Water quality sampling on the Laura-Normanby Rivers

Samples collected from the upper catchment all the way to the coast

Compared to more developed regions, the Normanby River has relatively good water quality. However, water quality is impacted by:
- Cattle grazing
- Horticulture at Lakeland Downs
- Erosion from roads, fences and other land clearing
- Feral pigs, cattle and horses in wetlands
- Fire

Water sampling on the Normanby:

[1] AIMS (Kalpowar Crossing 1999-2000):
 -Turbidity, nutrients and suspended sediments

[2] QLD DSITIA/ DERM (Kalpowar Crossing 2006- 2013):
 - Suspended sediments and nutrient concentrations and loads

[3] CYMAG Environmental (Catchment wide- 2006-2010)
 - Monthly monitoring at 10 sites (see map above)
 - Turbidity, nutrients and chlorophyll-a
 - Metals, herbicides, petroleum and other contaminants
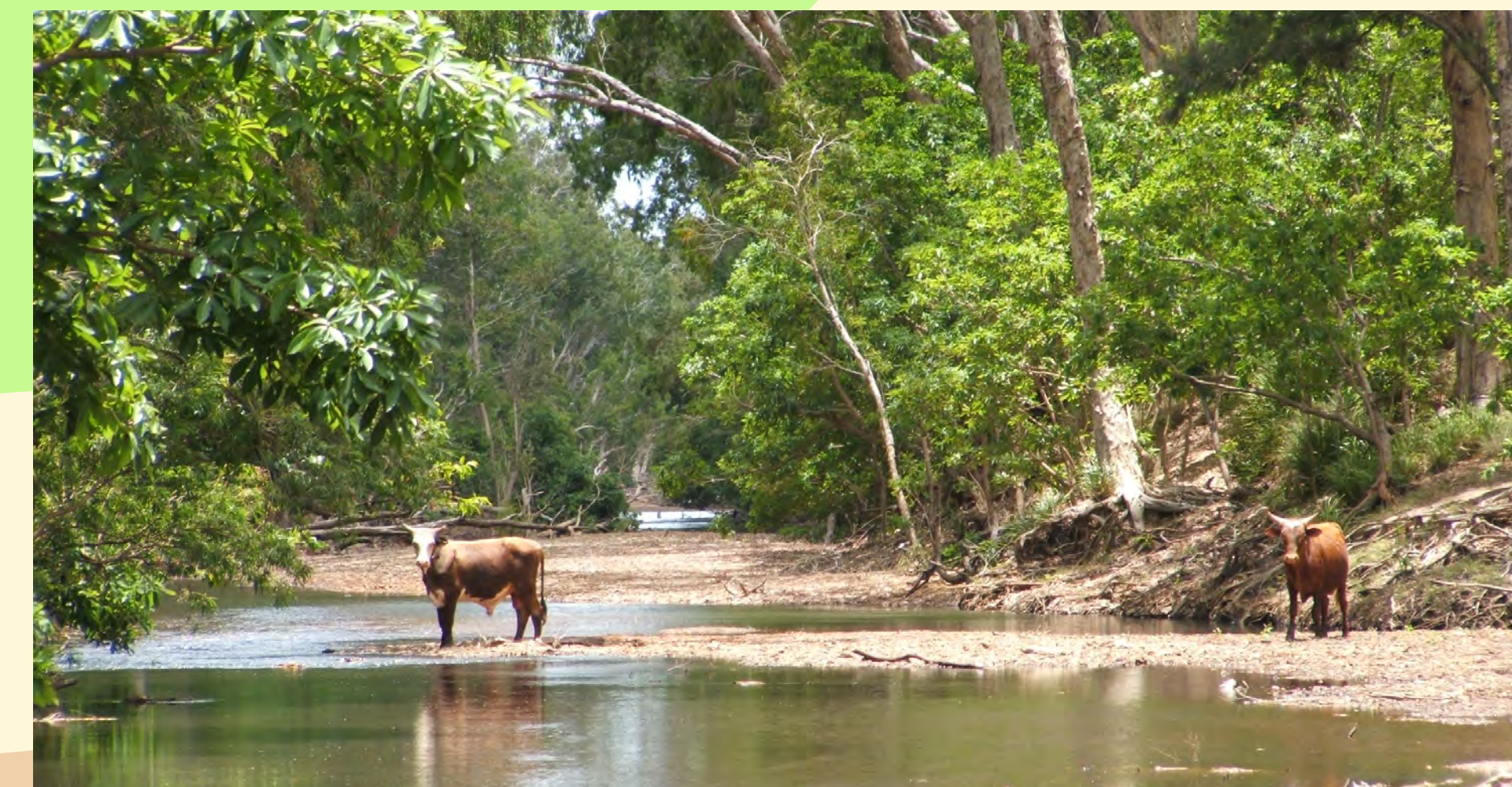
[4] Howley Environmental Consulting/ Griffith University/ DSITIA/ Laura Rangers (2012 & 2013)
 - Catchment wide flood event monitoring
