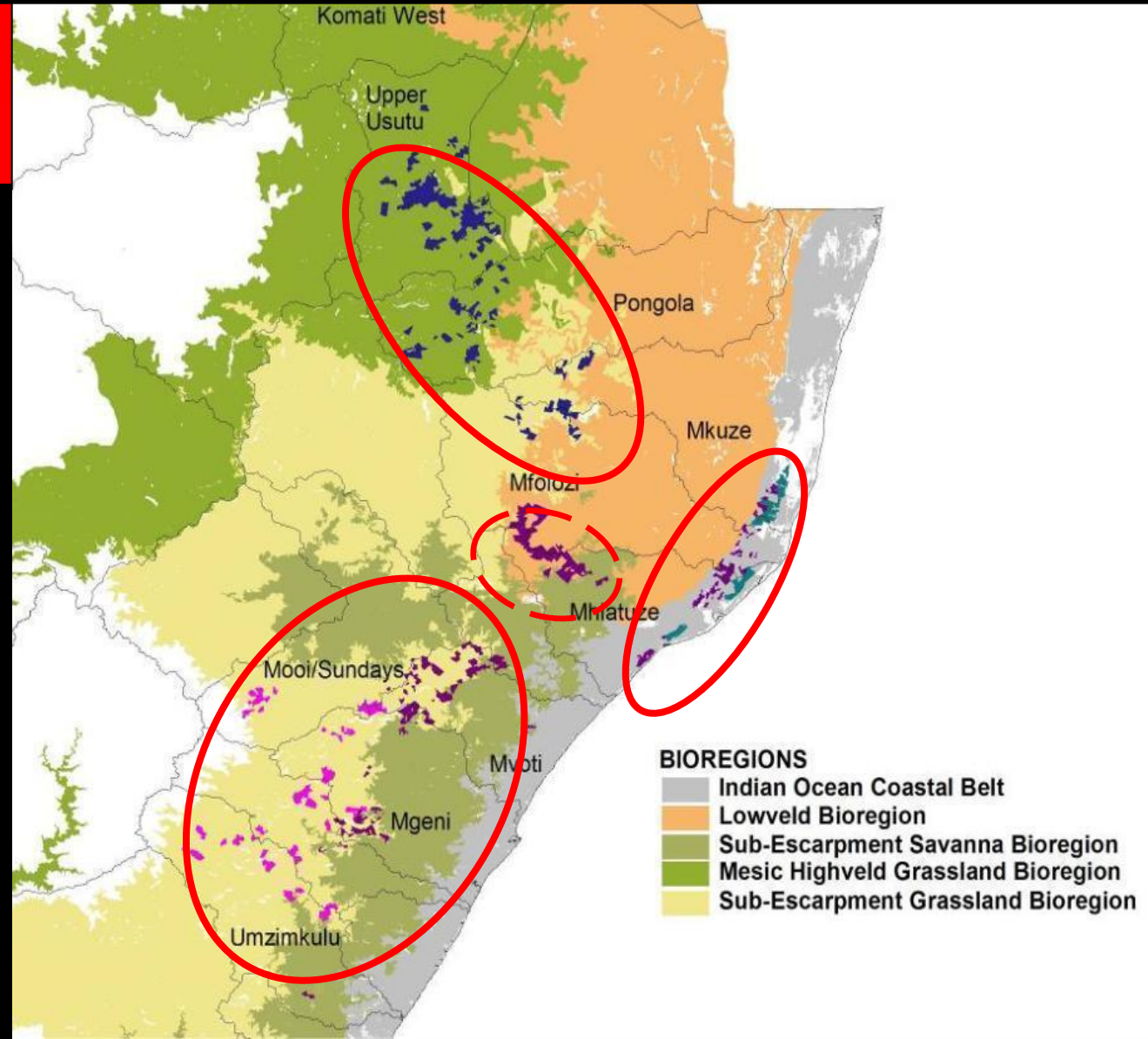**Damian Walters**

South Africa

Making Science Real -
Using State of Environment Reporting
to Improve Practice

Objective: overview of health & functionality of Mondi's priority wetlands & recommend mgt

