Doing our bit to help protect our local waterways and the Great Barrier Reef

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Townsville City Council

creek to coral
our waterways – our responsibility

reef guardian council

So why these new arrangements?

Prevention better than cure… and cheaper!

Creek to Coral partnership

Townsville City Council initiative (with DERM)

- Protecting our local freshwater and downstream marine environment from the effects of land based activities… using a Total Water Cycle Management approach:
  - Achievable local government actions:
    - Infrastructure based approach
    - Improved urban planning and regulatory mechanisms
  - Involving the community:
    - Supporting community based education and involvement
- Integration of waterway management activities across Council, Government, Industry and our community
- Manage catchment management and water quality improvement projects

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our waterways – our responsibility

Black Ross WQIP

Characteristics of the WQIP region

Total area ~ 2700km²

- Urban ~8%
- Nature cons / min use ~37%
- Grazing ~49%
- *or Peri-urban ~ 30%*

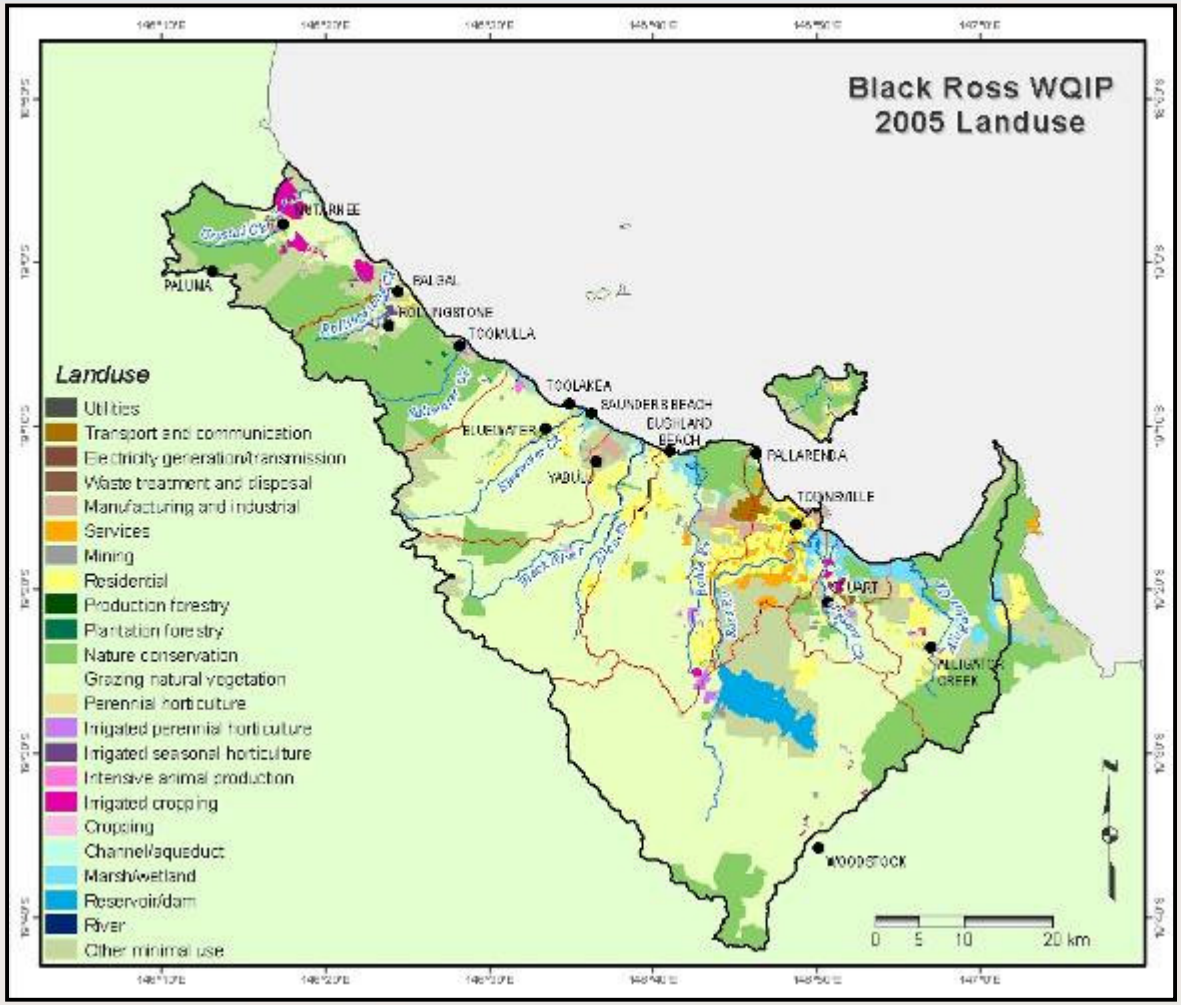
Population

~ 160 000 (2005)

