

# Land cover change in the Southern Gulf region 2012–14

## Introduction

This fact sheet is 1 of 13 in a series detailing land cover change in Queensland's Natural Resource Management regions. These fact sheets are addenda to the report: Queensland Department of Science, Information Technology and Innovation. 2015. *Land cover change in Queensland 2012–13 and 2013–14: a Statewide Landcover and Trees Study (SLATS) report*. DSITI, Brisbane. Please refer to this report for further background, terminology, methods and explanatory notes.

Figure 1 and Table 1 provide an historical overview of the remnant and non-remnant woody vegetation clearing trends within the region. The spatial distribution of the 2012–13, 2013–14 and historical woody vegetation clearing is shown in Figure 2. An overview of woody vegetation clearing rates categorised by tenure is provided in Table 2 and Figure 3. Woody vegetation clearing rates and remaining woody vegetation in each catchment within the region are provided in Tables 3 and 4, respectively, while replacement land cover information is provided in Table 5 and Figure 4.

## Summary

In 2012–13, the woody vegetation clearing rate for the Southern Gulf region was 3 337 hectares per year (ha/year), an increase of 85% from the 2011–12 woody vegetation clearing rate of 1 801 ha/year (Table 2 and Figure 1).

In 2013–14, the woody vegetation clearing rate was 2 019 ha/year, a decrease of 39% from the 2012–13 woody vegetation clearing rate (3 337 ha/year) (Table 2 and Figure 1).

In 2012–13, the clearing rate of remnant woody vegetation in the region was 1 893 ha/year, an increase of 92% from the 985 ha/year reported in the 2011–12 period. In 2013–14, the remnant woody vegetation clearing rate was 1 907 ha/year, similar to the remnant woody vegetation clearing rate for the 2012–13 period (1 893 ha/year). The clearing of remnant woody vegetation accounted for 57% and 94% of the total woody vegetation clearing in the region for the 2012–13 and 2013–14 periods, respectively (Table 1 and Figure 1).

The replacement land cover class for pasture represented 89% and 94% of the region's woody vegetation clearing reported in the 2012–13 and 2013–14 periods, respectively (Table 5 and Figure 4).

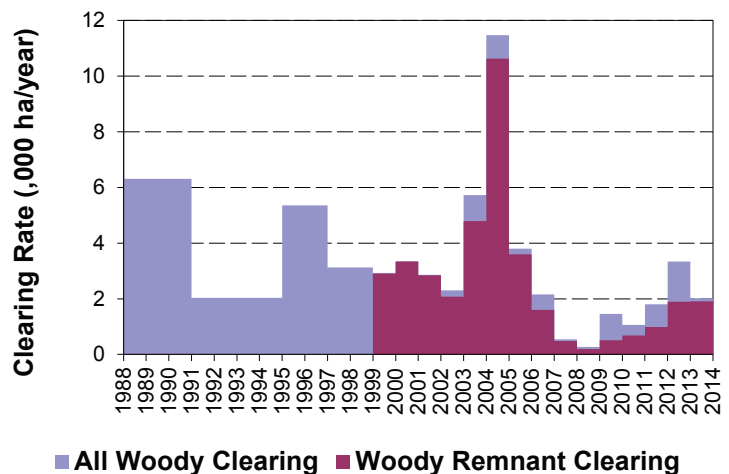
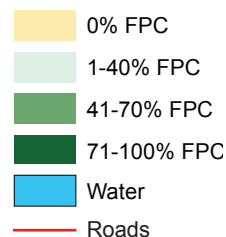


Figure 1. Woody vegetation clearing rates (1,000 ha/year) in the Southern Gulf region.