The challenge

- 350 000ha land

  20 000ha wetland

  5 bioregions

- Priority wetlands largely unknown

- Research must lead to improved practice

BIOREGIONS
- Indian Ocean Coastal Belt
- Lowveld Bioregion
- Sub-Escarpment Savanna Bioregion
- Mesic Highveld Grassland Bioregion
- Sub-Escarpment Grassland Bioregion

Science based tools

Social Learning Orientated Processes

Wetland Management Series

WET-Health
A technique for rapidly assessing wetland health
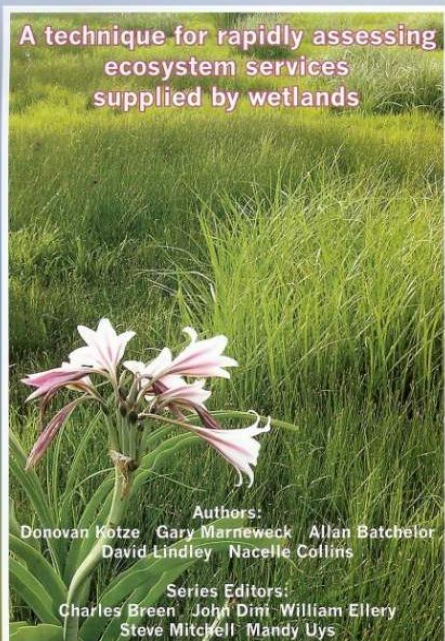
WRC Report TT 340/08
February 2008

Series Editors:
Charles Breen
John Dini
William Ellery
Steve Mitchell
Mandy Uys

Authors:
DM Macfarlane
DC Kotze
WN Ellery
D Walters
V Koopman
P Goodman
C Goge

Wetland Management Series

WET-EcoServices
A technique for rapidly assessing ecosystem services supplied by wetlands

Authors:
Donovan Kotze   Gary Marneweck   Allan Batchelor
David Lindley   Nacelle Collins

Series Editors:
Charles Breen   John Dini   William Ellery
Steve Mitchell   Mandy Uys

