

### 3.7.6 Landslides

#### 3.7.6.1 Distribution

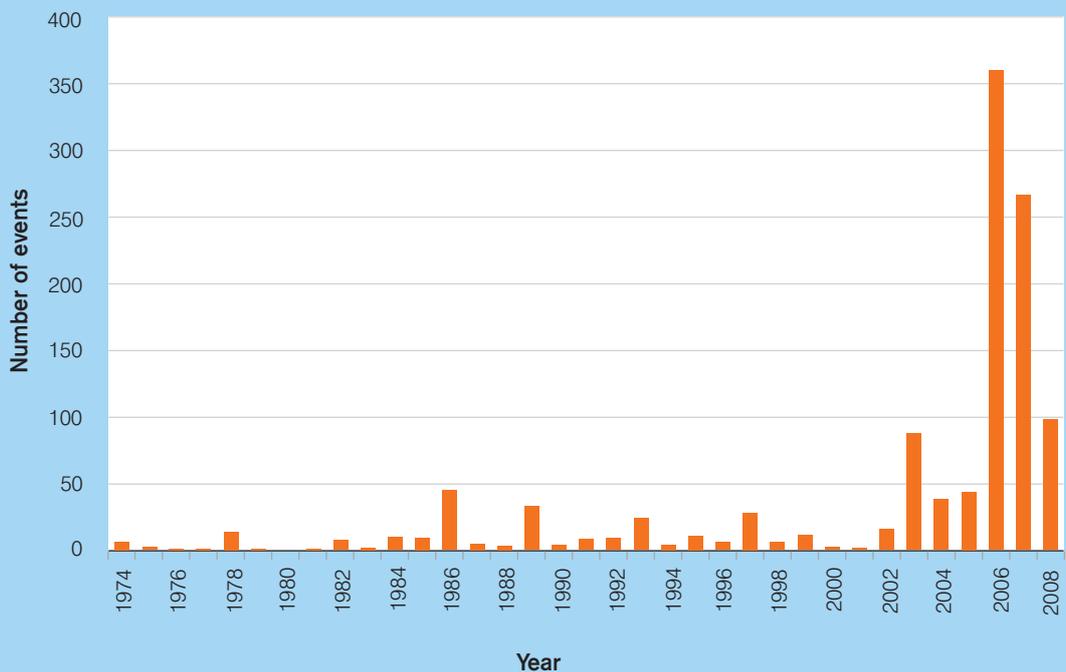
##### Annual Time Series Distribution

Landslides had been traditionally considered as a minor type of disaster and not a common occurrence in Sri Lanka. Until the year 2002, the annual average number of landslide records did not exceed 50 (Figure 60). However, the data shows a sudden increase in the occurrence of landslides during the period 2003 – 2008.

##### Seasonal Distribution

Seasonal distribution of landslides demonstrates a clear link with the distribution of the rainfall as illustrated in Figure 61. The records of landslides are high in the months of May and June and once again from November to January, showing a clear relationship with two monsoon seasons in Sri Lanka. The second peak is higher than the first and November has the highest recorded landslides, exceeding more than 275 incidents.