## Foliage Projective Cover (FPC) 2012 V2.3



## Clearing

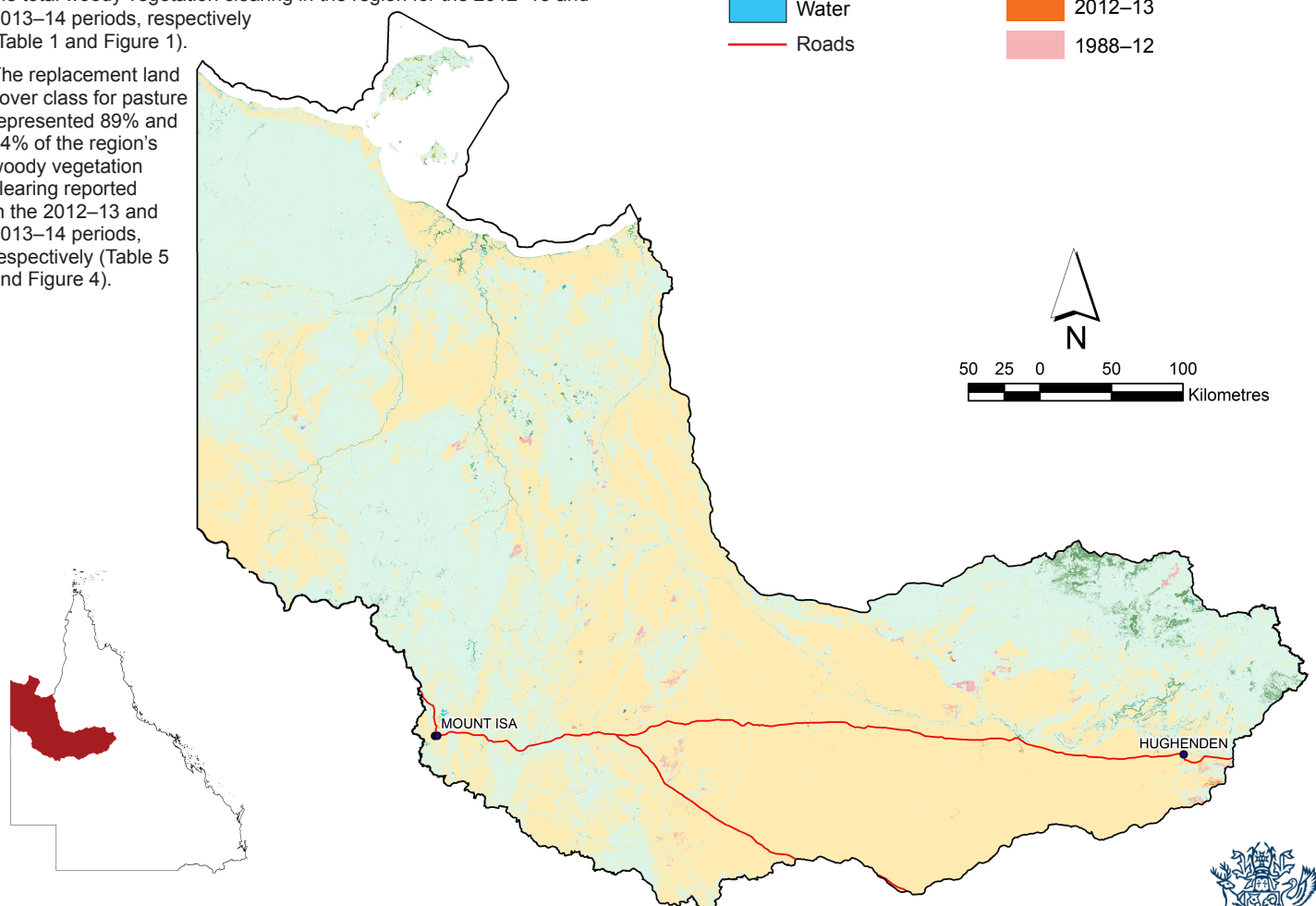
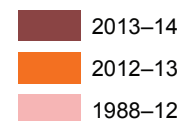


Figure 2. Spatial distribution of current (2012–13 and 2013–14) and historical (1988–12) woody vegetation clearing in the Southern Gulf region.

