



CARING
FOR
OUR
COUNTRY



PAST, PRESENT and FUTURE: REEF RESCUE IN THE WET TROPICS REGION

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Terrain NRM

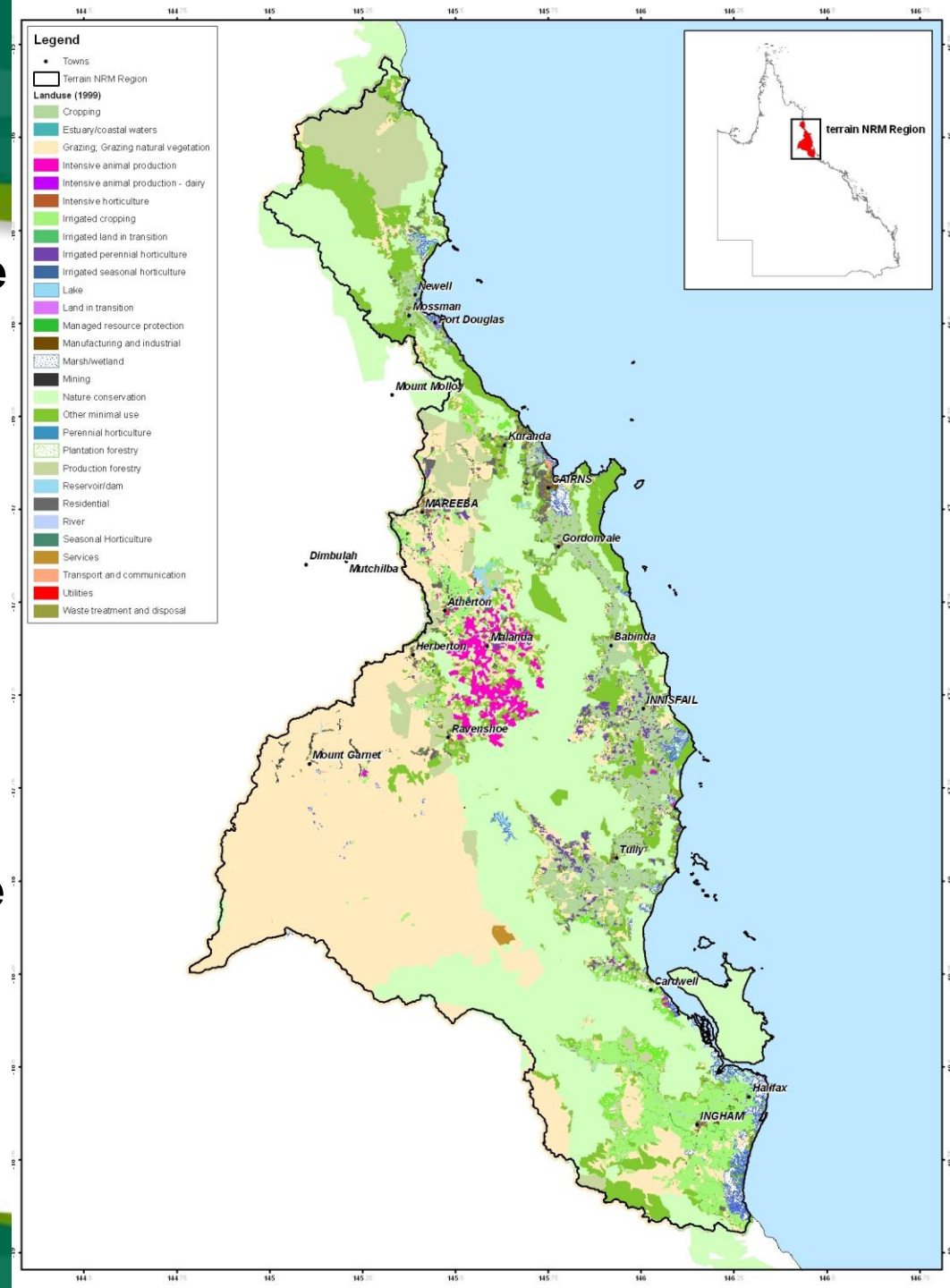
Outline

- **The Wet Tropics Region**
- **Where it started - WQIPs**
- **Terrain RR arrangements**
- **Terrain investment priorities**
- **New in 2010**
- **Some Reef Rescue examples**



