

3.7.4 Extreme Wind Events (Cyclone, Gale, Strong wind, Surge)

3.7.4.1 Distribution

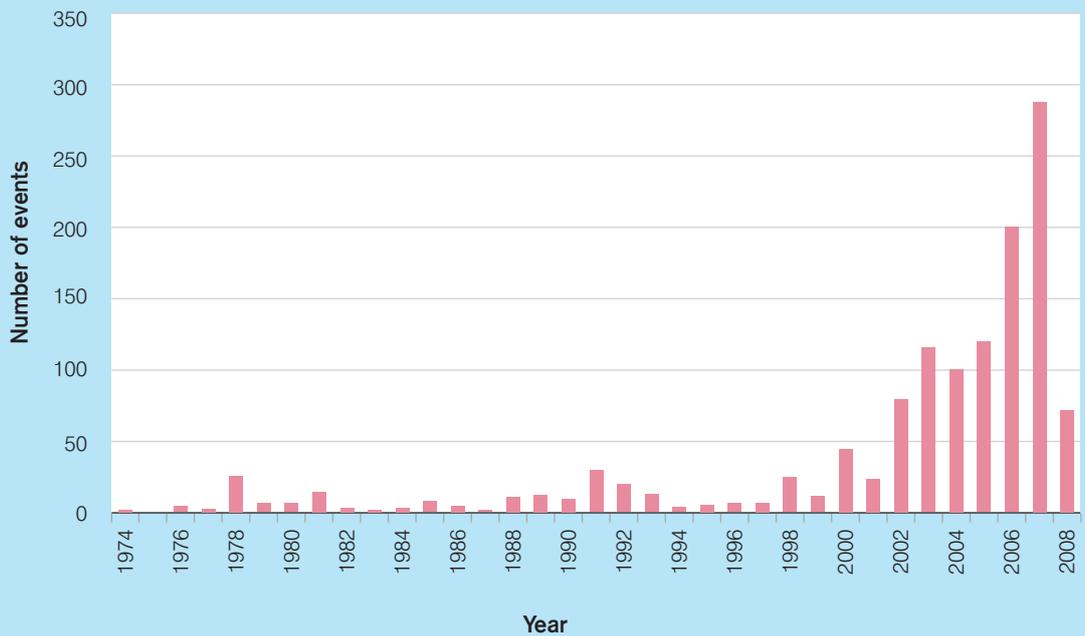
Annual Time Series Distribution

The occurrence of wind events over the time period has been quite consistent and low (Figure 50). However, a sudden increase can be seen in the latter part of the period, with the highest number of events taking place in 2007.

Seasonal Distribution

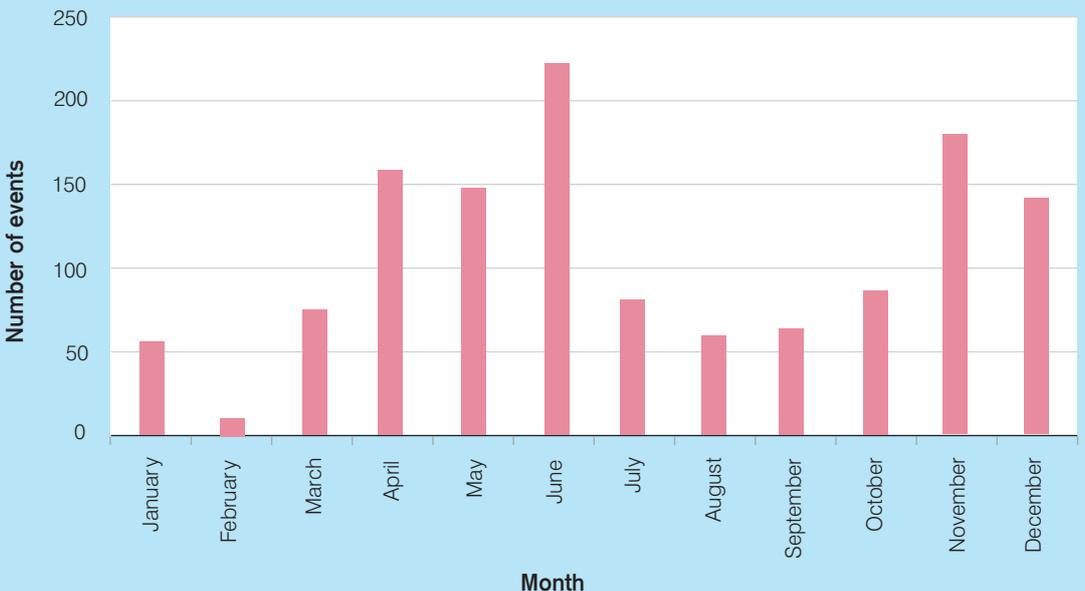
Seasonal distribution of wind events is illustrated in Figure 51 clearly showing a fluctuating pattern with two peaks in par with the rainfall patterns in the island. The incidence of wind events is high during April-June and again during November-December.