## Woody vegetation clearing by remnant status

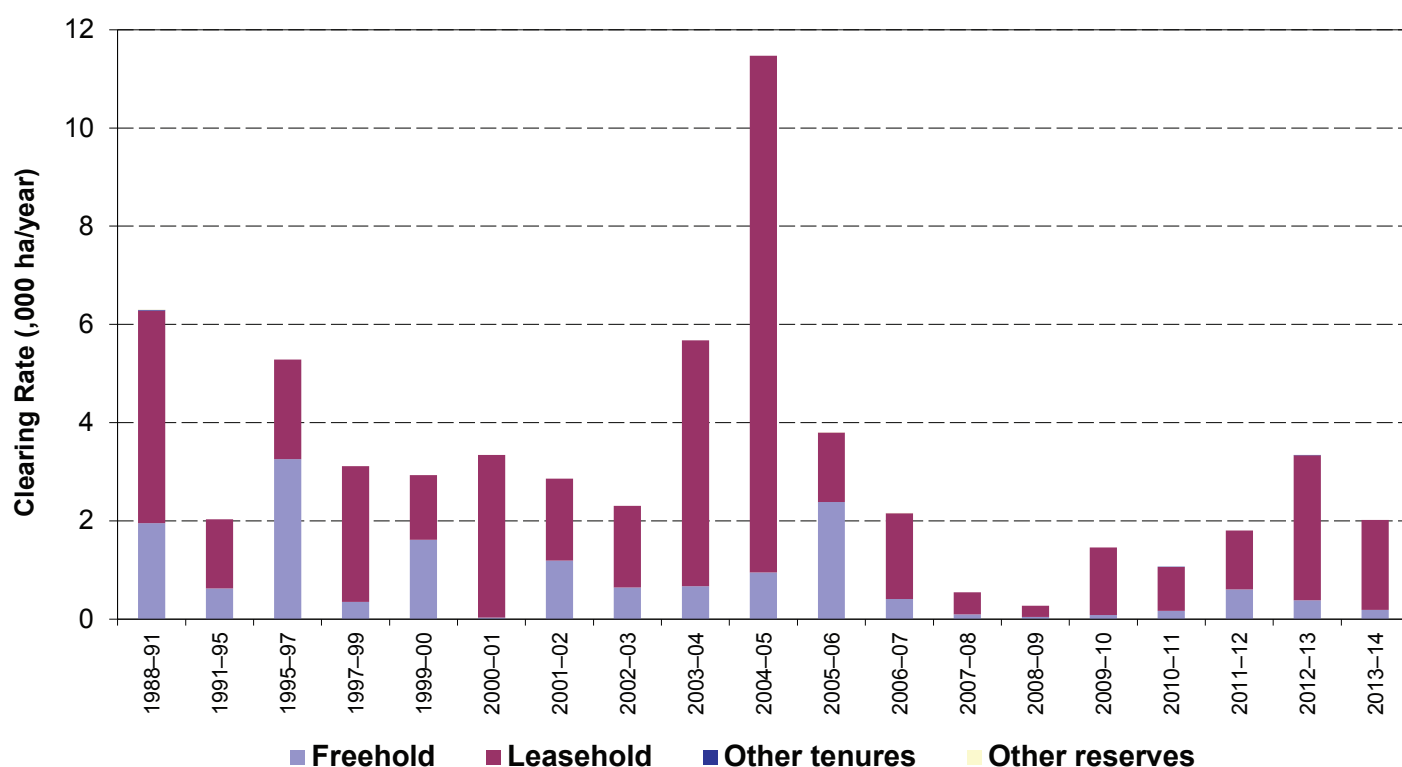
**Table 1. Remnant and non-remnant woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region.**