~ 175 000 (2009)

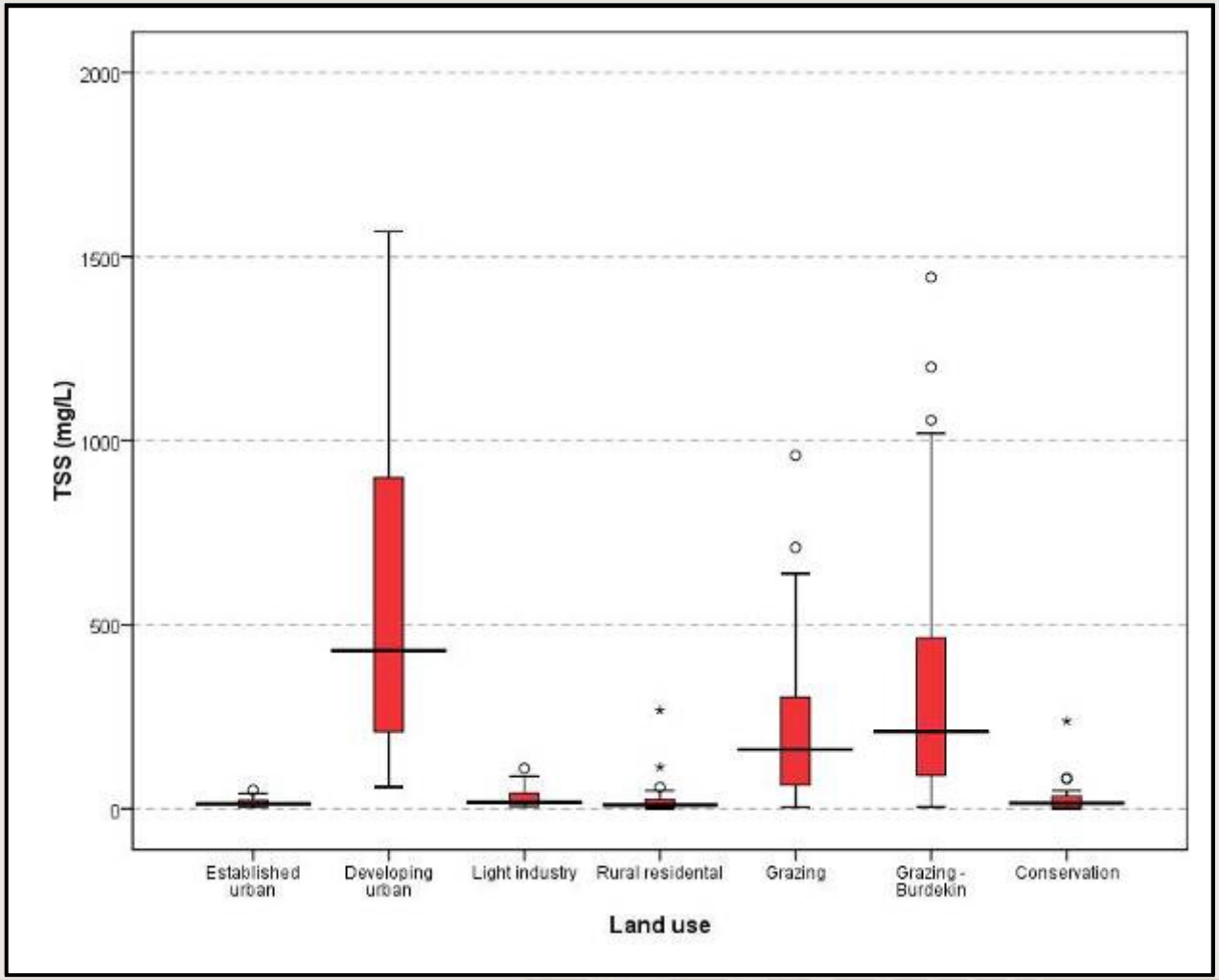
Rainfall

- Av ~1143mm/yr (91 days)
- > 2000mm/yr at Paluma



Event based water quality results

Source: 2006/07 and 2007/08 data (ACTFR)