Figure 50 :
Annual
Time Series
Distribution of
Extreme
Wind Events



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Figure 51 :
Seasonal
Distribution of
Extreme Wind
Events :
1974 -2008



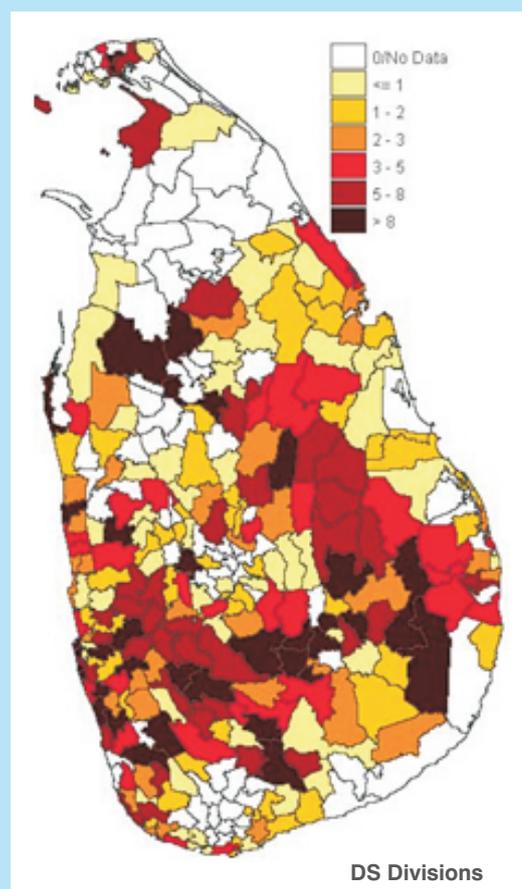
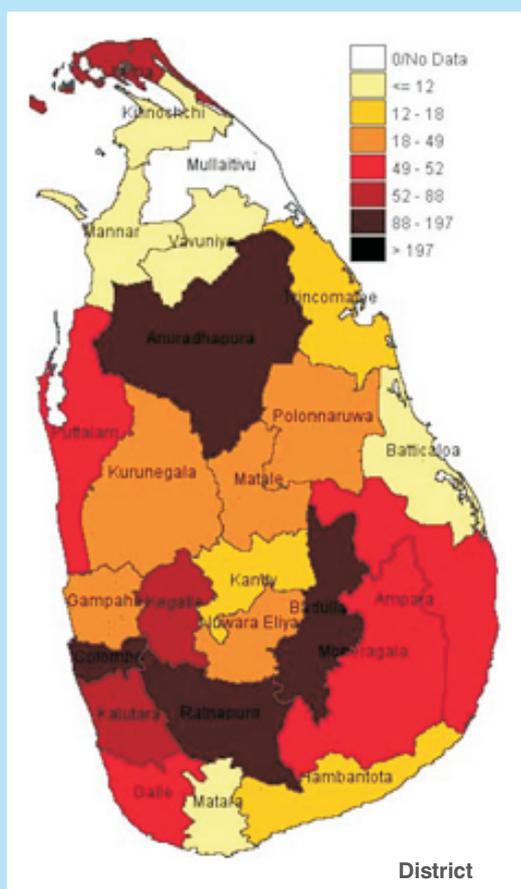
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Spatial Distribution

With respect to spatial distribution, wind events are most prevalent in the districts of Rathnapura, Badulla Anuradhapura and Colombo (Map 29). Districts such as Mannar, Kilinochchi, Vavuniya and Mullativu show a lower incidence of wind events due to limited data availability. With respect to DS divisions, a

majority of them have a low incidence of wind events with a very few numbers experiencing a high incidence. For some divisions in districts of Mannar, Kilinochchi, Vavuniya and Mullativu, the low incidence can be attributed to the limited availability of desegregated data at the DS division level.