Features

- Diverse land use from intensive agriculture (bananas/sugar cane/) to extensive grazing
- Mean annual rainfall of 1,580mm is triple the long term Aust average (472mm)
- Seasonal rainfall from rain depressions and cyclones during the summer wet season
- Soils have low cation exchange capacity and are porous
- Seven diverse catchments



WQIPs



- Started in Douglas, Tully and Barron and now progressing all catchments.
- Showed nutrients, pesticides and sediments substantially over pre-development levels.
- Set Water Quality Objectives to secure reef health.
- Nutrient levels primarily nitrogenous fertilisers.
- Sediment primarily bank and gully erosion.

Terrain Reef Rescue Processes



Common to
all panels

- Industry delivery partnerships with Canegrowers, Prod Boards, Mills, Growcom, QDO and Agforce.
- Grant applications to address criteria
 - Impact on water quality (50%)
 - Value for money index (15%) –priority practice/water quality/cost /area
 - Contribution in excess of 50% (15%)
 - Risk assessment (10%)
 - Number of times previously funded under Reef Rescue (10%).
- Selection panel for each industry.
- Solid project follow through and impact reporting.

Terrain Multi-Criteria Decision Support Tool



REEF RESCUE FUNDS ALLOCATION

MULTI-CRITERIA DECISION SUPPORT TOOL

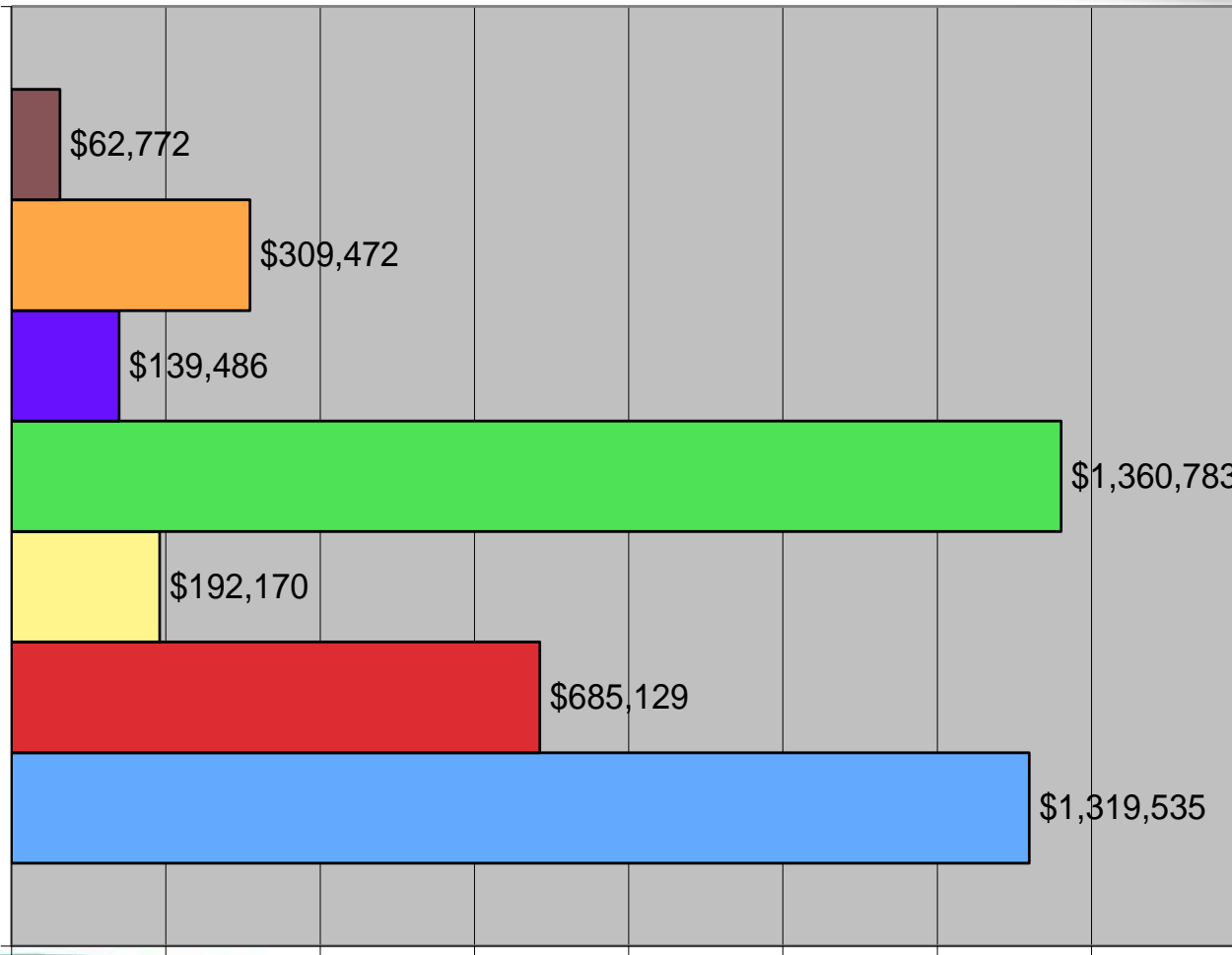
	Weighting	Sugar		Horticulture		Dairy		Grazing		Forestry		Totals
		Sugar Rating	Rating X Weighting	Horticulture Rating	Rating X Weighting	Dairy Rating	Rating X Weighting	Grazing Rating	Rating X Weighting	Forestry Rating	Rating X Weighting	
Nitrogen Risk	5	5	25	2.5	12.5	0.5	2.5	0	0	0	0	
Sediment Risk	2	4	8	1	2	0.25	0.5	0.5	1	0	0	
Pesticide Risk	3	5	15	0.5	1.5	0	0	0	0	1	3	
Area	4	4	16	0.25	1	0.25	1	4.5	18	0.25	1	
Solvability	2	5	10	2	4	1	2	0.25	0.5	0.25	0.5	
Total			74		21		6		19.5		4.5	125
Percentage % Total			59.2%		16.8%		4.8%		15.6%		3.6%	100.0%