Issues, pressures and threats

Priority pollutants by land use

Diffuse sources

- All developing landuses (e.g. construction phase)
  - total suspended sediment (TSS) and particulate nutrients
- Developed landuses (e.g. mature urban areas)
  - inorganic, organic nutrients, TSS and rubbish (and low DO)
  - pesticides, metals and hydrocarbons (some localised issues)
- Peri-urban
  - diffuse inorganic nutrients (nitrogen)
- Grazing
  - TSS and particulate nutrients

Point sources

- Wastewater treatment plants
  - inorganic nutrients

Issues, pressures and threats

Population increase

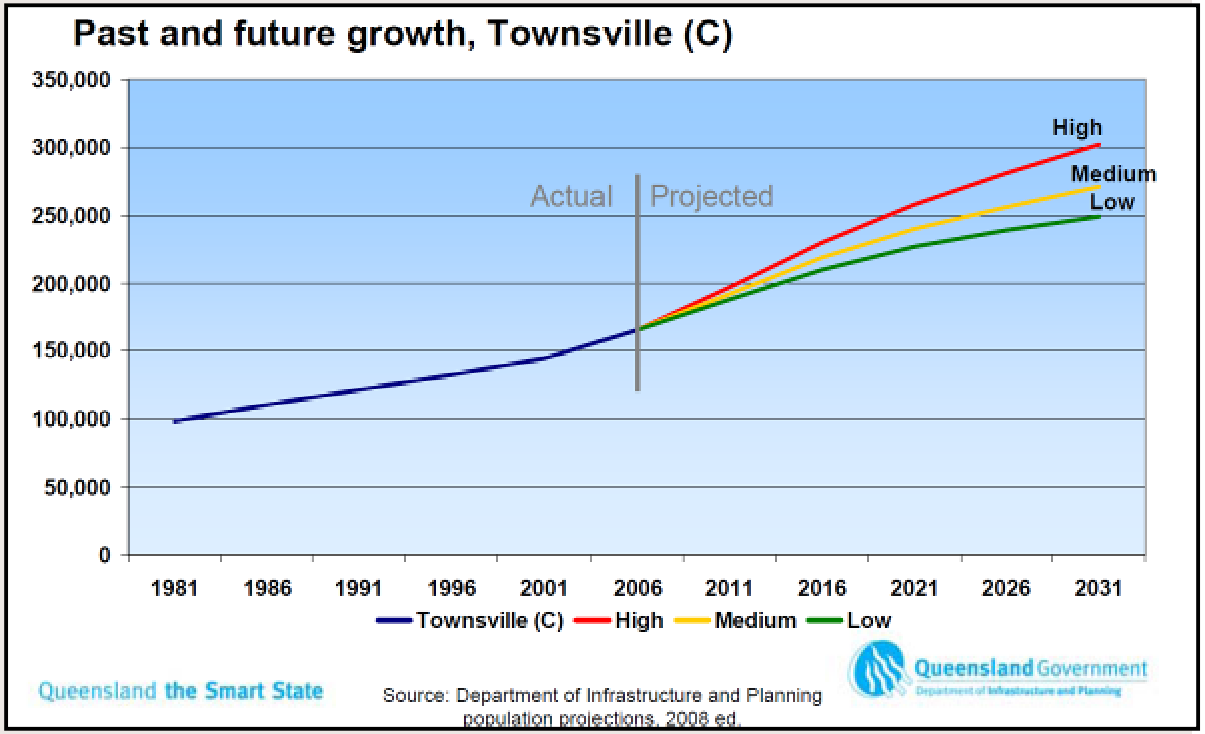
Townsville population

Actual (2005) ~160 000ppl

Actual (2009) ~175 000ppl

Projected (2021) ~237 000ppl

Projected (2045) ~312 000ppl