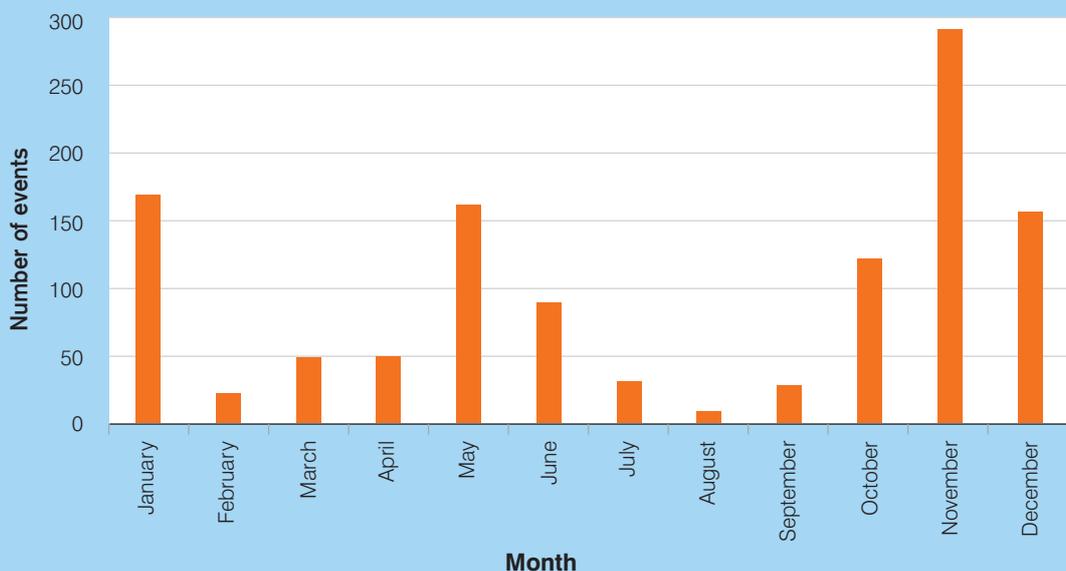
**Figure 60 :**  
Annual  
Time Series  
Distribution of  
Landslides



source

www.desinventar.lk

**Figure 61 :**  
Seasonal  
Distributions of  
Landslides:  
1974 - 2008



source

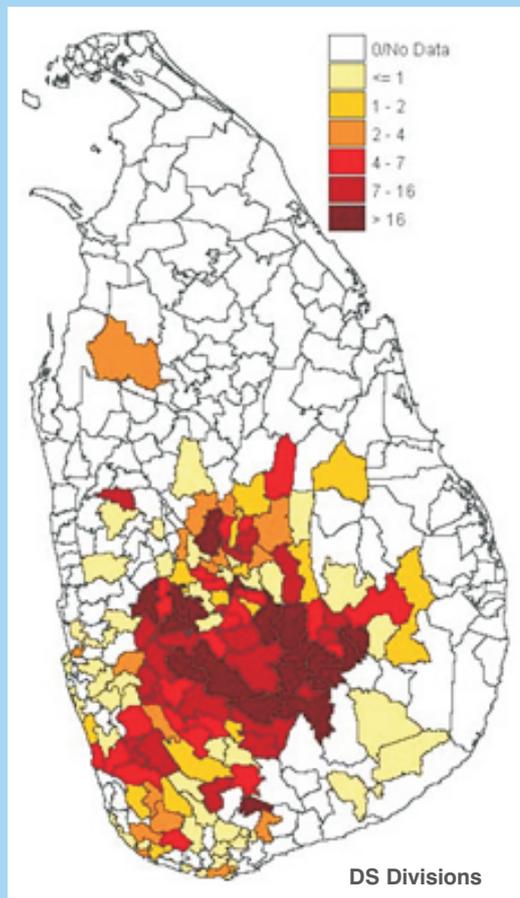
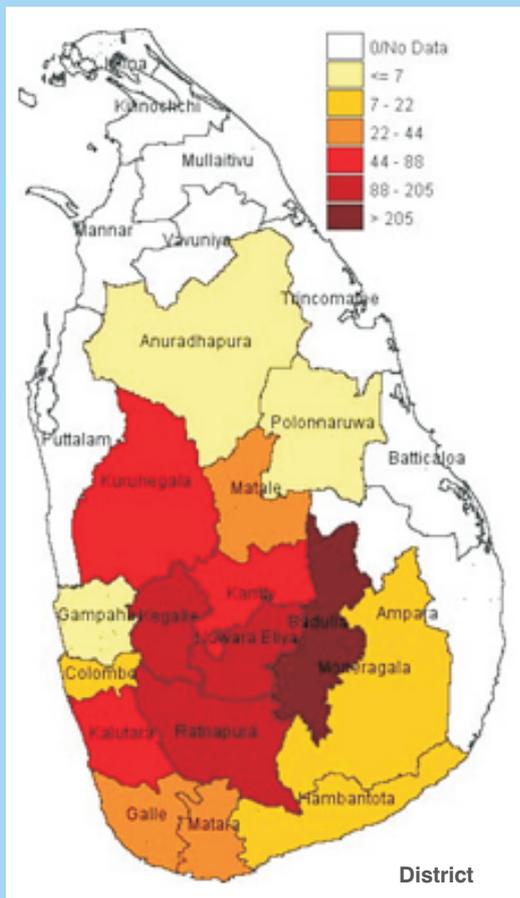
www.desinventar.lk