- Overall weighting and individual industry risk assessment for nitrogen, sediment, pesticide, area and solvability

Reef Rescue – Investment Focus

- Soil and Nutrient Management Planning.
- Integrated Weed Control Training.
- Farm Management Systems and Risk Assessments
- Farm/ Industry Extension services.
- Water Quality Improvement Grants.

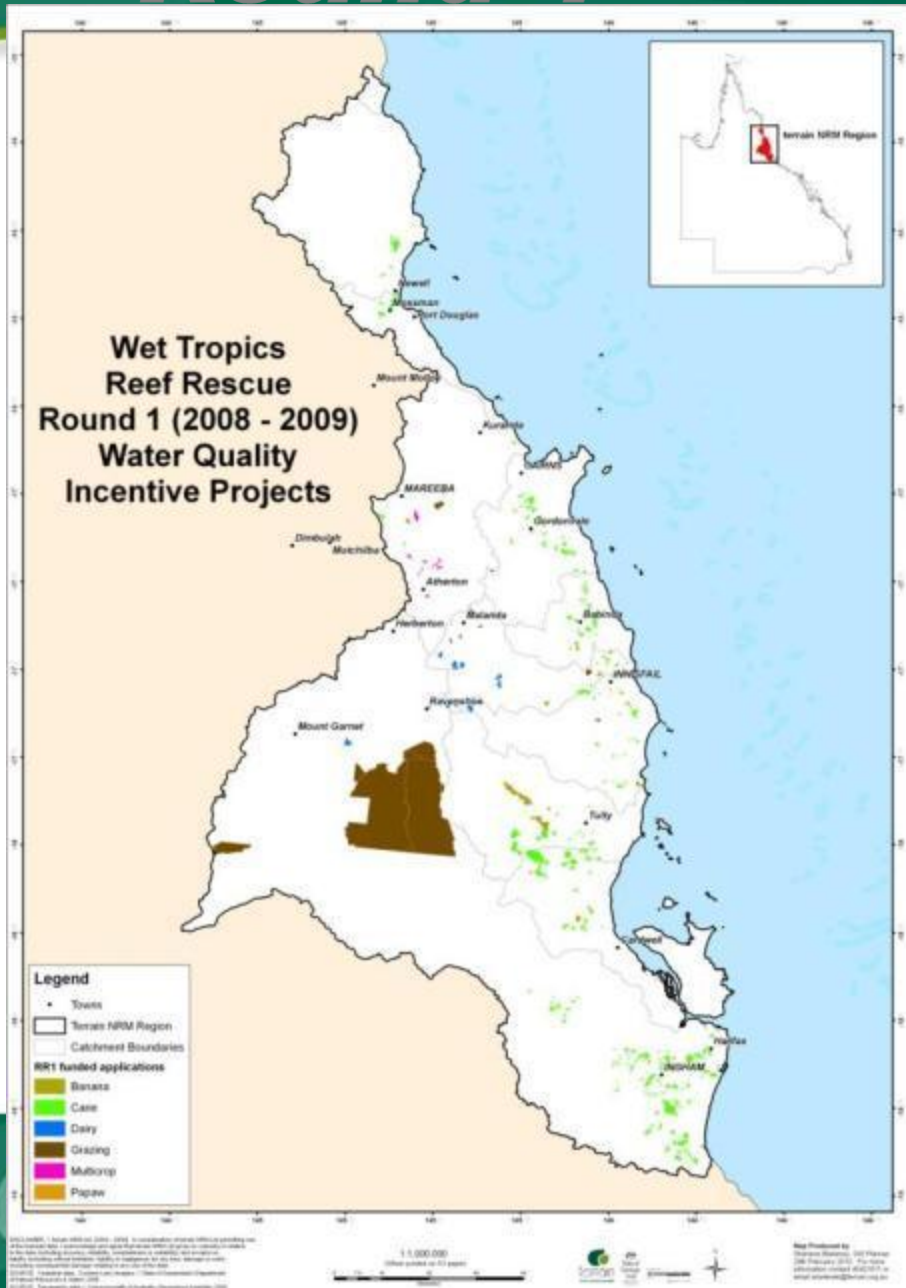
Reef Rescue - Target Issues



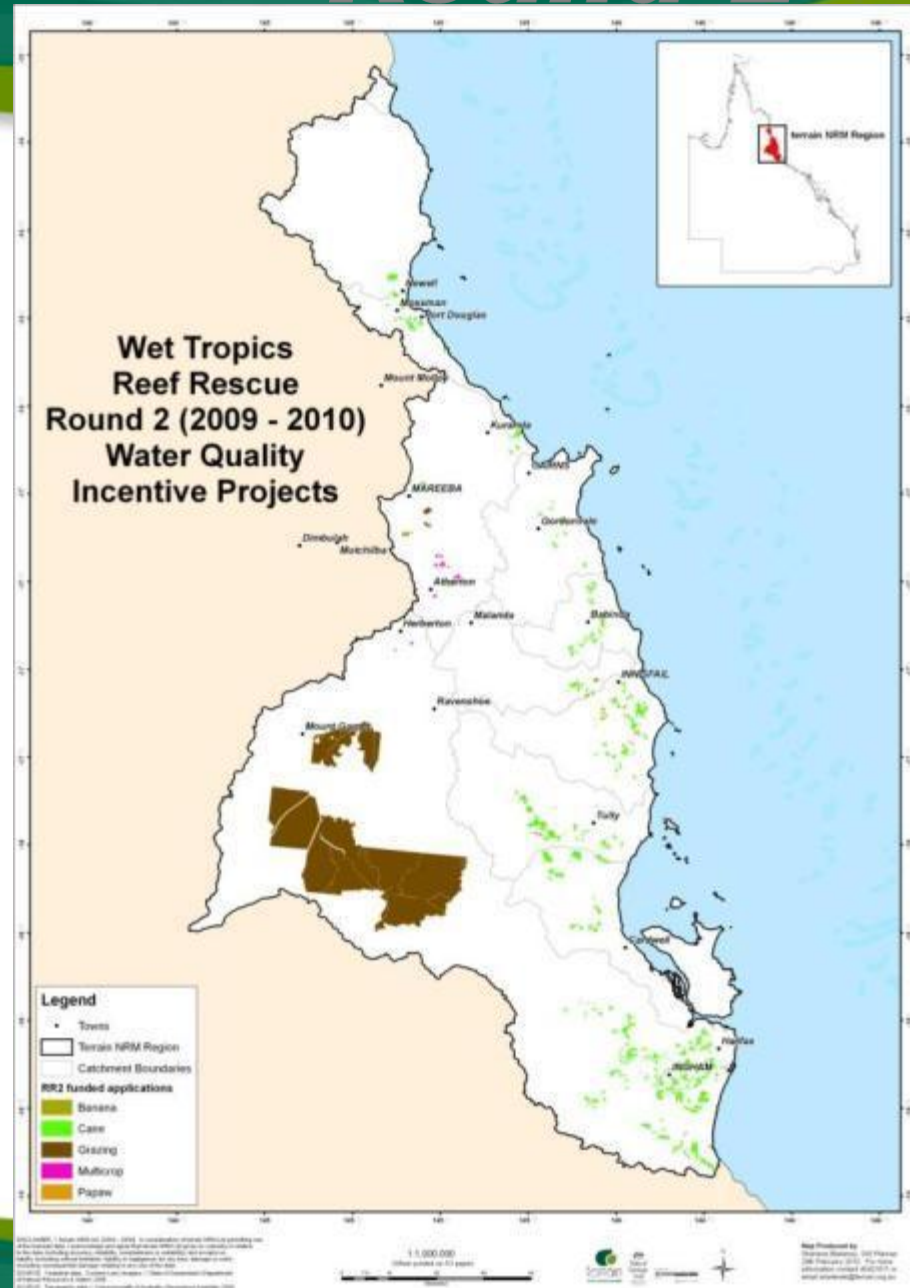
Many projects addressed multiple targets – nutrients main focus

- Nutrient, sediment and pesticide
- Sediment and pesticide
- Nutrient and pesticide
- Nutrient and sediment
- Pesticide only
- Sediment only
- Nutrient only

Round 1



Round 2



RR Example – Sub-Surface Fert



“...with the switch to a sub surface fertiliser application method, we are adopting more accurate placement of fertiliser and this results in less fertiliser applied and reduced fertiliser run off.”

Cane farmers are placing fertiliser underground, using GPS, wider rows and minimum tillage. All cane is cut green and trash conserved.

RR Example – Bananas



Under tree micro-sprinklers with automatic fertigation in bananas applies the correct amount of water and fertiliser – reducing the loss of nutrients

RR Example – Contour Banks

Soils in the multi-cropping lands of the Atherton Tablelands are at risk from erosion without erosion prevention structures like contour banks.



RR Example – Hooded Sprayer



- Switch away from residual herbicides
- Adjustable height as cane grows for accurate placement
- Adjustable width along boom for increasing row widths to minimise compaction
- Directional sprays controlled from cab for accurate placement of herbicide
- Four hoods to minimise in-field traffic

RR Example – Cell Grazing



“This project permits regular rotation of stock...before paddocks come under stress, to ensure all pastures have enough time to fully regenerate without chemical fertilisers or weedicides”

RR Example – Drain/ Gully Repair



Major gully repairs to protect headland, and revegetation with locally occurring native species reduces erosion and loss of soil

RR Example – Catchment Repair



- Major stabilisation works on Mulgrave River, Gordonvale
- Revegetation links two areas of previous riparian revegetation
- 55ha cane land above has undertaken eco-efficiency.

