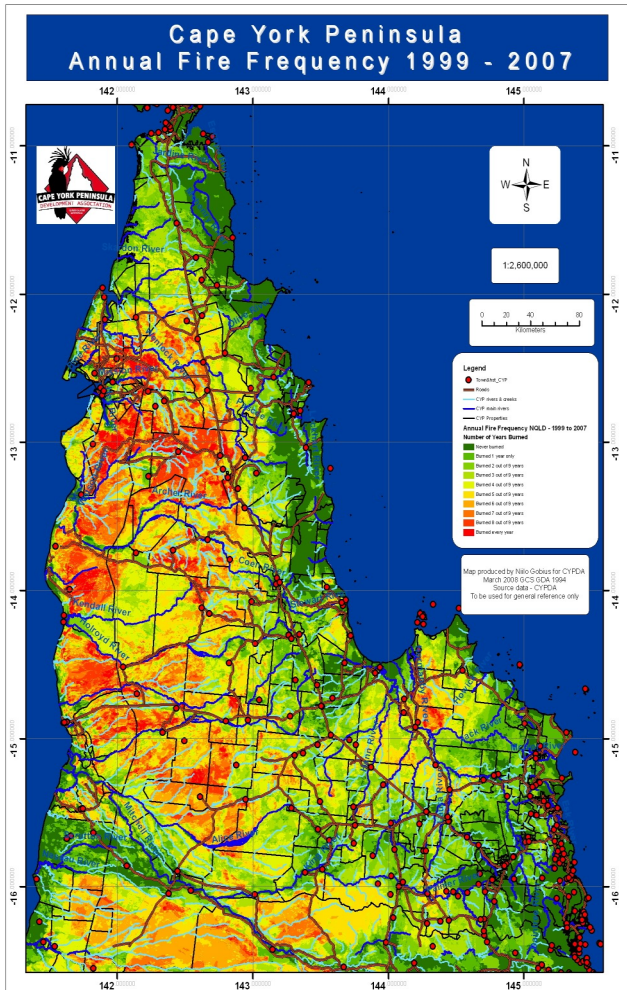


Fire Frequency Map for CYP Derived From Satellite Imagery

This fire frequency map shows the land that has been burned over time. The dark green areas represent areas that have not been burned from 1999 to 2007. The bright red areas have been burned every year in the same period, with various degrees of burning represented by the lighter shades of orange, yellow and green.



Acknowledgements

Cape York Sustainable Futures would sincerely like to thank the Cape York Peninsula pastoralists who freely contributed to this study.

We would also like to thank researchers at CDU and JCU for their part in making this project possible, and the Australian Government for funding this important work.

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**CYSF Inc working in partnership
with community, and...**



**Cape York Sustainable
Futures**

Remote Sensing and the Economics of Fire Management for Sustainable Pastoralism



Main findings



The Cape York Peninsula fire economics project



The Cape York Sustainable Futures1 (CYSF), Charles Darwin University (CDU) and James Cook University (JCU) conducted a study to investigate the economics of fire management on Cape York Peninsula through a project funded by the National Landcare Program.

How the project was conducted ?

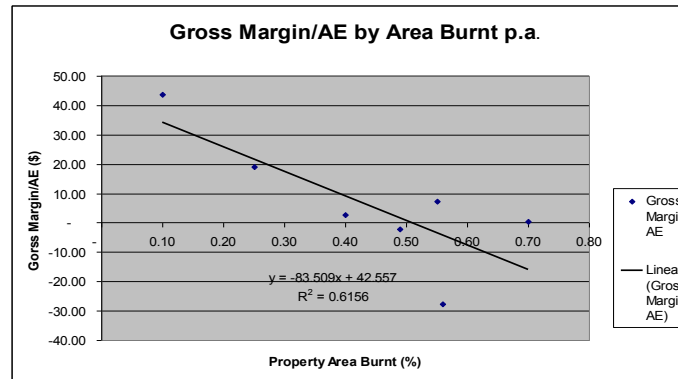
The project combined 8 years (1999-2006) of satellite image mapping and interviews with land managers to assess the relative use of no fire management, fire fighting only, early dry season and/or storm burning in achieving property management objectives (such as restricting dry season fires, maintaining healthy cattle, preventing/reversing woody thickening).

An economic analysis and comparison of these fire management strategies (using the corresponding eight years of property financial records) was undertaken to compare and contrast the properties.

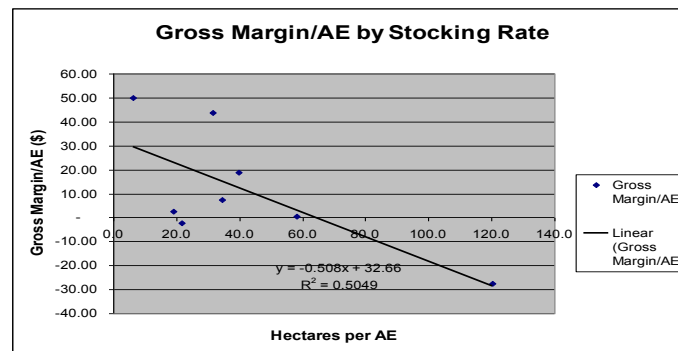
Pastoral managers were also asked to ground truth inputs into the end-product economic model relative to operations on their own property and the surrounding region.

Main findings

- ◆ Lower gross margins (GM)/Adult Equivalent (AE - 400kg animal) were associated both with increasing average annual burn areas and lower stocking rates.



- ◆ The greater the area of property burnt each year, the lower the stocking rate, as pasture availability is reduced.



- ◆ Reduced stocking rates and the use of family labour mean only relatively small differences between the costs and benefits of various fire management regimes were observed.

- ◆ Properties that can successfully fight and stop wildfires still engage in early dry season preventative burning, as this can significantly reduce the number of years in which wildfires need to be fought.

- ◆ Storm burning ti-tree flats avoids a loss of carrying capacity estimated to be worth \$0.025/ha p.a., equivalent to \$760 - \$3,660 p.a. on the properties surveyed. Given the low costs of storm burning, it usually results in higher gross margins than if just early season firebreaks are implemented.

- ◆ Attempts to draw relationships between the mapped fire scar information and on-ground vegetation trends to improve the model were unsuccessful. Fire frequency alone could not be related to shrub density, canopy cover or tree basal area.



Project benefits for landholders

- ◆ Contributes to an understanding of how using fire, or not using fire, affects economic viability

- ◆ Helps to develop strategies to assist land holders to manage fire on properties so as to best sustain or improve economic viability

- ◆ Contributes to a better understanding of fire in the landscape and its impact on sustainable production

- ◆ CYSF and natural resource management agencies like the Rural Fire Service have gained valuable economic insights regarding fire management on pastoral properties and, by implication on conservation areas and indigenous lands as well.