### Spatial Distribution

With respect to spatial distribution (Map 37), most landslides appear to occur only in the Southern, Uva and Central province within the districts of Badulla, Nuwara Eliya, Kegalle and Rathnapura, which are the

most landslide-prone districts. A similar pattern can be observed on the map for DS divisions where the higher incidence can be seen within the Uva Province.

**Map 37 :**  
**Spatial**  
**Distribution**  
**of Landslides:**  
**1974 - 2008**



source

www.desinventar.lk

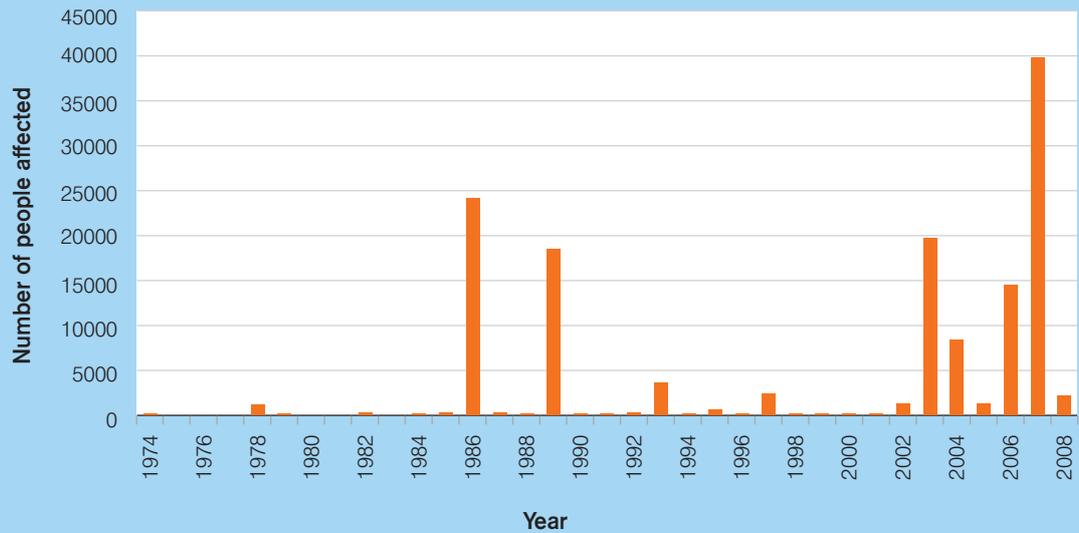
### 3.7.6.2 Impacts

#### People Affected (Annual Time Series and Spatial Distribution)

As the incidence of landslides is relatively low and most of them are minor incidents, the overall number of people affected is also quite low (Figure 62). However, a significant number of people were affected by landslides in 1986, 1989, 2003 and 2007.

As most landslides appear to have occurred only within the Southern, Uva and Central provinces, people affected are generally confined to this area (see Map 38). The highest impact can be seen in the districts of Badulla, Nuwara Eliya, Kandy and Rathnapura districts. A similar pattern can be seen on the map for DS divisions where the highest impact can be observed in DS divisions in the Uva Province.