| Period  | Non-remnant woody | Remnant woody | Total woody clearing |
|---------|-------------------|---------------|----------------------|
| 1999–00 | 0.027             | 2.901         | 2.929                |
| 2000–01 | 0.000             | 3.340         | 3.340                |
| 2001–02 | 0.017             | 2.843         | 2.861                |
| 2002–03 | 0.227             | 2.075         | 2.302                |
| 2003–04 | 0.935             | 4.790         | 5.725                |
| 2004–05 | 0.842             | 10.628        | 11.470               |
| 2005–06 | 0.203             | 3.597         | 3.800                |
| 2006–07 | 0.557             | 1.598         | 2.155                |
| 2007–08 | 0.062             | 0.480         | 0.542                |
| 2008–09 | 0.075             | 0.193         | 0.268                |
| 2009–10 | 0.946             | 0.510         | 1.456                |
| 2010–11 | 0.380             | 0.680         | 1.060                |
| 2011–12 | 0.816             | 0.985         | 1.801                |
| 2012–13 | 1.444             | 1.893         | 3.337                |
| 2013–14 | 0.112             | 1.907         | 2.019                |

## Woody vegetation clearing by tenure

**Table 2. Woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region by tenure.**

| Period  | Freehold | Leasehold | Other tenures | Other reserves | Total  |
|---------|----------|-----------|---------------|----------------|--------|
| 1988–91 | 1.954    | 4.325     | 0.014         | 0.006          | 6.299  |
| 1991–95 | 0.626    | 1.408     | 0.000         | 0.000          | 2.034  |
| 1995–97 | 3.257    | 2.025     | 0.000         | 0.000          | 5.282  |
| 1997–99 | 0.349    | 2.762     | 0.000         | 0.000          | 3.111  |
| 1999–00 | 1.616    | 1.313     | 0.000         | 0.000          | 2.929  |
| 2000–01 | 0.032    | 3.308     | 0.000         | 0.000          | 3.340  |
| 2001–02 | 1.193    | 1.667     | 0.000         | 0.000          | 2.861  |
| 2002–03 | 0.645    | 1.657     | 0.000         | 0.000          | 2.302  |
| 2003–04 | 0.669    | 5.006     | 0.000         | 0.000          | 5.675  |
| 2004–05 | 0.952    | 10.518    | 0.000         | 0.000          | 11.470 |
| 2005–06 | 2.380    | 1.420     | 0.000         | 0.001          | 3.800  |
| 2006–07 | 0.410    | 1.744     | 0.000         | 0.001          | 2.155  |
| 2007–08 | 0.095    | 0.447     | 0.000         | 0.000          | 0.542  |
| 2008–09 | 0.041    | 0.227     | 0.000         | 0.000          | 0.268  |
| 2009–10 | 0.081    | 1.375     | 0.000         | 0.000          | 1.456  |
| 2010–11 | 0.166    | 0.892     | 0.002         | 0.000          | 1.060  |
| 2011–12 | 0.603    | 1.198     | 0.000         | 0.000          | 1.801  |
| 2012–13 | 0.382    | 2.954     | 0.001         | 0.000          | 3.337  |
| 2013–14 | 0.189    | 1.830     | 0.000         | 0.000          | 2.019  |



**Figure 3. Woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region by tenure.**

## Woody vegetation clearing by catchment

**Table 3. Woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region by catchment.**

| Catchments         | 2009–10      | 2010–11      | 2011–12      | 2012–13      | 2013–14      |
|--------------------|--------------|--------------|--------------|--------------|--------------|
| Cliffdale Creek    | 0.000        | 0.000        | 0.001        | 0.002        | 0.005        |
| Cloncurry River    | 0.872        | 0.135        | 0.783        | 0.416        | 0.538        |
| Eight Mile Creek   | 0.000        | 0.000        | 0.002        | 0.000        | 0.001        |
| Flinders River     | 0.318        | 0.543        | 0.467        | 2.412        | 0.750        |
| L Creek            | 0.000        | 0.000        | 0.000        | 0.003        | 0.005        |
| Lagoon Creek       | 0.000        | 0.000        | 0.002        | 0.006        | 0.000        |
| Leichhardt River   | 0.071        | 0.176        | 0.226        | 0.335        | 0.144        |
| Misc other Islands | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        |
| Morning Inlet      | 0.000        | 0.004        | 0.004        | 0.017        | 0.013        |
| Mornington Island  | 0.000        | 0.000        | 0.000        | 0.001        | 0.011        |
| Nicholson River    | 0.029        | 0.025        | 0.070        | 0.047        | 0.028        |
| Saxby River        | 0.166        | 0.166        | 0.245        | 0.098        | 0.524        |
| Settlement River   | 0.000        | 0.011        | 0.002        | 0.000        | 0.000        |
| <b>Total</b>       | <b>1.456</b> | <b>1.060</b> | <b>1.080</b> | <b>3.337</b> | <b>2.019</b> |

