Soil Erosion Solutions
Helping North Coast landholders reduce soil erosion

Soil erosion projects completed in the Northern Rivers, NSW 2005/06

Funded by Northern Rivers Catchment Management Authority
1. Gully stabilisation - Cudgen | Page 2
2. Steep slope stabilisation - Upper Crystal Creek | Page 3
3. Stopping mass movement - Barkers Vale | Page 4
4. Orchard floor improvement - Bangalow | Page 5
5. Improve orchard drainage and groundcover - Nashua | Page 6
6. Repair of cultivated land - Whiteman Creek | Page 7
7. Steep land stabilisation - Sandy Beach | Page 8
8. Stabilising banana tracks - Moonee Beach | Page 9
9. From bananas to bushland - Korora | Page 10
10. Moving out of bananas - Bruxner Park | Page 11
11. Rehabilitation of grazing land - Boambee | Page 12
12. Reafforesting former banana land - Valla | Page 13
13. Rehabilitation of former banana land - Newee Creek | Page 14
14. Gully stabilisation - West Kempsey | Page 15
Soil Erosion Solutions supports work to repair, reduce and prevent soil erosion on agricultural land in the northern rivers region.

How SES works
SES is funded by Northern Rivers Catchment Management Authority and delivered by NSW Department of Primary Industries (NSW DPI) and Landcare. Technical panels assess applications from landholders and NSW DPI and Landcare work with successful applicants to finalise technically sound project plans. Landholders do the on-ground works.

Clarence projects
In the Clarence catchment the focus was on stabilising gullies and repairing cultivated land.

Nambucca/Macleay projects
In the Nambucca/Macleay catchments an active gully was stabilised, a former banana plantation was reshaped and replanted with pasture on the flatter terrain and trees on the steeper slopes, and an indigenous group rehabilitated a creekside former banana slope with native tree planting.

SES 2 & 3
The initial Soil Erosion Solutions program has been so successful in helping landholders control severe soil erosion that the Catchment Management Authority has now funded the NSW DPI to manage two further programs. SES2 is funding projects in the Richmond and SES3 will address gully erosion in the mid-upper Clarence and Casino areas, and steep land erosion in the Tweed and Byron local government areas.

SES 1
At the end of the first year of Soil Erosion Solutions, 17 landholders had completed works on their properties. Eight field days were held, and four newsletters and seven erosion fact sheets produced, available on the web at www.agric.nsw.gov.au/reader/soil-erosion or as hardcopies by request.

Richmond/Tweed projects
In the Richmond/Tweed catchments two macadamia farmers reshaped their orchard floor drainage and established shade-tolerant groundcover, and other landholders have stabilised mass movement, tunnel erosion and active gullies.

Coffs/Bellinger projects
In the Coffs/Bellinger catchments steep lands were the focus, with landholders funded to safely remove bananas, remove noxious weeds, establish groundcover, revegetate gullies and stabilise roads.

Information and support
The Soil Erosion Solutions team will continue to help landholders with erosion project planning, and to run field days and training events to share knowledge about how to reduce soil erosion on farms. The team is currently compiling a technical manual for landholders to provide more detailed information on soil erosion management and rehabilitation. For more information about Soil Erosion Solutions contact Abigail Jenkins on 6626 1357 or abigail.jenkins@dpi.nsw.gov.au.
Erosion Facts

Worldwide...

Each year, wind and water clear 75 billion tons of soil from the land, most of which comes from agricultural land.

1 cm of soil lost to sheet erosion = 100 cubic metres of soil per hectare.

30% of the world’s farmland has become unusable in the last 40 years due to erosion.

Locally...

In New South Wales soil forms at 0.04 to 0.4 tonnes per hectare per year.

On the North Coast, erosion rates of more than 50 tonnes per hectare per year have been recorded.


**EROSION MANAGEMENT**

There are two basic strategies to control soil erosion on the North Coast.

1. **Maintain 95% groundcover**, with living plants and mulches, for example...

2. **Slow down water flow** to reduce erosivity and increase infiltration

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**EROSION FACT SHEETS**

The following fact sheets are available from the Department of Primary Industries by calling 02 6626 1294 or online at [www.northern.cma.nsw.gov.au/publications](http://www.northern.cma.nsw.gov.au/publications)

1. Types of erosion
2. Indicators of erosion
3. Monitoring erosion
4. Groundcover
5. Gully erosion
6. Roads and tracks
7. Planning your erosion project
Soil Erosion Solutions

Do you have soil erosion on your property?

**Splash**
erosion: raindrops hit bare soil and the impact breaks up soil aggregates mobilising particles and forming a surface crust.

**Sheet**
erosion: raindrop impact and shalllow surface flow removes soil in thin layers. Soil loss is gradual and often goes unnoticed.

**Gully**
erosion: expands as concentrated flows of water undercut and collapse the head and side walls of watercourses.

**Rills**
erosion: shallow gullies less than 30cm deep, common in agricultural land and freshly cultivated soil.

**Tunnel**
erosion: water moves into the soil through cracks, burrows or tree root cavities and creates a tunnel as dispersive clays wash away.

**Landslips**
steep slopes, intense rainfall and gravity can weaken the soil so that it collapses in large amounts. Early signs of potential landslips are cracks and scars running across the slope.

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