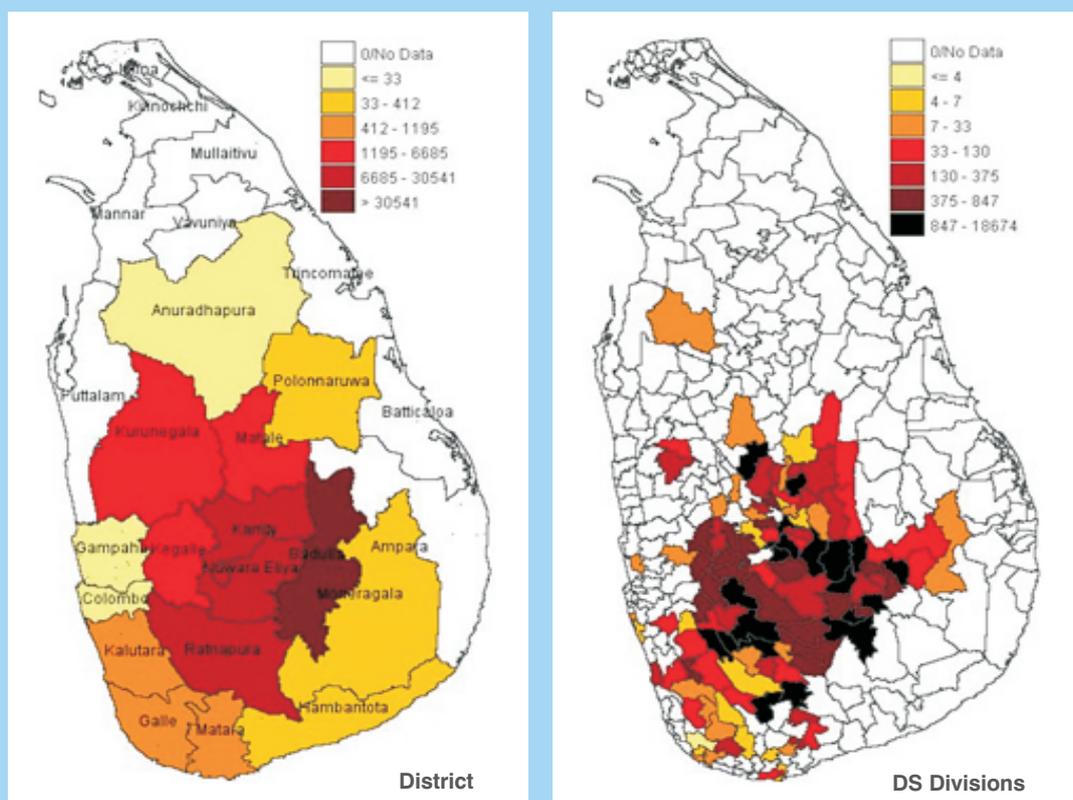
**Figure 62 :**  
People  
Affected Due to  
Landslides  
– Annual Time  
Series  
Distribution



source

www.desinventar.lk

**Map 38 :**  
People Affected  
Due to  
Landslides  
– Spatial  
Distribution :  
1974 - 2008



source

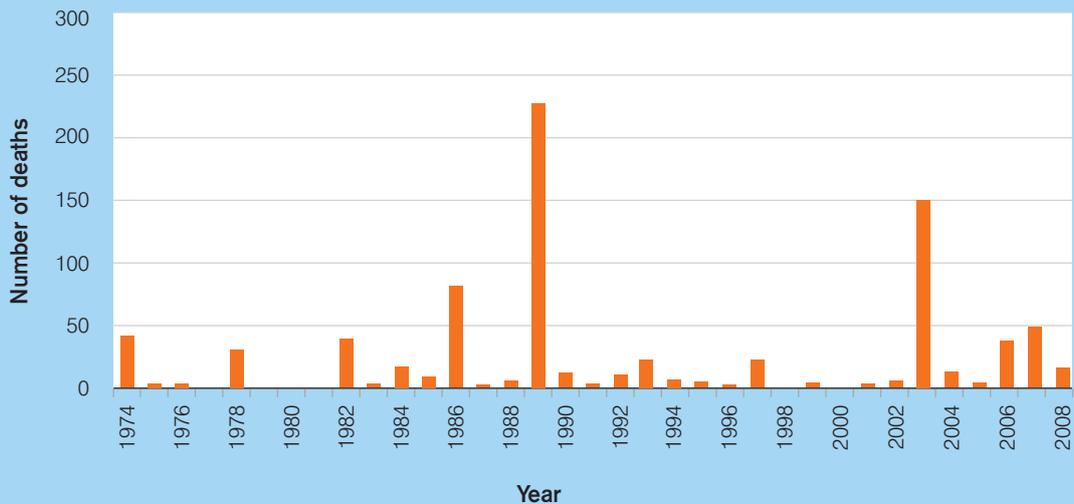
www.desinventar.lk

### Loss of life (Annual Time Series and Spatial Distribution)

The occurrence of death is greater and more frequent than the number of people affected (Figure 63). It can be observed that in almost all locations in the country, where landslides have been experienced, there has been loss of life. The highest death toll due to landslides was experienced in 1989,