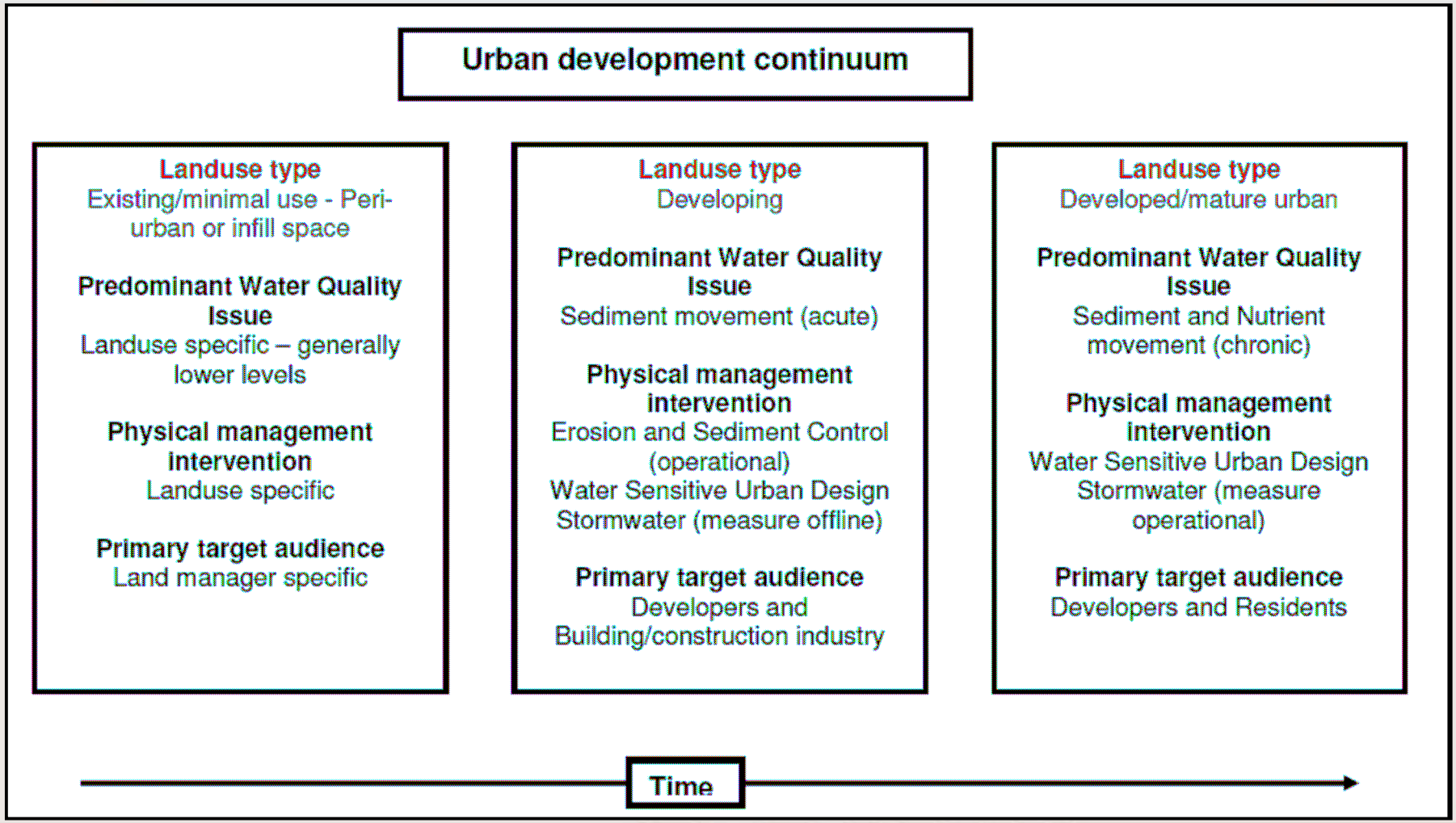


More people equals:

- *more houses/development pressure = more pollutant loads*
- *more wastewater volumes = more pollutant loads*

Priority management actions

Urban development context



Priority management actions

Developing urban areas

- Erosion and sediment control (operational)
  - 6 day E&SC course; Works code – E&SC Plan
- Water sensitive urban design (planned but non operational)
  - Draft Dry Tropics WSUD Technical Design Guidelines
- Influencing behaviours
  - Developers, construction industry, civil works etc
- Site Based Stormwater management plans
- Enhanced development assessment and conditions
- Enabling actions
  - planning scheme and policies (stormwater, lakes etc),
  - awareness and training