New Innovations in 2010

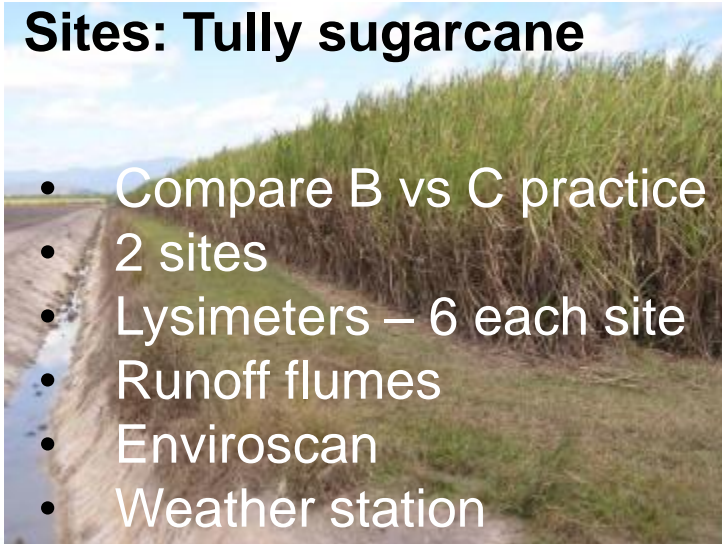
- Maximum grant size for single cane projects reduced to \$30,000, in line with other industries (papaw \$20,000), to extend the reach and in anticipation of greater co-contribution from the sugar industry.
- Reintroduction of a small grants category (\$2,000-\$5,000), to increase the reach of the Reef Rescue program to a greater percentage of landholders (currently less than 10%).
- Cane mill area grants (\$5,000-\$150,000) to support, mill area specific priorities.
- Project Catalyst technical support for successful innovative (A class) cane projects in the Tully and Herbert mill areas.
- Full integration of the catchment repair component into the industry competitive grants process.
- Selection criteria to weigh in favour of new applicants.

Catchment to Reef

Integrated Monitoring, Modelling and Reporting Program

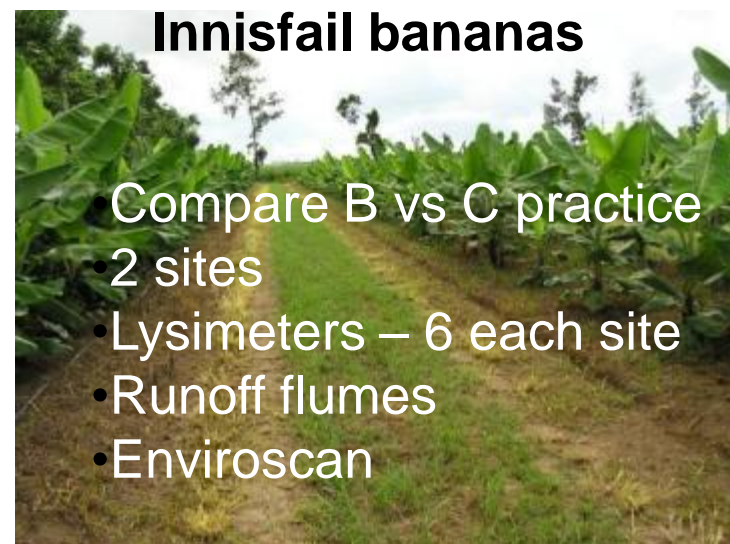
- Water quality parameters - sediment, nutrient, pesticide
- Soil description, profile analyses, BD, changes in mineral N with legume,
- Yield and other agronomic performance
- Monitoring and modelling

Sites: Tully sugarcane



- Compare B vs C practice
- 2 sites
- Lysimeters – 6 each site
- Runoff flumes
- Enviroscan
- Weather station

Innisfail bananas



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- 2 sites
- Lysimeters – 6 each site
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The Future

- Keep on solid delivery of targets for coming three years.

Post Reef Rescue Focus on:

- Innovation, including corporate investment.
- Progressing Nitrogen Fixation Systems.
- Continuous improvement via industry farm management systems.
- Engaging the high hanging fruit.
- Public good focus focus on river and wetland repair.

Thank you

More information on Terrain NRM can be obtained from our web site

- www.terrain.org.au

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