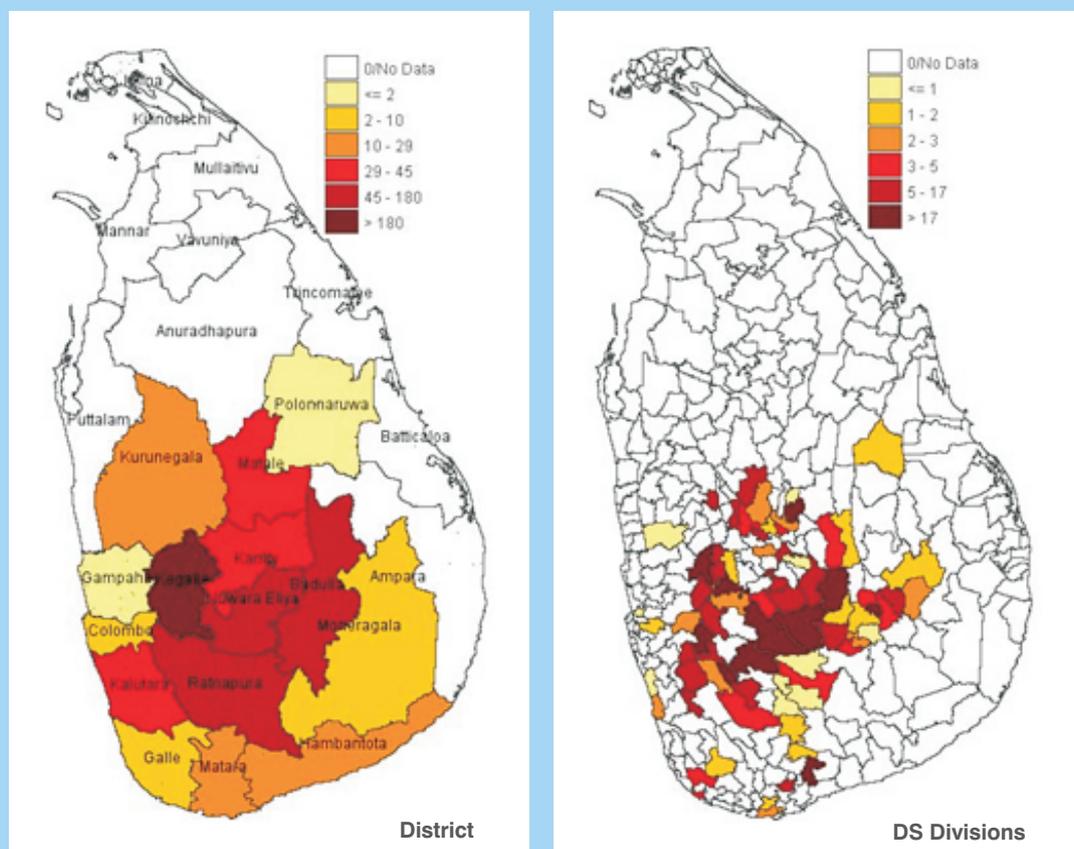
year 2003 coming next. Spatially too (Map 39), the loss of life has shown a similar pattern as the number of people affected. The highest death toll was experienced in the districts of Nuwara Eliya, Kegalle, Badulla and Ratnapura. A similar pattern was also observed in the case of deaths experienced in the DS divisions.