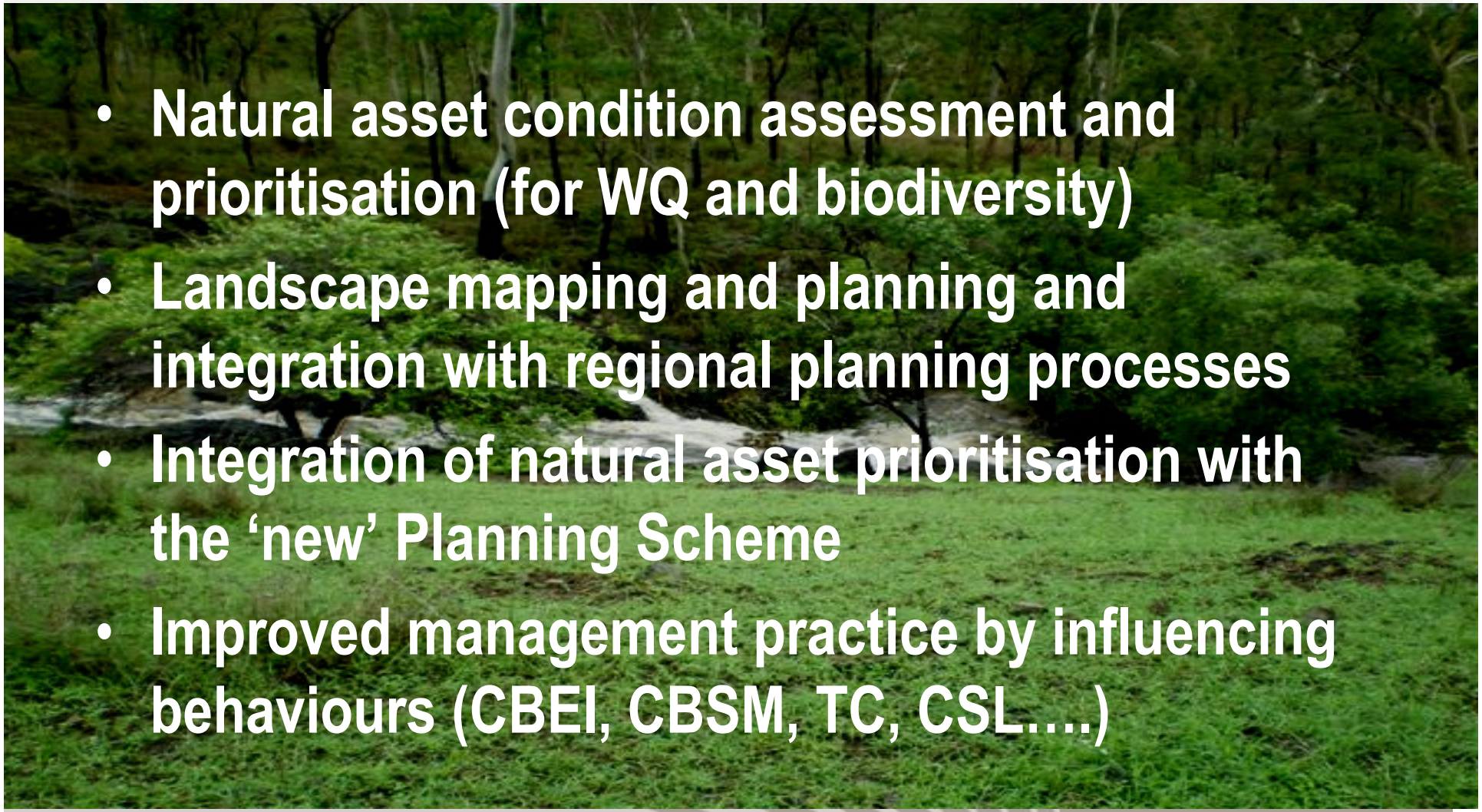
Priority management actions

Developed urban areas

- Urban stormwater quality management planning
  - Complete USQMP for 'urban growth zone' of the amalgamated TCC local government area
- Water Sensitive Urban Design (operational) including retrofits
  - Draft Dry Tropics WSUD Technical Design Guidelines
- Social learning and influencing behaviours
  - Residents and land managers inc Council operations
- Enabling actions - Community based education and involvement

Priority management actions

Peri-urban areas



- Natural asset condition assessment and prioritisation (for WQ and biodiversity)
- Landscape mapping and planning and integration with regional planning processes
- Integration of natural asset prioritisation with the 'new' Planning Scheme
- Improved management practice by influencing behaviours (CBEI, CBSM, TC, CSL….)

Priority management actions

Influencing behaviours

Implementation considerations

>> Affordable and cost effective (over life cycle)

>> Practical and effective (over life cycle)

>> Involving, integrating and collaborative

>> Transferable and replicable

>> Supported

>> Maintainable

Simple, effectives and practical ON-GROUND ACTIONS

… integrating technology, ecology and people via transformative communications

What about uncertainty and complexity?

- Population growth rate
- Climate change and variability
- WSUD efficacy in the Dry Tropics
- Peri-urban ‘Best Practice’
- Community expectations
- Behaviour ‘drivers’ – various audiences
- Government policy and political will
- Funding and budget allocation uncertainty

Thanks for listening…

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City of Townsville

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Australian Government

Queensland Government