Map 29 :
Spatial
Distribution of
Extreme
Wind Events :
1974 - 2008



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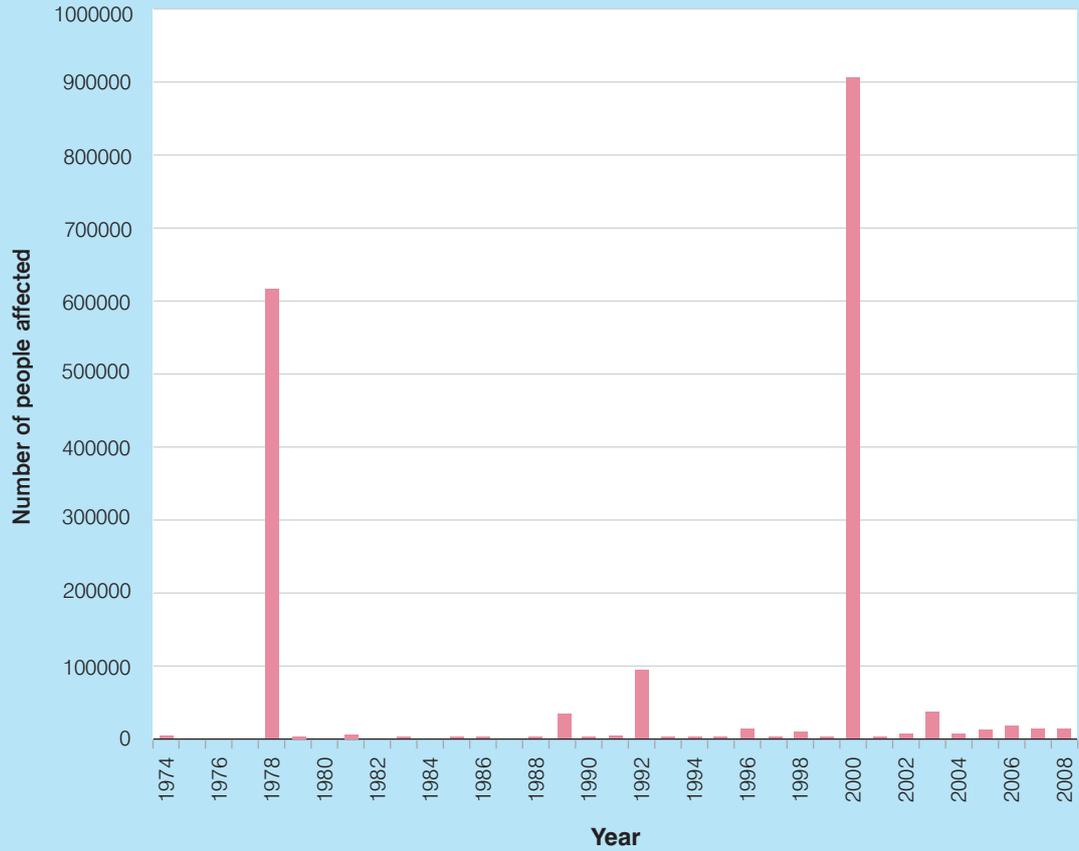
3.7.4.2 Impacts

People Affected (Annual Time Series and Spatial Distribution)

From Figure 52 below, it may be said that in general people in Sri Lanka have somewhat not been very much affected by wind events. However an exception can be seen in the years 1978 and 2000, during which extremely large numbers of people were affected due to the two very severe cyclone events that occurred during these two years.

Further, according to (Map 30) people located in the district cluster of Anuradhapura, Polonnaruwa, Trincomalee and Batticaloa are shown as most affected by wind events. With respect to DS divisions, in the divisions in the Eastern parts of the island largest numbers of people have been affected. In divisions in the Northern areas the numbers affected are shown as very low because of limited availability of desegregated data at the DS division level.

