

[Estimates of river pollutant](#) loads to the Great Barrier Reef lagoon indicate the Fitzroy and Burdekin catchments contribute at least 70 per cent of the anthropogenic total suspended solids load to the Great Barrier Reef lagoon, with grazing lands (gully and hillslope erosion) (45 per cent) and streambank erosion (39 per cent) the main sources.

The same report states that compared to pre-European conditions, mean-annual river loads to the Great Barrier Reef lagoon have increased; 3.2 to 5.5-fold for total suspended solids; two to 5.7-fold for total nitrogen; and 2.5 to 8.9-fold for total phosphorus. The total pesticide load to the Great Barrier Reef lagoon is likely to be considerably larger, given that a total of 34 pesticides have already been detected in the Great Barrier Reef catchments.

Flood water in rivers contains much higher 'total suspended solids,' or volume of other debris materials (like soil, plant material, dust, and other particulate material) than normal flow conditions. For example, the transitory TSS for an [Adani infringement notice](#) due to a controlled release in high rains at a monitoring point was 58 mg/L when the maximum limit of total suspended solids allowed in a flood water release under the Port's Environmental Authority is 30 mg/L. But this is a fraction of the levels usually found in natural flood events.

The research shows that the dominant sediment supply to many rivers in the Great Barrier Reef catchment is from a combination of gully and streambank erosion, and subsoil erosion from hillslope rilling.

The [cumulative effects of flooding](#) of Queensland Rives may have reduced coral growth by 50%. A Bradfield Scheme would reduce total flows by capturing some of the flood water and redirecting inland to provide irrigation, town and mine water supplies. The capture and redirection of flood water would reduce the overall sediment discharge and potentially help to maintain the health of the Great Barrier Reef.