

# Herbert River Catchment

## Catchment Information

### Description

Area (km <sup>2</sup> )	9843
% Gauged	87
Mean Discharge Yr (km <sup>3</sup> )	4
Rainfall (mm)	1506
Runoff (mm/m <sup>2</sup> )	407
Runoff/Rainfall Ratio	27

### Land Use

Population	8778
Clearing (km <sup>2</sup> )	1434
% Cleared	15
Area under Grazing (km <sup>2</sup> )	7330
Area under Sugar (km <sup>2</sup> )	691
Area under Horticulture (km <sup>2</sup> )	35

### Pesticide Application

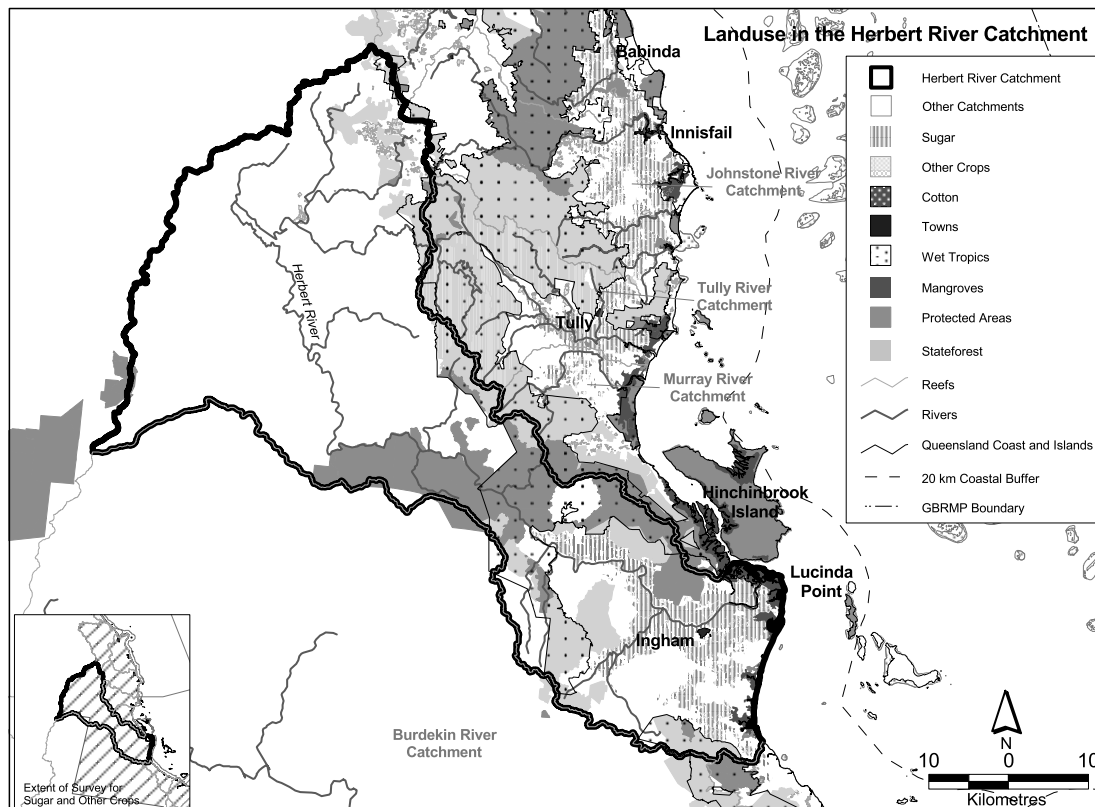
(Kg Active Ingredient/Yr)

Atrazine	33601
Diuron	16618
2-4D	28068
Chlorpyrifos	3084
MEMC	397

## Catchment Targets

	1850 T/yr	Current T/yr	Current T/ km <sup>3</sup>	ratio	2011 % Red'n	2011 T/yr Target	2011 T/ km <sup>3</sup> Target
Sediment Export	83000	664787	165835	8	33	445407	111109
Total N Export	539	1588	396	2.9	50	794	198
Total P Export	26	168	42	6.5	33	113	28

Data Confidence Index = 3



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The Herbert River catchment covers an area of 9843 km<sup>2</sup>. Grazing is the dominant land use including 7330 km<sup>2</sup>, with cultivation of sugarcane on the lower river and coastal plains covering 691 km<sup>2</sup> and horticulture occupying 35 km<sup>2</sup>. Approximately 1417 km<sup>2</sup> of the catchment is in the Wet Tropics World Heritage Area. State forests and timber reserves occupy 990 km<sup>2</sup> and total protected areas cover approximately 1825 km<sup>2</sup>. Sediment and total phosphorus exports are classified as medium risk and total nitrogen export is classified as high risk in the Herbert River catchment.

### *Issues in the catchment:*

- Grazing land is the dominant land use.
- Regular floods in the lower catchment areas cause some erosion of croplands and flooding.
- Approximately 70% loss of coastal wetlands.
- Significant hydrological modification of the flood plain.
- High contribution of nutrient (particularly nitrates) and pesticides.
- Fauna species have been affected by changes in land use.
- Approximately 19% of the catchment is within protected areas.
- Commercial and recreational fishery.
- Marine and land based tourism.
- Close proximity to seagrass beds and dugong protection areas.

AIMS conducted sampling in the Herbert River between 1989 and 1995. Three sites were sampled down the freshwater section of the river from just below the gorge, at Abergowrie and at the John Row bridge, Ingham. Dalrymple Creek, a tributary of the Herbert River was sampled at upstream and downstream sites in collaboration with the Bureau of Sugar Experiment Stations (BSES) office at Ingham between 1993 and 1995. An AIMS river logger has been deployed on the Gairlock bridge for the past 6 years to obtain continuous turbidity measurements through each wet season.

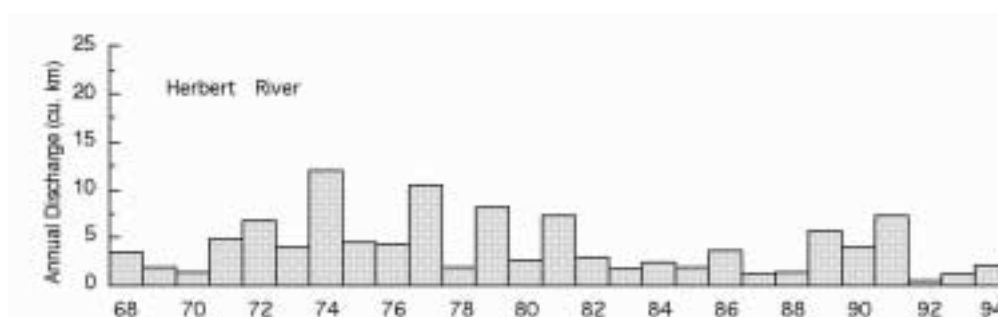


Figure 15. Water discharge patterns in the Herbert River.