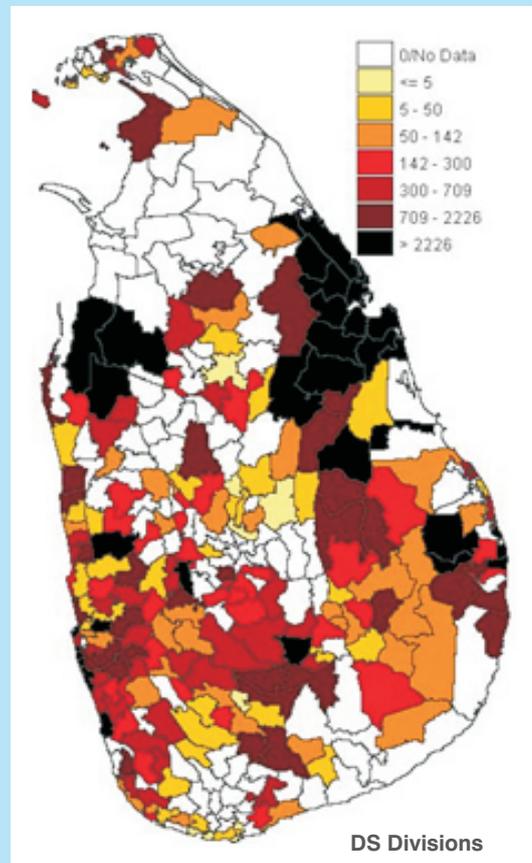
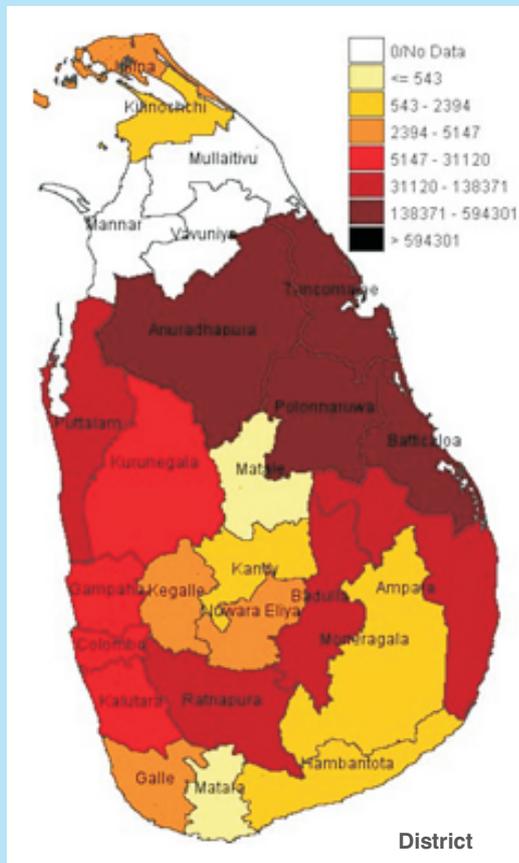
Figure 52 :
People Affected
Due to Extreme
Wind Events –
Annual Time
Series
Distribution



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Map 30 :
People Affected
Due to Extreme
Wind Events –
Spatial
Distribution:
1974 -2008



source

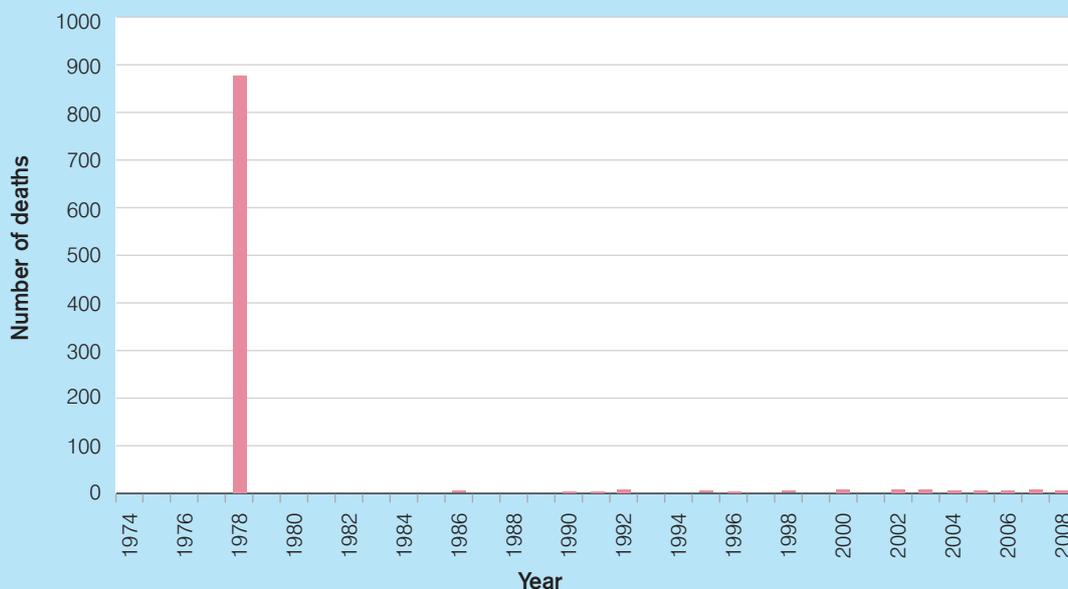
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Loss of Life (Annual Time Series and Spatial Distribution)

