



## Disasters in Numbers

### Fact sheet on Coastal Erosion related losses in Kerala (2002 – 2012)

The 590 km coast of Kerala is one of the most densely populated land areas in the country. This coastline is exposed to high waves, rogue waves, ‘Kallakadal’ and Tsunami which in-turn results in rampant coastal erosion and consequent beach loss. The ‘Fact sheet of shoreline changes - Kerala’ published by the Ministry of Environment and Forests, Govt. of India (NCSCM et al., 2011) shows that a major stretch of Kerala’s coastline (~63%) is eroding rapidly. Figure 1 shows the erosion prone areas of the Kerala coast.



Figure 1: Erosion and accretion prone areas of Kerala (NCSCM et al., 2011)

Of the nine coastal districts, they being Kasargod, Kannur, Kozhikode, Malappuram, Thrissur, Ernakulam, Alappuzha, Kollam and Thiruvananthapuram (from north to south), the coastline of Thiruvananthapuram district is the most prone to erosion. About 23% of Thiruvananthapuram coastline is affected by erosion. About 310 km of the coastal stretch of Kerala has seawalls, riprap revetments, groynes etc. These artificial coasts are essentially eroding coasts and therefore it is appropriate to consider them as eroding coasts (NCSCM et al., 2011). The other districts that are highly prone to erosion, but are partly safeguarded by artificial means are Kollam and Ernakulam. Coastal erosion results in the loss of life and property of the coastal fisher population who are one of the most downtrodden communities of the state. One of the most apparent losses of property is the damages that come about to the dwelling spaces of the fisher population. Every year hundreds of houses are damaged due to the fury of the sea. Almost all fisher families prefer to live along the coast and very few of them tend to have landed property or houses further inland. The Tsunami of 2004 exposed the weakness of Kerala's coastal fisher population in terms of their resilience and coping capacity. Almost 1.3 million people in 187 villages of Kerala were affected by Tsunami with a death toll of 171 persons and a house damage of 17381. The waves also damaged livelihood of the fishermen community.

Every year, the coastal district administrations of Kerala are forced to open a number of relief camps costing substantial loss to the exchequer. Tables 1 to 3 given below shows the statistics related to coastal erosion in Kerala from 2002 to 2012.

### 1 Year wise details of total land area eroded due to coastal erosion (in ha)

District	Year										Total
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	
Kollam	0.35	0.4	1.54	0.18	0.2	0	0.15	0.1	0.57	0.12	3.61
Alappuzha	0.3	21.22	0.3	0.1	0.15	0.13	0.1	0.01	0	0	22.31
Trissur	23.49	12.31	21.09	44.26	43.93	58.53	36.24	48.03	68.6	13.28	369.76
Malappuram	5.50	5.90	3.90	5.90	5.90	5.50	5.50	5.90	5.90	6.30	56.22
Kozhikode	3	2.8	3.4	3.2	3.1	2.9	2.3	2.7	2.4	2.9	28.7
Kasargodu	1.13	0.95	1.1	1.03	0.88	0.95	1.52	1.33	1.51	2.35	12.75
<b>Total</b>	<b>33.7</b>	<b>43.58</b>	<b>31.33</b>	<b>54.67</b>	<b>54.16</b>	<b>68.01</b>	<b>45.81</b>	<b>58.07</b>	<b>78.98</b>	<b>24.95</b>	<b>493.3</b>

### 2 Year wise details of total number of people affected due to coastal erosion

District	Year										Total
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	
Trivandrum	29	35	2456	29	524	194	52	579	133	213	4244
Kollam	201	240	2500	545	401	0	402	425	508	608	5830
Alappuzha	205	13517	199	236	1267	150	201	202	252	190	16419
Trissur	1731	14019	1571	1416	2693	1110	2753	1140	647	79	27159
Malappuram	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	15000
Kozhikode	120	130	350	120	130	140	110	130	150	130	1510
Kasargodu	74	852	89	66	48	41	54	88	162	103	1577
<b>Total</b>	<b>4057</b>	<b>30725</b>	<b>12597</b>	<b>4932</b>	<b>7278</b>	<b>3637</b>	<b>5204</b>	<b>4169</b>	<b>3490</b>	<b>2862</b>	<b>78951</b>

**3 Year wise details of area of agricultural land lost due to coastal erosion (in ha)**

District	Year										Total
	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	
Kollam	0	0	0	0	0	0	0	0	0	237	237
Alappuzha	1.2	170.3	1.2	0	0.2	0.7	0.7	1	0	2.5	177.8
Malappuram	2.56	2.74	3.90	2.50	3.91	3.00	2.64	2.76	3.29	3.02	30.33
Kozhikode	1.6	1.9	1.3	1.6	0.9	1.3	1	1.8	1.2	1.8	14.4
Kasargodu	155	0	125	0	0	45	0	150	48	0	523
<b>Total</b>	160.35	174.9	131.4	4.102	5.01	50	4.34	155.6	52.49	244.3	<b>982.5</b>

In light the facts and figures above, the Government of Kerala has since 2011 repeatedly appealed to Government of India for declaring coastal erosion as a natural calamity eligible for assistance from the National/State Disaster Response Fund.

**Data source:** District Administration

**Reference:** [ncscm.org/cms/geo/pdf/research/kerala\\_fact\\_sheet.pdf](http://ncscm.org/cms/geo/pdf/research/kerala_fact_sheet.pdf)

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