

Climate Change Impact in Cambodia



Climate Change Effects in Cambodia

Scientists predict that climate change will profoundly affect Cambodia's coastal residents, ecosystems, and economy. All climate change models show that rainfall in Cambodia will increase, but there is a range in the magnitude of this increased rainfall. Estimates range from 3% to 35% and this increased rainfall will likely occur during the wet season. Rainfall is likely to increase more in the lowlands than in the highlands. Runoff in the Mekong Basin is projected to increase by 21% by 2030. There are also estimates that by 2030 climate change will raise the wet season level of the Tonle Sap Lake by 2.3 meters.

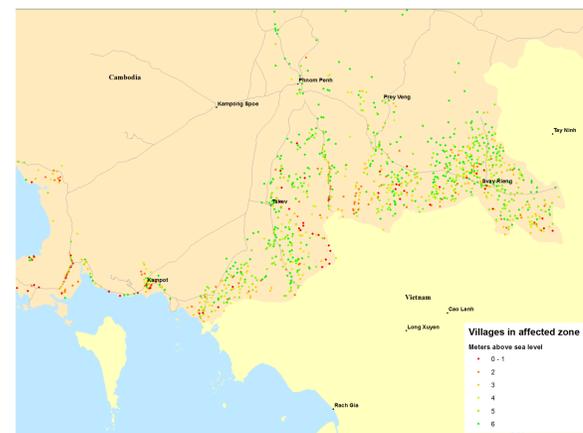
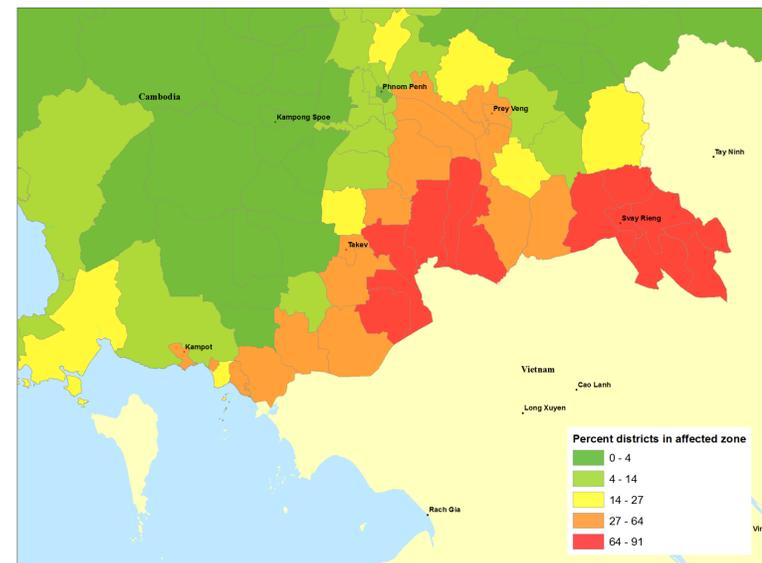
Cambodia's high level of poverty will make it harder for its population to adapt to the effects of climate change. Cambodia is considered a Least Developed Country (LDC) with about 36% of its population living below poverty line and it has a GDP per capita of less than US\$300. In addition, many economic activities are concentrated within low-lying and coastal areas, such as agriculture and aquaculture. Cambodian farmers are already facing troubles related to rising sea levels because the seawater is destroying crops and salting the soil.

Project Description

This project geospatially shows the areas that would be affected by up to 6 meters of inundation due to sea level rise as well as increased precipitation in Cambodia. It shows the villages, schools and health centers that would be at risk. It also demonstrates the land cover in the potentially affected areas.