As can be seen from Figure 53, the occurrence of deaths due to wind events is quite low, except for the year 1978, where it has reached nearly 850. Further considering the spatial distribution (Map 31), deaths

appear to have occurred mostly in the district of Batticaloa. The low incidence of deaths reflected in the DS divisions (Map 31) may be attributed to the limited availability of desegregated data at the DS division level.

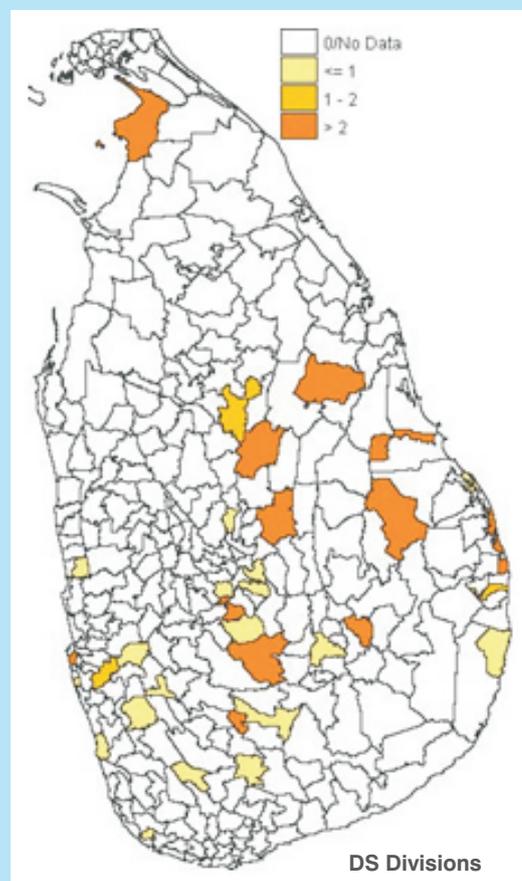
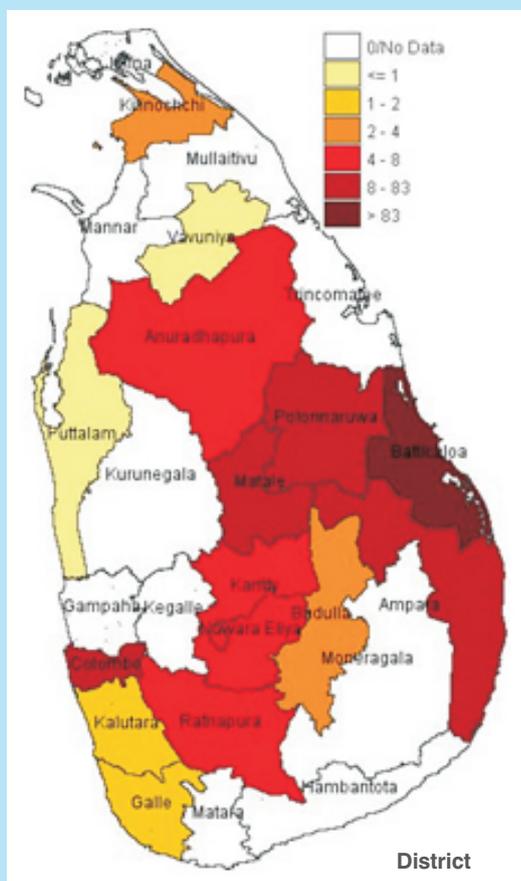
Figure 53 :
Loss of Life
Due to Extreme
Wind Events –
Annual Time
Series
Distribution



