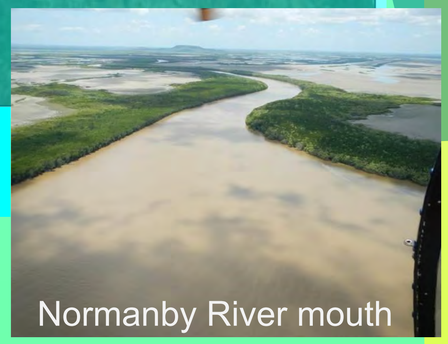
Flood plumes: From the rivers to the reef

Princess Charlotte Bay Flood plume: January 2013

Princess Charlotte Bay

High value marine & coastal ecosystems:

- Extensive coastal wetlands
- Healthy and diverse coral reefs
- Large dugong and marine turtle populations
- Nesting areas for the critically endangered Hawksbill turtle
- Home to rare snub fin and humpback dolphins
- Seagrass meadows cover most intertidal zones and reef areas
- Declared Fish Habitat Area for the protection of barramundi and other fish

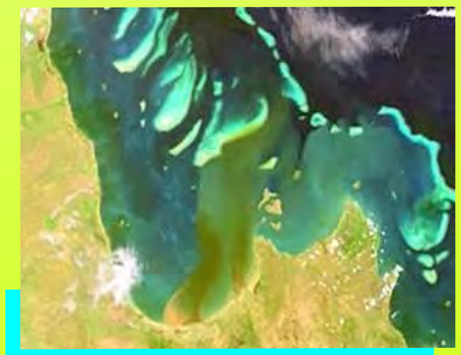


What's in a Flood plume?

Suspended sediment (dirt)
- Mostly fine clay
- Larger sediment particles drop out of the plumes before they reach the reef
-Increases in sediment could smother seagrass and corals

Nutrients (Nitrogen & Phosphorous)
- Attached to sediment particles, organic matter, and dissolved in the water
- Delivered to the Bay from many sources in the Catchment
- Travel further offshore than sediments

Algae (phytoplankton)
- Microscopic plants fed by nutrients in the flood create an algae soup
-This "soup" supports the food web at Princess Charlotte Bay



Flood plume: Feb 2007

*Flood plume sampling supported by **Reef Rescue Marine Monitoring Program***

Photos:Christina Howley, Jeff Shellberg, Amanda Hogbin

Flood plumes in Princess Charlotte Bay: What do they look like and what's in them?

More info: **Christina Howley**, Howley Environmental Consulting [chowley@bigpond.com]

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