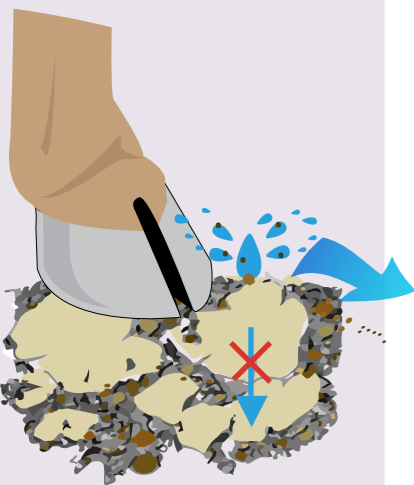


5. EROSION IN GRAZING LANDS

Overgrazing

Over time, overgrazing reduces pasture cover (including 3P grasses) and can lead to bare, compacted ground that is less porous to rain. This increases the speed and volume of run-off during rain events and therefore increases the risk of erosion and soil loss, impacting pasture productivity and waterways. Frontage country along watercourses is particularly prone to overgrazing.

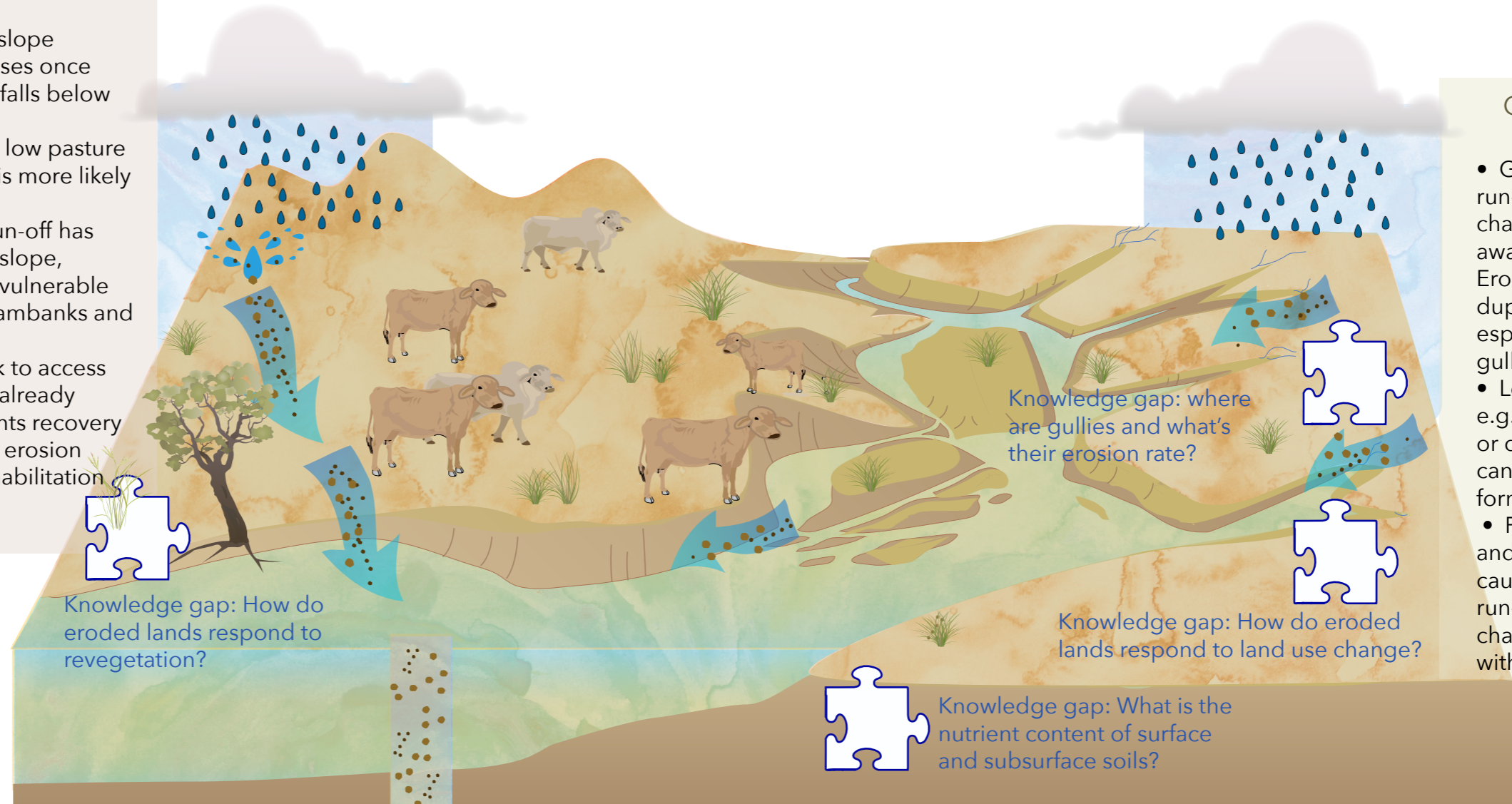


Hillslope erosion

The risk of hillslope erosion increases once ground cover falls below 40%:

- in areas with low pasture cover, rainfall is more likely to run-off
- increased run-off has impacts downslope, particularly in vulnerable areas like streambanks and gullies

Allowing stock to access areas that are already eroded prevents recovery and can make erosion worse and rehabilitation more costly.



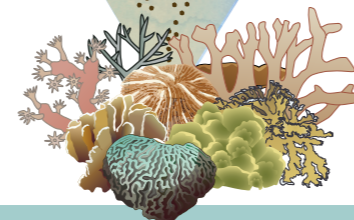
Gully erosion

- Gullies can form when run-off concentrates into channels and washes away sub-surface soil. Erodible and duplex-profile soils are especially vulnerable to gullies.
- Loss of pasture cover, e.g. through overgrazing or drought-flood cycles can trigger gully formation.
- Poorly located roads and tracks can also cause gullying e.g. when run-off from roads is channelled into areas with erodible soils.

Streambank erosion

Riparian areas that do not have deep rooted trees, shrubs and grasses (which can result from overgrazing) are vulnerable to streambank erosion. This can occur through:

- channel deepening
- channel widening
- new channels forming



Impacts on the reef

In the Burdekin catchment, sub-surface soil from hillslope, streambank and gully erosion represents approximately 85% of sediment loads following dry conditions and approximately 95% of sediment loads following wet conditions.

When soils wash off paddocks, nutrients and pasture productivity go with it. Most particles drop out at the river mouth. Fine soil particles (<16 µm) continue out onto the Great Barrier Reef forming flocs with organic matter. These flocs block light to seagrass and coral causing death on settling.



Economic costs

For graziers in the Burdekin, sediment loss is a major issue. Loss of sediment means loss of productive land, pasture, nutrients, water and infrastructure. Much time is spent on dealing with this problem.

Knowledge gaps highlight priorities for future research