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Map 31 :
Loss of Life
Due to Extreme
Wind Events
– Spatial
Distribution :
1974 - 2008



source

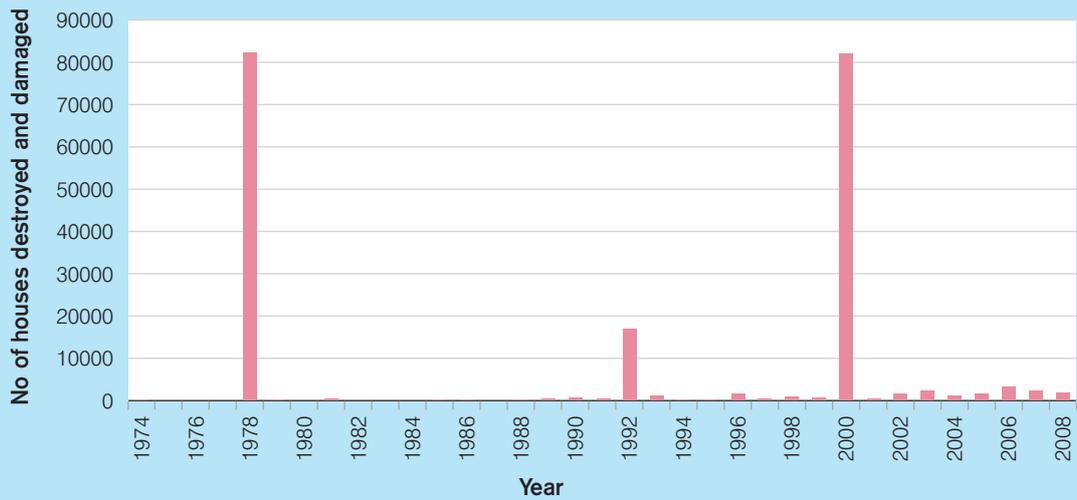
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Destroyed and Damaged Houses (Annual Time Series and Spatial Distribution)

Wind events have not caused much damage or destruction to houses (Figure 54) except for the large damage that can be seen in the years 1978 and 2000 during which years very severe high wind events occurred. Houses located in the districts of

Anuradhapura, Polonnaruwa, Trincomalee and Batticaloa appear to be most prone to wind events (see Map 32). With respect to DS divisions, those in the Eastern parts of the island have the largest number of damage, while those in the Northern parts reflect very low numbers because of unavailability of desegregated data at the DS division level in Mannar, Vavuniya, Kilinochchi and Mullaitivu.

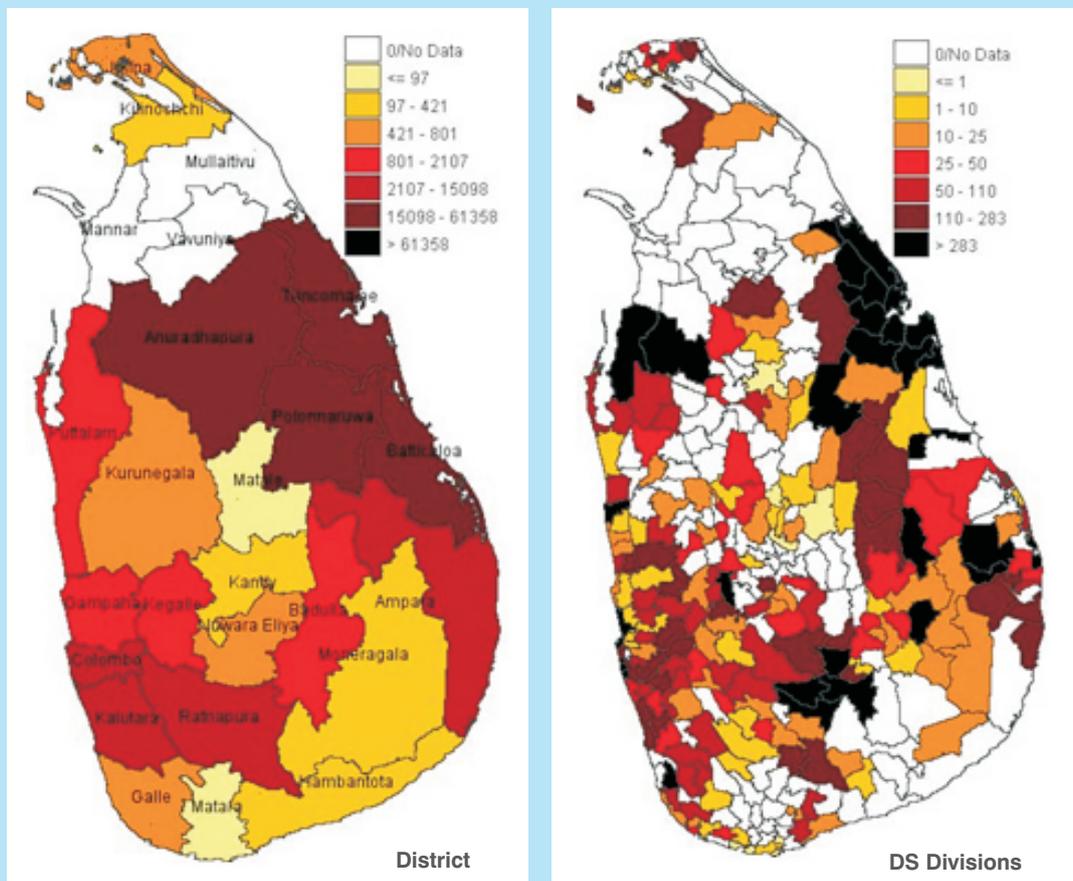
Figure 54 :
No of Houses Destroyed and Damaged Due to Extreme Wind Events – Annual Time Series Distribution