Mondi State of the Wetlands Report

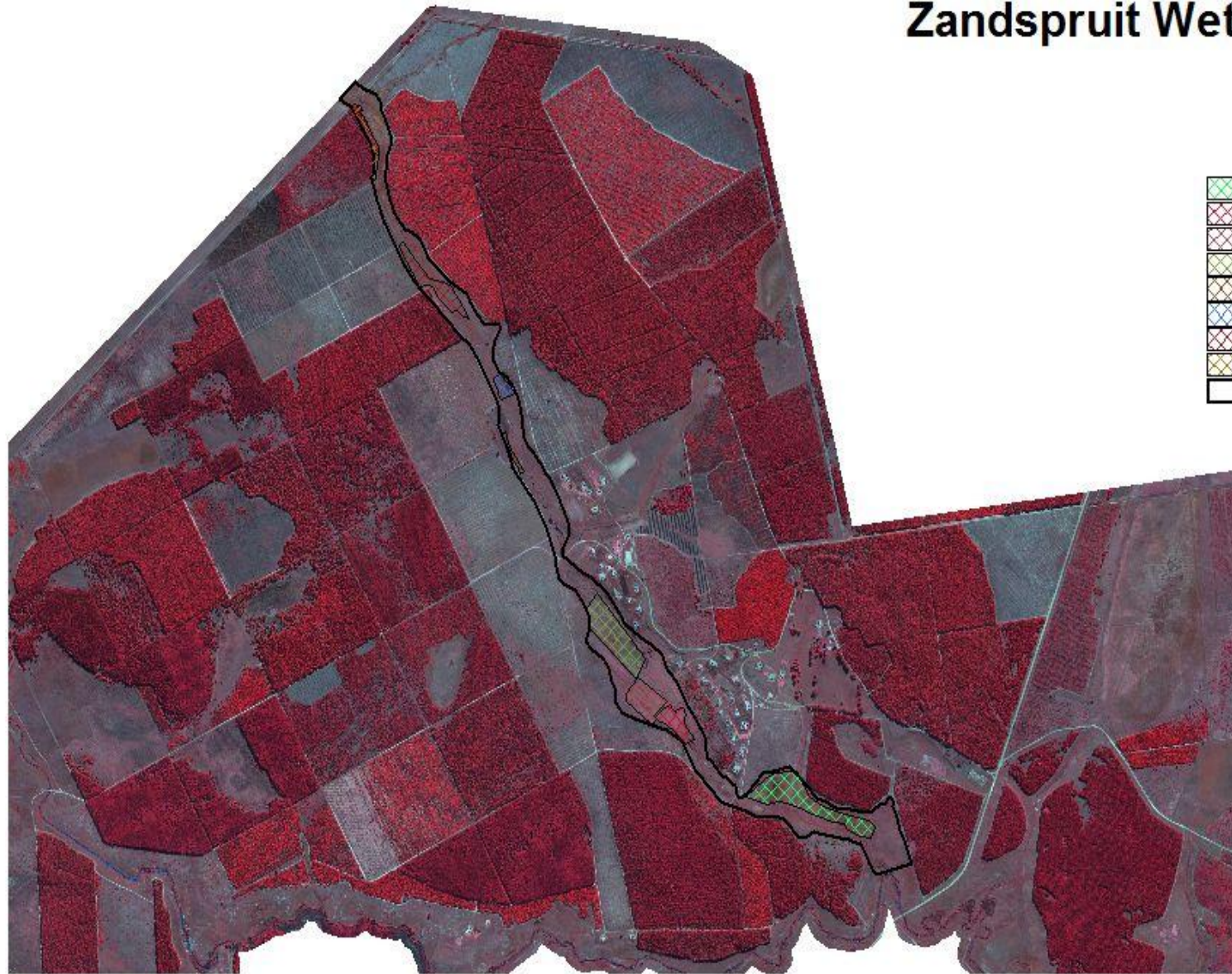A Health and Ecosystem Services Assessment of a Selection of Priority Wetlands across Mondi Landholdings

By

UNIVERSITY OF KWAZULU-NATAL   mondi

Zandspruit Wetland

Legend:
- Disturbance unit 1
- Disturbance unit 2
- Disturbance unit 3
- Disturbance unit 4
- Disturbance unit 5
- Disturbance unit 6
- Disturbance unit 7
- Distrubance unit 8
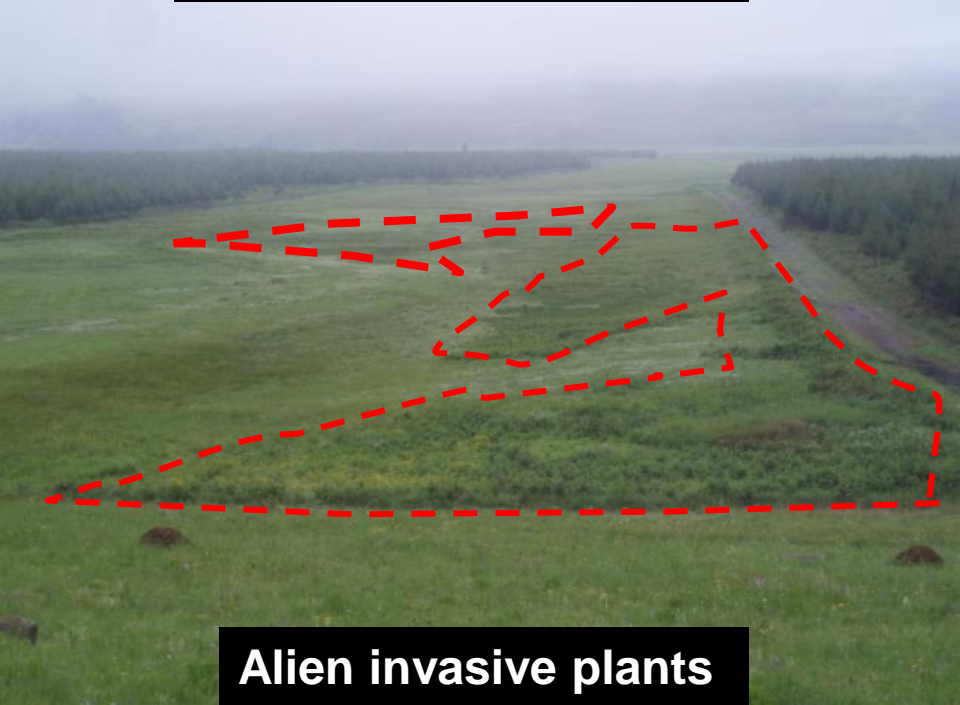- Zandspruit boundary