Sea Level Rise Estimates

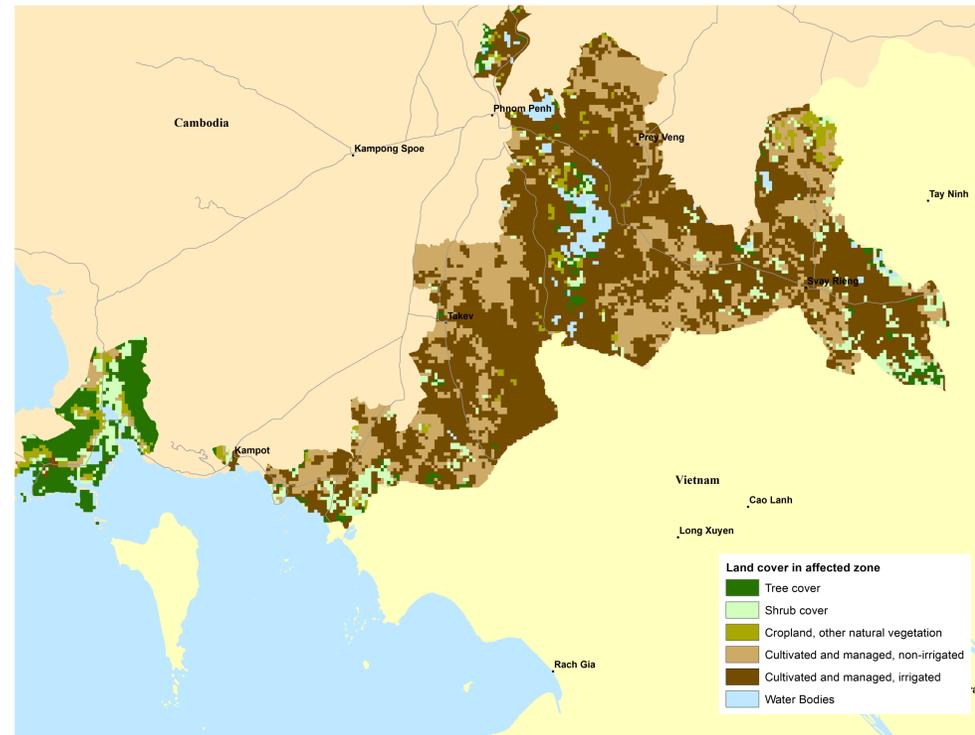
Climate change will cause sea level rise, tidal variation, increased frequency of tropical cyclones, and increased precipitation. Scientists expect that continued growth of greenhouse gas emissions will lead to 1 to 3 meters of sea level rise in this century and the unexpected breakup of the Greenland and West Antarctic ice sheets could lead to 5 meters of sea level rise.



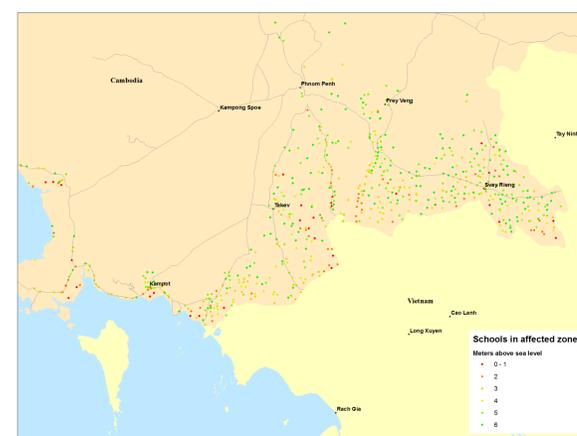
Population Affected

Meters above sea level	Population affected
0 - 1	103,426
0 - 2	214,743
0 - 3	404,193
0 - 4	640,783
0 - 5	920,437
0 - 6	1,299,681

Land Cover in Affected Zone

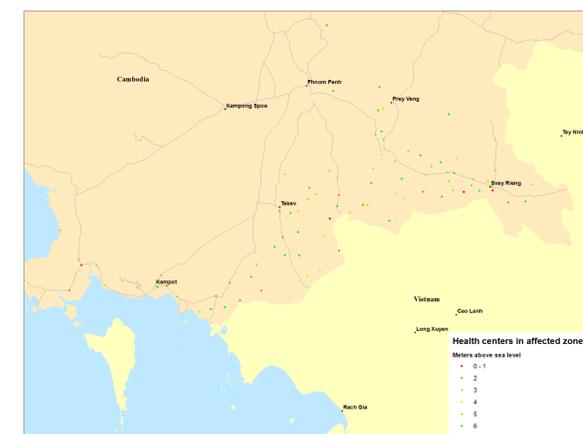


Type of Land Cover	Area in affected zone (Sq. Km)
Tree cover, broadleaved, evergreen, closed and closed to open	421.66
Mosaic: tree cover/other natural vegetation or cropland	183.15
Tree cover, broadleaved, deciduous, mainly open	115.99
Tree cover, regularly flooded, Swamp	302.26
Mosaics & shrub cover, shrub component dominant, mainly evergreen	420.94
Mosaics & shrub cover, shrub component dominant, mainly deciduous	405.56
Mosaics of cropland/other natural vegetation	160.71
Cultivated and managed, non irrigated (mixed)	1541.20
Cultivated and managed, irrigated (flooded, rice, shrimp farms)	4374.20
Water bodies	851.93



Schools Affected

Meters above sea level	Schools affected
0 - 1	50
0 - 2	126
0 - 3	249
0 - 4	411
0 - 5	631
0 - 6	890



Health Centers Affected

Meters above sea level	Health centers affected
0 - 1	7
0 - 2	15
0 - 3	24
0 - 4	38
0 - 5	59
0 - 6	93

Cartographer: Lauren Gritzke
May 8, 2012

Data Sources: 2008 General Population Census of Cambodia (National Institute of Statistics of Cambodia); Global Land Cover 2000: South East Asia (Global Environment Monitoring Unit - European Commission Joint Research Center); STRM 2000 (NGA/NASA)
Data projection: WGS_1984_UTM_Zone_48N