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Map 32 :
No of Houses Destroyed and Damaged Due to Extreme Wind Events – Spatial Distribution: 1974 - 2008



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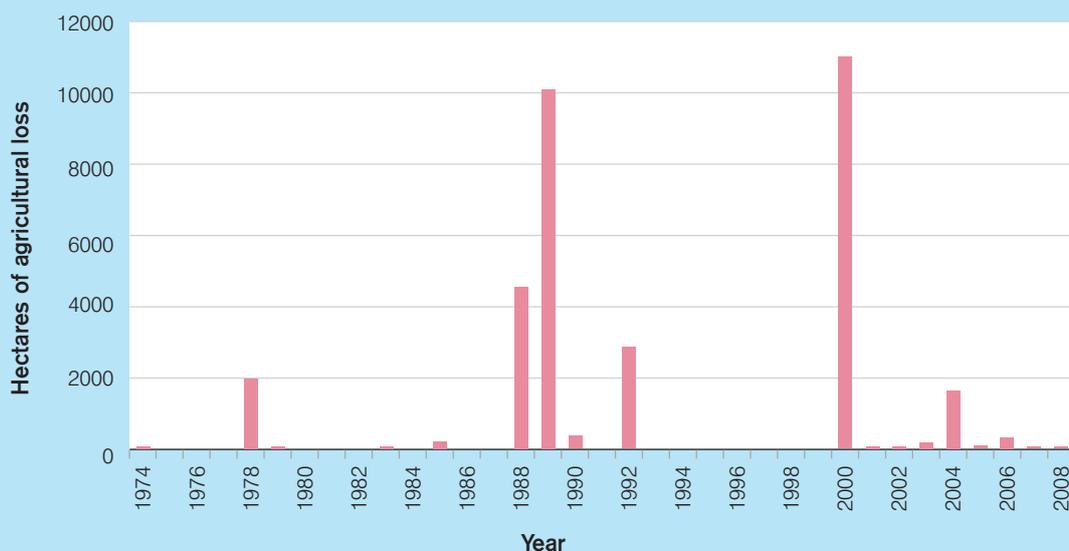
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Losses to Agricultural Crops (Annual Time Series and Spatial Distribution)

Agricultural loss in hectares of crop damage due to extreme wind events appears to be very low in some years and high in others as can be seen from Figure 55. Further, as seen in Map 33, most agricultural loss have occurred in the districts of Moneragala,

Ampara, Polonnaruwa and Trincomalee, while districts such as Matara, Galle, Matale, Vavuniya and Mannar have experienced very low crop losses. In terms of DS divisions, it is difficult to comment on the spatial distribution of losses to agricultural crops due to the unavailability of desegregated data at the level of DS Divisions