1   0   1   2 Kilometers

N

Plantation in wetland

Cattle grazing

Alien invasive plants

Crops in wetland

Health scores of some wetlands assessed

Wetland	Hydrology	Geomorph	Vegetation	Overall score
Inverness	C (→)	A (→)	B (↓)	B (→)
Homesdale	C (→)	A (→)	D (→)	C (→)
Langepan	D (↓)	B (↓)	B (↓)	C (↓)
Canewoods	E (→)	A (→)	E (↑)	D (↑)
Nyalzi Pan	D (→)	A (→)	D(→)	D (→)
Zoar Vlei	D (→)	A (↓)	C (→)	C (→)
Zoar Pan	D (→)	A (→)	A (→)	C (→)
Zandspruit	C (↓)	A (→)	C (→)	C (→)
Brecher	D (→)	C (→)	D (↑)	D (→)

Impact level	Present state
None	A
Small	B
Moderate	C
Large	D
Serious	E
Critical	F

Predicted change@ current mgt	
Substantial improvement	↑ ↑
Slight improvement	↑
Remain stable	→
Slight deterioration	↓
Substantial deterioration	↓ ↓

Examples of the Goods & Services provided by the wetlands

Wetland	Regulating Services			Support Services	Provisioning Services		
	Streamf low reg.	Toxicant assim.	Carbon storage	Biodiversity maintenance	Water supply	Harvestable resources	Cultivated foods
Inverness	**	**	***	****	***	****	**
Homesdale	****	**	***	*****	*****	**	*
Langepan	****	***	****	*****	**	**	*
Canewood	**	*	**	*	*	*	*
Nyalzi Pan	*****	**	**	****	**	*	**
Zoar Vlei	***	**	**	***	**	*****	*****
Zoar Pan	***	*	***	****	*	**	*
Zandspruit	****	**	***	****	**	*****	*****
Brecher	***	**	**	**	***	*****	***

Key management issues revealed by the State of the Wetlands Report

Management Region	Grazing pressure	Fire regime	Alien plants	Cultivation	Roads	Delineation
Midlands	🙂 (yellow)	🙂 (yellow)	☹️ (red)	N/A	🙂 (yellow)	🙂 (green)
Zululand coastal	🙂 (green)	☹️ (red)	🙂 (green)	N/A	🙂 (green)	🙂 (yellow)
Northern KZN and southern Mpumalanga	☹️ (red)	☹️ (red)	🙂 (green)	🙂 (yellow)	🙂 (yellow)	🙂 (yellow)

☹️ (red) = Significant impact. Significant management challenge.

🙂 (yellow) = Some impact. Going reasonably, but room for improvement

🙂 (green) = Relatively low impact, going well.

Discussing recommended Practice

Key elements for translating wetland science into practice

1. Don't offer turn-key solutions rather **co-develop** the report with the partner/client

2. The **process** can be as or more important than the **product**

3. You need to **work together to learn together– Socially Robust Knowledge!!**

4. This strengthens **partnership relations**