**Figure 63 :**  
Loss of Life  
Due to  
Landslides  
- Annual Time  
Series  
Distribution



source  
www.desinventar.lk

**Map 39 :**  
Loss of Life  
Due to  
Landslides  
- Spatial  
Distribution :  
1974 - 2008



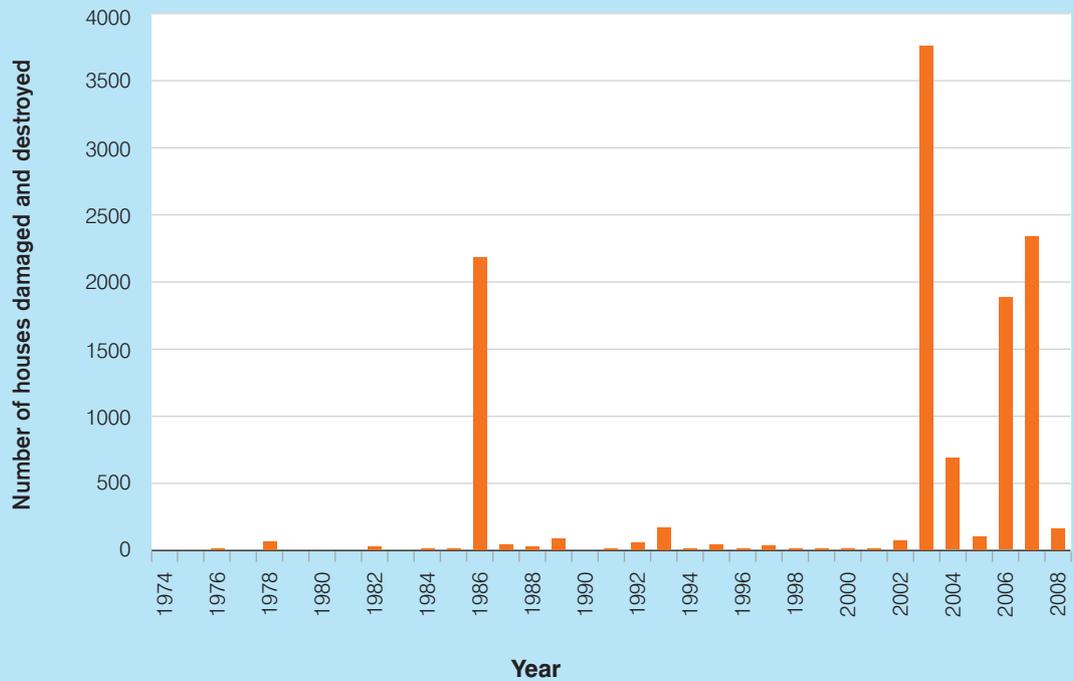
source  
www.desinventar.lk

### Destroyed and Damaged Houses (Annual Time Series and Spatial Distribution)

During the period reviewed, the destroyed and damaged houses have been quite low with the exception of 4 years, namely, 1986, 2003, 2006 and

2007 (Figure 64). With respect to spatial patterns, destruction and damage to houses follows a similar pattern to that experienced by people affected and loss of life (Map 40).