## Remaining woody vegetation

**Table 4. Remaining woody vegetation in the Southern Gulf region by catchment.**

| Catchments         | Area (,000 ha) | 2012 wooded vegetation cover (,000 ha) | % wooded vegetation cover |
|--------------------|----------------|--|---------------------------|
| Cliffdale Creek    | 618            | 553                                    | 89                        |
| Cloncurry River    | 4734           | 1279                                   | 27                        |
| Eight Mile Creek   | 163            | 149                                    | 91                        |
| Flinders River     | 5188           | 2015                                   | 39                        |
| L Creek            | 194            | 84                                     | 43                        |
| Lagoon Creek       | 283            | 263                                    | 93                        |
| Leichhardt River   | 3287           | 2192                                   | 67                        |
| Misc other Islands | 22             | 16                                     | 73                        |
| Morning Inlet      | 173            | 98                                     | 56                        |
| Mornington Island  | 98             | 86                                     | 88                        |
| Nicholson River    | 3564           | 2180                                   | 61                        |
| Saxby River        | 1015           | 535                                    | 53                        |
| Settlement River   | 111            | 98                                     | 88                        |
| <b>Total</b>       | <b>19450</b>   | <b>9547</b>                            | <b>49</b>                 |

## Woody vegetation clearing by replacement land cover

**Table 5. Woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region by replacement land cover.**

| Period  | Pasture | Crop  | Forestry | Mining | Infrastructure | Settlement | Total  |
|---------|---------|-------|----------|--------|----------------|------------|--------|
| 1988–91 | 5.445   | 0.000 | 0.000    | 0.001  | 0.862          | 0.000      | 6.308  |
| 1991–95 | 2.034   | 0.000 | 0.000    | 0.000  | 0.000          | 0.000      | 2.034  |
| 1995–97 | 5.082   | 0.000 | 0.000    | 0.041  | 0.232          | 0.000      | 5.356  |
| 1997–99 | 2.124   | 0.000 | 0.000    | 0.256  | 0.744          | 0.000      | 3.125  |
| 1999–00 | 2.346   | 0.001 | 0.000    | 0.208  | 0.373          | 0.000      | 2.929  |
| 2000–01 | 3.221   | 0.000 | 0.000    | 0.000  | 0.120          | 0.000      | 3.340  |
| 2001–02 | 2.063   | 0.000 | 0.000    | 0.000  | 0.797          | 0.000      | 2.861  |
| 2002–03 | 1.736   | 0.000 | 0.000    | 0.000  | 0.566          | 0.000      | 2.302  |
| 2003–04 | 5.378   | 0.000 | 0.000    | 0.050  | 0.292          | 0.005      | 5.725  |
| 2004–05 | 11.347  | 0.000 | 0.000    | 0.004  | 0.119          | 0.000      | 11.470 |
| 2005–06 | 3.690   | 0.000 | 0.000    | 0.053  | 0.057          | 0.000      | 3.800  |
| 2006–07 | 1.965   | 0.000 | 0.000    | 0.144  | 0.046          | 0.000      | 2.155  |
| 2007–08 | 0.484   | 0.000 | 0.000    | 0.043  | 0.009          | 0.006      | 0.542  |
| 2008–09 | 0.266   | 0.000 | 0.000    | 0.000  | 0.000          | 0.002      | 0.268  |
| 2009–10 | 1.397   | 0.000 | 0.000    | 0.029  | 0.030          | 0.000      | 1.456  |
| 2010–11 | 0.835   | 0.000 | 0.000    | 0.146  | 0.076          | 0.003      | 1.060  |
| 2011–12 | 1.547   | 0.000 | 0.000    | 0.181  | 0.073          | 0.001      | 1.801  |
| 2012–13 | 2.965   | 0.000 | 0.000    | 0.183  | 0.189          | 0.000      | 3.337  |
| 2013–14 | 1.894   | 0.000 | 0.000    | 0.078  | 0.047          | 0.000      | 2.019  |