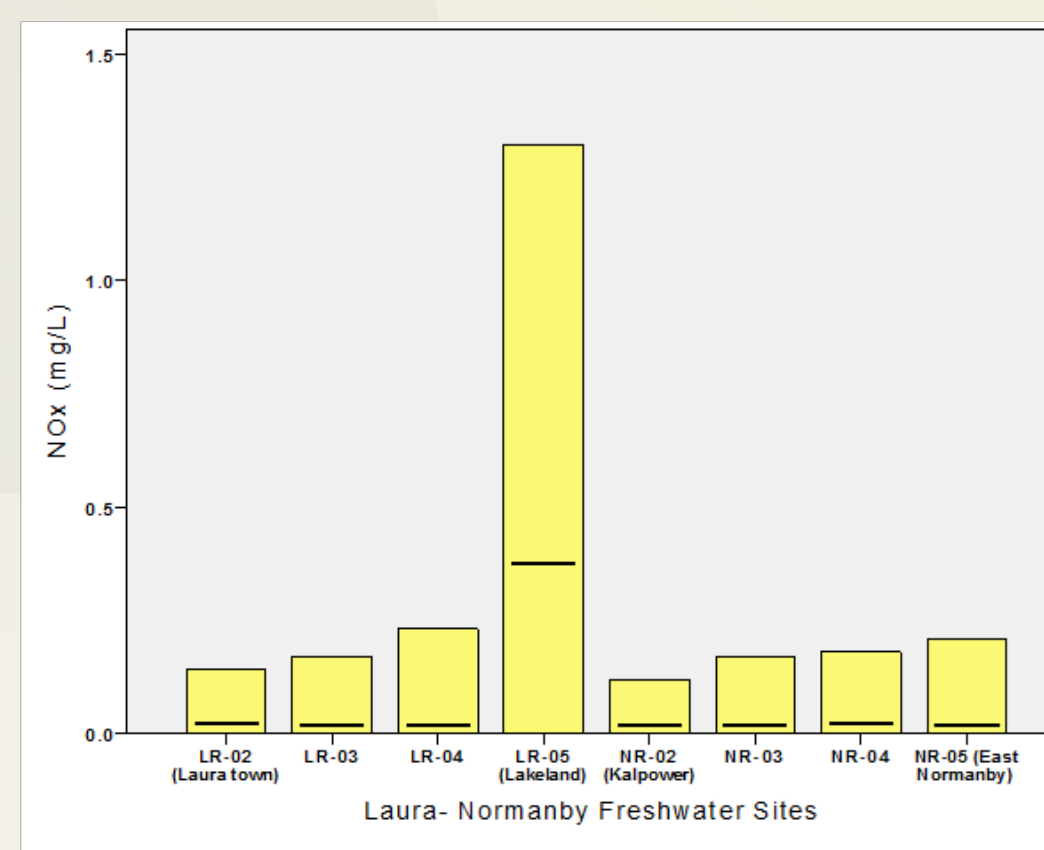 - Sediment and nutrient concentrations and loads

Cattle accelerate bank and gully erosion
- More erosion leads to increased turbidity (dirty water) and may be filling in waterholes and reducing fish habitat.
- High levels of bacteria have been measured in streams frequented by cattle.

Run-off from tilled soils at Lakeland

Herbicides detected (at low levels) in the Laura River:
 - diuron, atrazine, and hexazinone
 - Phenoxy-acetic acid herbicides: 2,4-D and 2,4,6-T
 - Pendimethalin, metolachlor and phenanthrene
* No herbicides or other contaminants were detected by CYMAG at Kalpower Crossing or the Normanby estuary

Lakeland Downs

Elevated nitrogen levels in the Laura River near Lakeland results from fertiliser run-off

Agricultural impacts on water quality in the Laura River:
- increased nutrient levels
- low levels of herbicides and pesticides
- sediment run-off from soil tillage
- increased water use for irrigation could reduce dry season stream flows

Photos: Christina Howley, Peter Pal, Jeff Shellberg, Jason Carroll