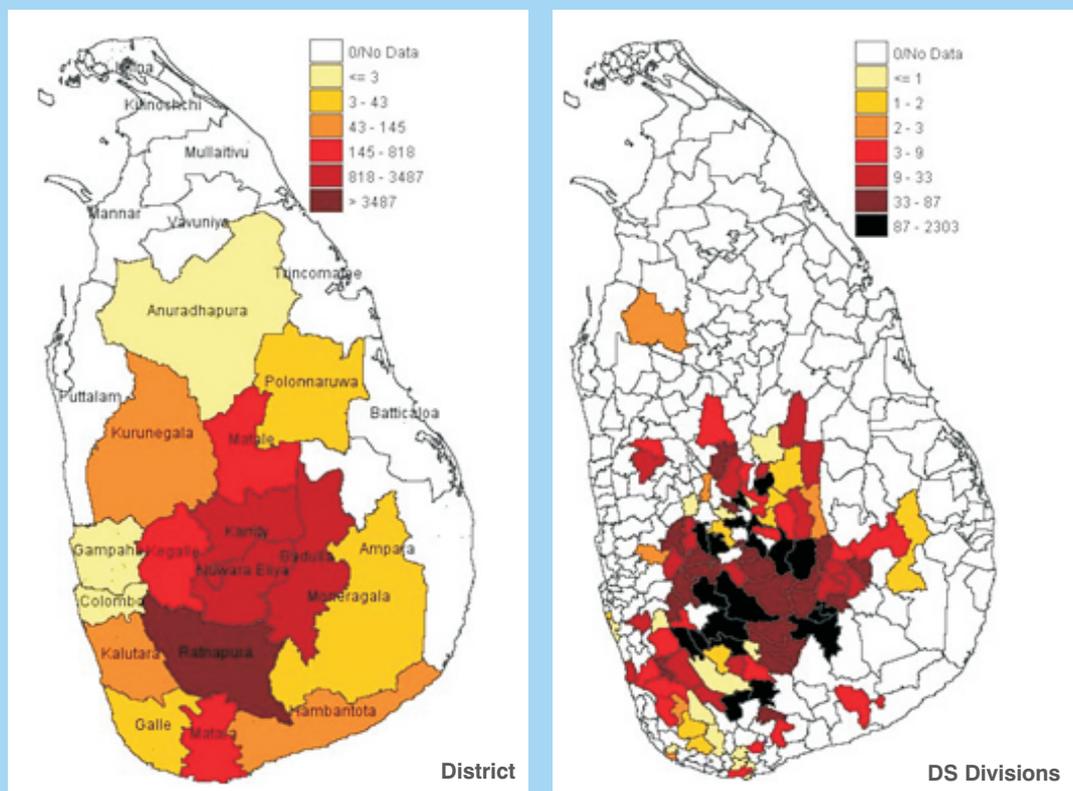
**Figure 64 :**  
No of Houses Destroyed and Damaged Due to Landslides - Annual Time Series Distribution



source

www.desinventar.lk

**Map 40 :**  
No of Houses Destroyed and Damaged Due to Landslides - Spatial Distribution : 1974 - 2008



source

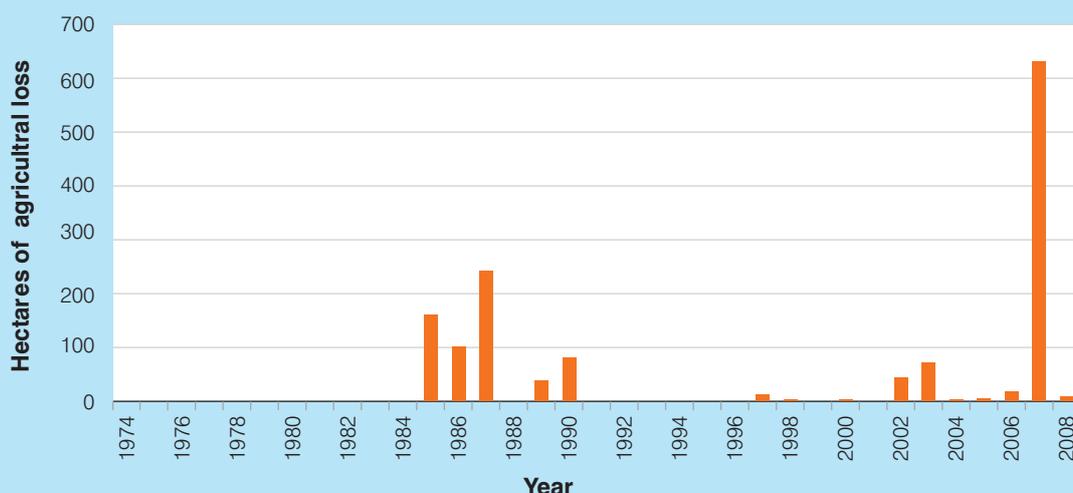
www.desinventar.lk

### Losses to Agricultural Crops (Annual Time Series and Spatial Distribution)

The occurrence of damage to paddy and other crops by landslides is not very significant and evenly distributed chronologically (Figure 65). From 1974 to 1984, there were no recorded damages but 1985 to 1990 represent a cluster of years showing damage. From 1991 to 2001 there were no records of damages, except for a few instances in 1997. However, very high crop loss was experienced in 2007. This was probably due either to the high intensity of the landslides or the area of occurrence. Landslides occurring during the harvesting period would cause severe crop loss. Spatially, most of the crop loss is centralized within the Southern, Western and Uva provinces, with most loss being experienced in the districts of Kandy and Badulla (Map 41). A similar pattern can be seen in the DS divisions as well.

