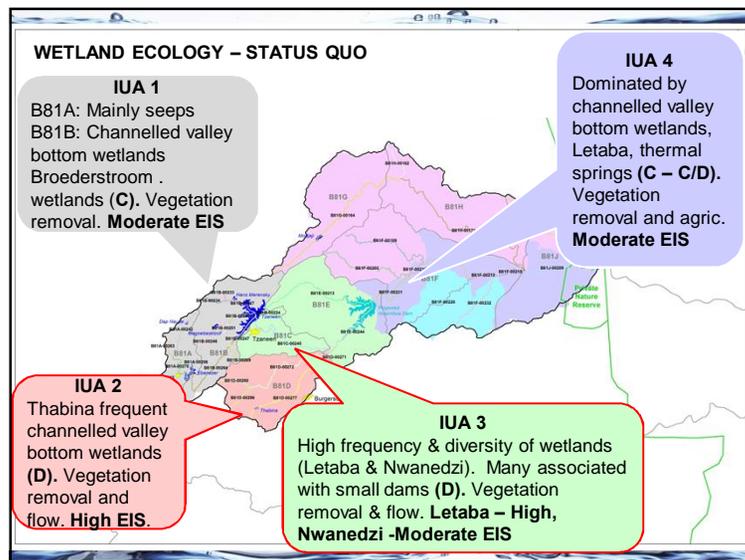
- Predict the natural condition (the %A+).
- Evaluate human impacts & describe how ecology changed. (Present Ecological State).
- Identify whether changes are flow, non-flow or quality.
- Determine the Ecological Importance and Sensitivity.
- Derive a Recommended Ecological Category (maintain or improve the PES)

PESEIS PROJECT: RESULTS & INFORMATION

- Undertaken for 75 SQ reaches.
- Desktop PES evaluation & info available.
- Desktop EI-ES results available.
- During this study, key non-flow, flow, water quality impacts identified.
- PESEIS information also extended with additional information in a master Excel Spreadsheet
- All NFEPA's evaluated and compared with PESEIS results . incorporated where relevant.

EVALUATION		
SQ Number	B81D-00246	Numbers for NFEPA and used by DWA for PESEIS
River	Thabina	
Instream Habitat continuity modification	2	Consider barriers
Riparian zone continuity modification	3	Consider areas of riparian veg that has been removed.
Instream habitat modification activities	3	Lack of flow, sedimentation, phys chem problems, bulldozing etc
Riparian zone modification activities	3	Alien vegetation, agriculture, veg removal.
Flow modification	2	Dams, abstraction, etc
Phys-chem modification	2	Return flows, sewage, urban etc
Phys chem hot spots	-	Additional review to identify hotspot, 3 . 5 rating
Key impact	Non-flow : agric & sedimentation	
PRESENT ECOLOGICAL STATE (PES)	D	Median converted to A . F scale





RECOMMENDED ECOLOGICAL CATEGORY (REC)

REC for nodes with high importance and which is not already in a B or higher PES:

- 2 nodes must be improved by means of non-flow mitigation.
- 19 nodes must be improved by means of improved flows.