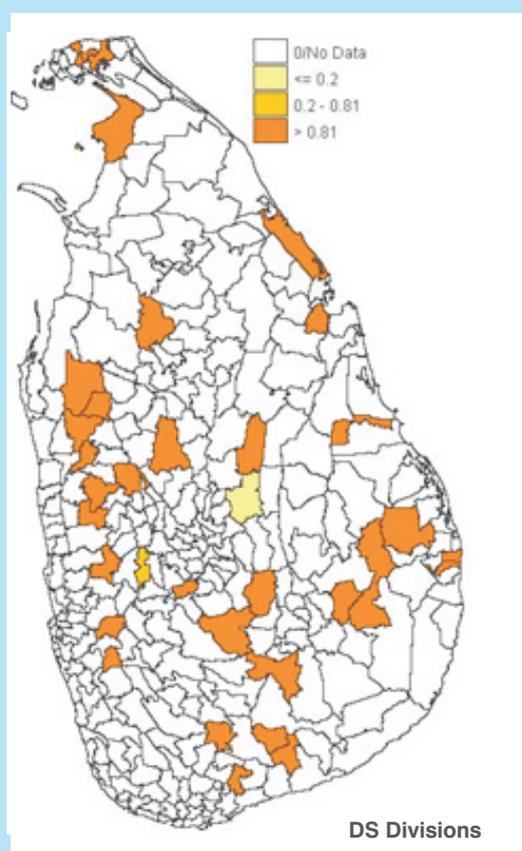
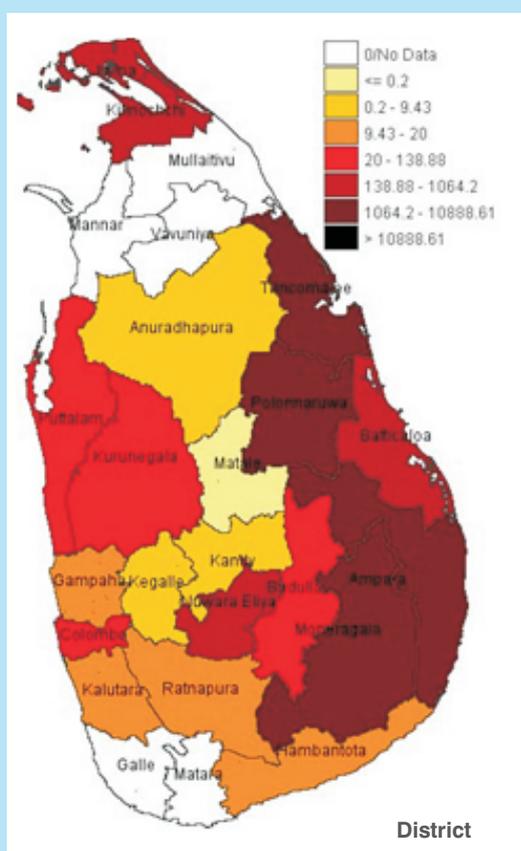
Figure 55 :
Agricultural Loss Due to Extreme Wind Events (in Hectares) – Annual Time Series Distribution



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Map 33 :
Agricultural Loss Due to Extreme Wind Events (in Hectares) – Spatial Distribution : (1974 - 2008)



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Box 10 :
Conclusions on
Distribution and
Impacts of
Extreme Wind
Events

Wind events seem to be most prevalent in the latter years, with the largest occurring in the year 2007. Further, the wind events in Sri Lanka are most likely to occur in the months of June and November. With respect to spatial distribution, wind events are most prevalent in the districts of Rathnapura, Badulla, Anuradhapura, and Colombo.

People in Sri Lanka have not been very much affected by wind events. However, an exception to this is the years 1978 and 2000. Further, people located in the districts of Anuradhapura, Polonnaruwa, Trincomalee and Batticaloa have been most affected by wind events.

The occurrence of deaths due to wind events is quite low except for the year 1978, where it has reached nearly 850. Further, deaths appear to have occurred mostly in the district of Batticaloa.

Destroyed and damaged houses also cannot be seen very much due to wind events, the exception to this being the large damage in the year 1978 and 2000 due to the two extremely severe events in these two years. Further, houses located in the districts of Anuradhapura, Trincomalee, Polonnaruwa and Batticaloa appear to have been most affected due to wind events.

Agricultural crop loss also seems to be somewhat low, with most losses taking place in 1989 and 2000. Further, most of the agricultural losses appear to occur in the districts of Moneragala, Ampara, Polonnaruwa and Trincomalee.

Some impacts reflected in terms of DS divisions have been somewhat low, which can be attributed to the limited availability or unavailability of desegregated data at the level of DS Divisions.