However, very high crop loss was experienced in 2007. This was probably due either to the high intensity of the landslides or the area of occurrence. Landslides occurring during the harvesting period would cause severe crop loss. Spatially, most of the crop loss is centralized within the Southern, Western and Uva provinces, with most loss being experienced in the districts of Kandy and Badulla (Map 41). A similar pattern can be seen in the DS divisions as well.

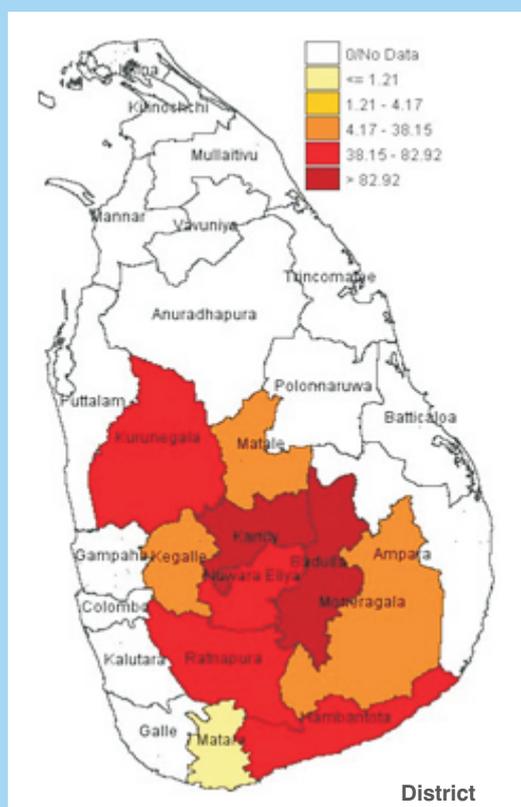
**Figure 65 :**  
Agricultural Loss Due to Landslides ( in Hectares) – Annual Time Series Distribution



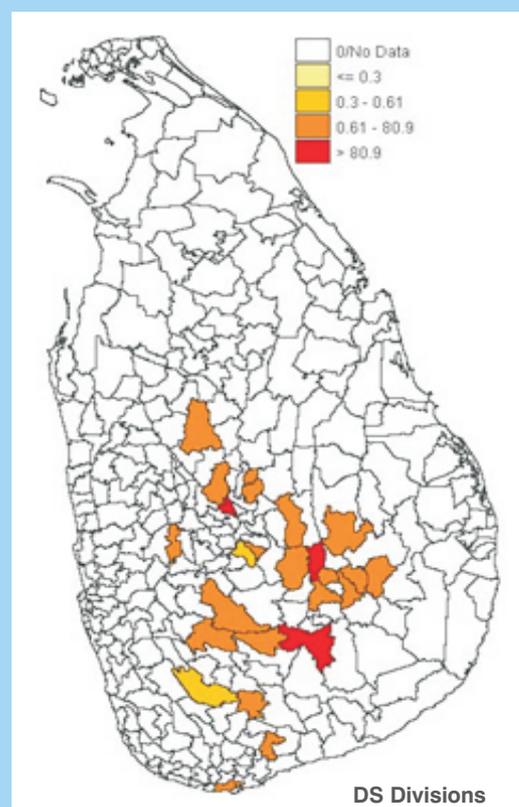
source

www.desinventar.lk

**Map 41 :**  
Agricultural Loss Due to Landslides ( in Hectares) – Spatial Distribution: 1974-2008



District



DS Divisions

source

www.desinventar.lk

**Box 12 :**  
**Conclusions on**  
**Distribution and**  
**Impacts of**  
**Landslides**

Until the year 2002, the annual average number of landslide records did not exceed 50. However, the data shows a sudden increase in the occurrence of landslides during the years 2003-2008. Further, landslides are most prone to occur in the months of November, December and January. With respect to spatial distribution, most landslides

appear to occur in the districts of Badulla, Ratnapura, Nuwara Eliya and Kegalle. People affected, loss of life, damage to houses and crop loss also appear to take the same trend with only the above mentioned districts being most affected.