

From the catchment to the Reef – it's all connected

DRIVER

Climate change

is predicted to increase the intensity of rainfall, floods and tropical cyclones which severely impact marine water quality and ecosystems. Climate change will also affect the Reef through rising sea levels; ocean acidification; and warmer waters causing corals to bleach.

PRESSURE/ACTIVITY

Agriculture

accounts for approximately 80% of land use in Reef catchments and is the main source of excess nutrients, fine sediments and pesticides that flow to the Reef.

LANDSCAPE FEATURE

Rivers and streams

act as corridors for many important species to move between freshwater, estuarine and marine environments. They also provide a pathway for pollutants to flow to the Reef.

PRESSURE/ACTIVITY

Clearing

of coastal and riparian vegetation contributes to erosion, especially of streambanks.

PRESSURE/ACTIVITY

Ground cover

stabilises soil preventing gullies from forming and eroding soil causing sediment to flow to the Reef.

PRESSURE/ACTIVITY

Modifications

to coastal ecosystems and creation of artificial barriers, such as dams and ponded pastures, impact water quality by interfering with the natural connections of waterways from catchment to the Reef.

LANDSCAPE FEATURE

Wetlands

connect catchments to the reef. They reduce the impacts of floods and help to filter catchment run-off.

PRESSURE/ACTIVITY

Urban and industrial

construction and land use activities cause nutrients, sediments, and other pollutants such as heavy metals and plastics to flow to the Reef.

PRESSURE/ACTIVITY

Urban development

including roads, footpaths and rooftops increases surface run-off which washes pollution into waterways.

LANDSCAPE FEATURE

Aquatic and marine ecosystems

provide important habitats for species such as fish, birds, and turtles to migrate to the Reef for breeding, feeding and shelter.

POLLUTANT

Pesticides

pose a risk to seagrass, wetlands and freshwater ecosystems, and restrict coral growth.

LANDSCAPE FEATURE

Seagrass meadows

are the primary food source for dugongs and green turtles. Increased sediment levels reduce the light available to seagrass ecosystems and inshore coral reefs.

POLLUTANT

Sediment

blocks light to and smothers corals and seagrass restricting growth. When combined with nutrients, fine sediment forms flocs that can impact coral health.

BENEFIT

Recovery from bleaching

events and other impacts is supported by good water quality. It is important that water quality impacts from both the catchment and marine environments are properly managed while climate change is being addressed.

BENEFIT

Cultural values and communities

are supported by healthy waterways, delivering a range of benefits through access to resources, employment and recreation.

POLLUTANT

Nutrients

are linked to outbreaks of the coral eating crown-of-thorns starfish and cause growth of algae and algal blooms.