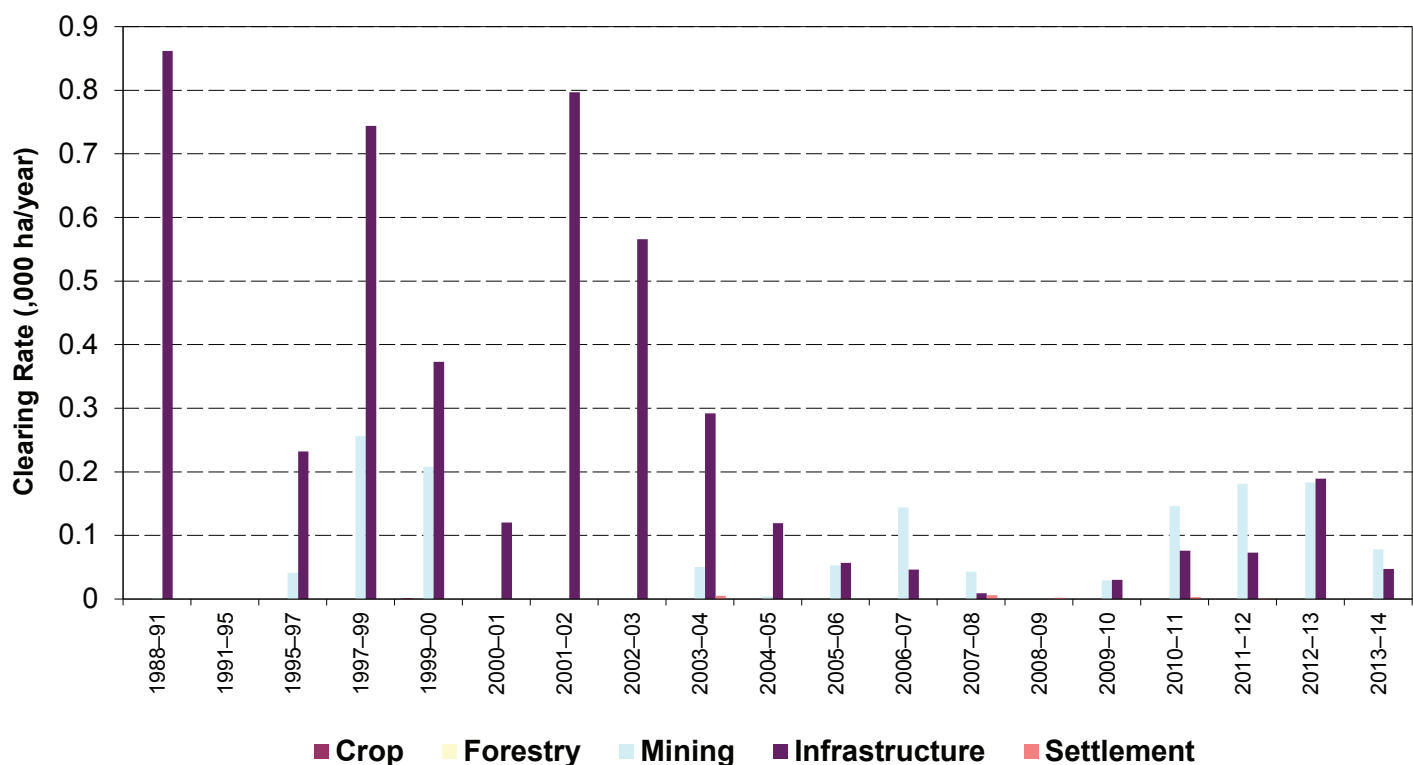
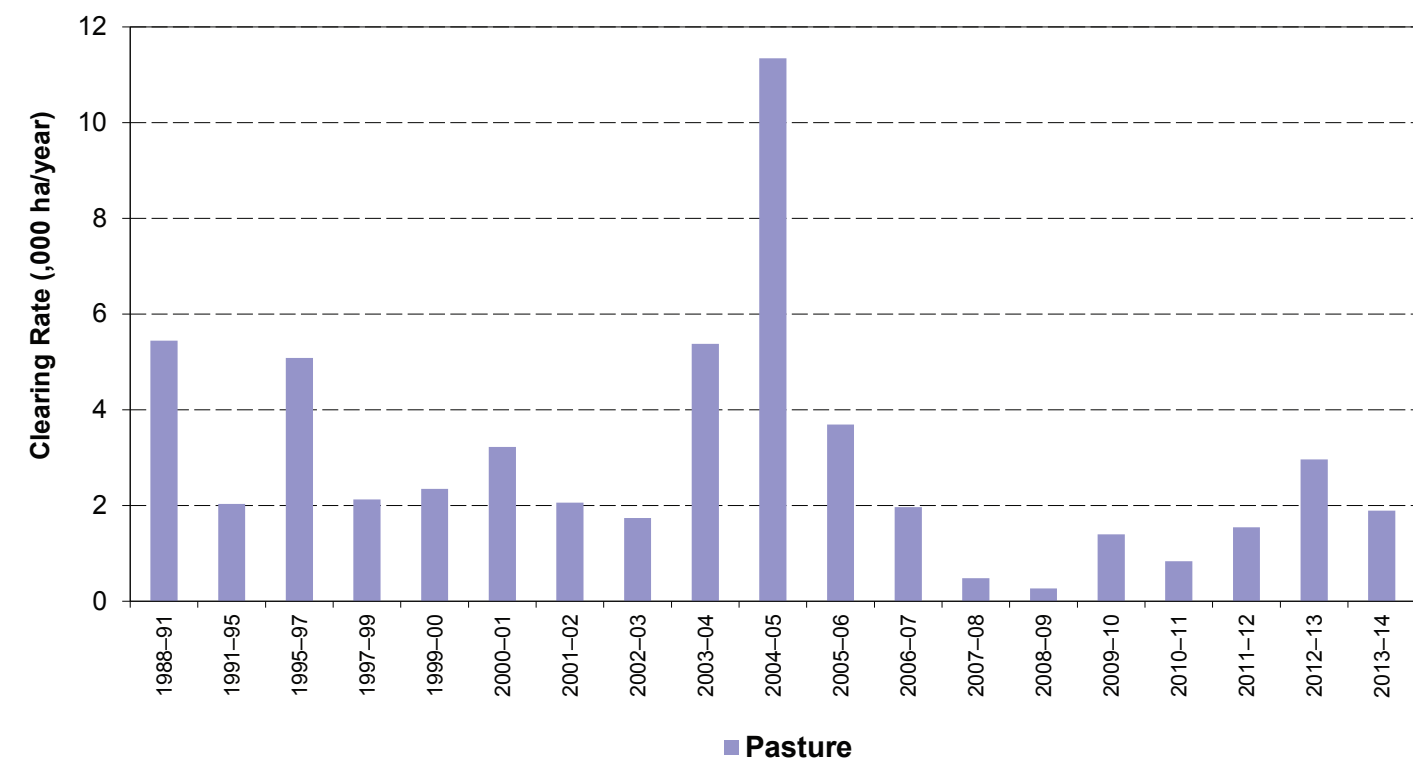


Figure 4. Woody vegetation clearing rates (,000 ha/year) in the Southern Gulf region by replacement land cover.

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