# Addressing a Change in Soil Erosion Risk through a Tender-based Management Approach

DEMO

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## Key messages

- **Reducing impact of soil erosion on private and public land.**
- **Ability to match land use to land capability.**
- **Landholders deciding their own management actions for erosion mitigation.**
- **Cost effective approach to address soil degradation.**

## Why do the trial?

The Eyre Peninsula Natural Resources Management Board's (EPNRM) "Soil Management Projects" aim to achieve a reduction in soil erosion risk at vulnerable sites on private land across Eyre Peninsula.

This pilot program on Eastern Eyre Peninsula was implemented to assist landholders adopt better land management practices that would reduce erosion on their poorer farming land. Using a tender-based (Market Based Instrument - MBI) approach, landholders entered into management contracts through a competitive process, to undertake a range of activities that would support the adoption of better land use that would maintain and enhance the sustainability of farming systems on Eyre Peninsula.

## How was it done?

Landholders within the targeted area submitted expressions of interest on how they would address soil surface cover issues to reduce soil erosion on areas of their properties. To demonstrate their intent to achieve the target, landholders agreed to a set of appropriate management actions for each site. Proposed management actions were at the discretion of the landholder, however, these needed to meet standards set by EPNRM to ensure the quality of outcomes.

Preferred management actions were those that could most cost-effectively achieve the soil erosion risk reduction target for the site for the duration of the contract (3 years).

Eligible management actions included:

- Changed stocking rates and times
- Stubble management
- Revegetation
- Planting of perennial vegetation
- Relocation of watering points and fencing

## What happened?

A total of 21 properties (782 ha) were assessed during the expression of interest stage of this pilot project. Twelve landholders over 32 sites were offered 3-year contracts for the management of a total of 495.6 ha. Sites selected were all classified as having high erodibility, with 70% of the area classified as Land Class 3a or 4a.

Landholders bids were assessed on an "Erosion Risk Index" (ERI) taking into account the area protected, site erosion risk and tender price. The ERI is increased through either a high erosion risk site or a lower price per ha being protected (therefore, the higher ERI the better value for money).

## What does this mean?

Landholders entered into contracts to increase and maintain 50% ground cover on designated areas of their property over a 3 year period. The average district cover level at the time of offering these contracts was 47.7% and the successful landholders applying through this tender process, averaged 7% below other sites in similar land classes in the region. This cover level was below the target level for adequate reduction of soil erosion risk (1 t/ha.). By early 2010, the difference in soil surface cover between managed and control sites had dropped to approximately 2% and were no longer significantly different from the district average.

Change in soil surface cover at managed sites was significant (see the difference in distribution between white bars (2009) and black bars (2010) in Table 1). The increase in cover represents a site compliance rate of approximately 80% in the first year of the program. This project also showed that increases in soil surface cover occurred at managed sites and that approximately 80% of sites met their soil surface cover targets in the first year of 3-year contracts. This is the first known demonstration of soil erosion risk reduction being achieved through tender for management contracts on Eyre Peninsula. The contract compliance rate of 80% is considered high for the first year of implementation of this novel project approach as landholders change to more conservative soil management techniques. Follow-up monitoring of landholders in 2011 will be necessary to see if differences in soil surface cover between managed and control sites have reduced further or disappeared.

This pilot project has been able to demonstrate that the tender-based approach to allocation funds for erosion protection was evidence-based, transparent and focussed on prioritisation of sites to achieve cost-effective outcomes for funds allocated. This in turn has lead to a subsequent MBI program being implemented to further improve Eastern EP's high risk erosion prone soils.


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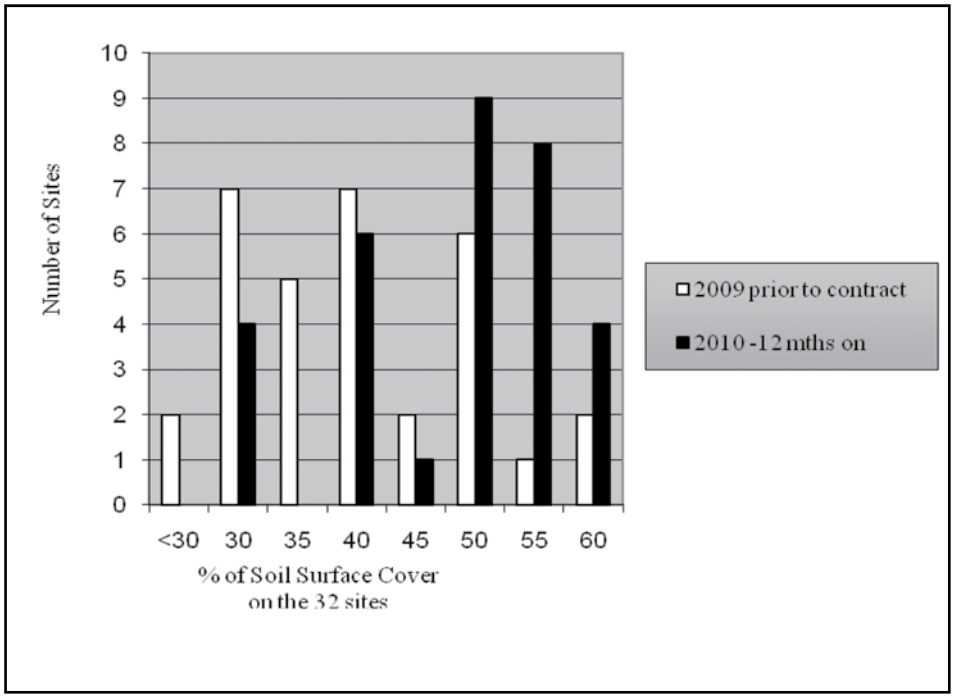


***Table 1 Change in soil surface cover on managed sites from 2009 to 2010***