

West Africa Coastal Vulnerability Mapping:  
Mangrove Forests Distribution, 2000 Polygon

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## DESCRIPTION

This data set was used as an indicator in the analysis presented in the report, "Mapping the Exposure of Socioeconomic and Natural Systems of West Africa to Coastal Climate Stressors" (de Sherbinin et al., 2014; de Sherbinin et al., 2015). The table below provides information about the indicator as it was used in the analysis, including a description of the input data (where relevant) and of the processing completed to produce the indicator.

<b>Title:</b>	Mangrove Forests Distributions, 2000
<b>Indicator Code:</b>	MANG
<b>Component:</b>	Exposed Systems
<b>Rationale:</b>	Mangroves are vulnerable to SLR and storm surge.
<b>Data Set:</b>	The Global Mangrove Forests Distribution, 2000 raster data set is a compilation of the extent of mangrove forests from the Global Land Survey and the Landsat archive with hybrid supervised and unsupervised digital image classification techniques. The data are available at a 30 meter spatial resolution. The total area of mangroves in the year 2000 was estimated at 137,760 km <sup>2</sup> in 118 countries and

	<p>territories in the tropical and subtropical regions of the world. This figure is more than 12 percent less than previous estimates; and if the current rate of loss continues, predictions suggest that 100 percent of these forests will be lost in the next century.</p> <p>The Mangrove Forests Distributions, 2000 Polygon data set represents the extent of mangrove forests in the coastal zone of West Africa based on the Global Mangrove Forests Distribution, 2000 raster data set. To produce the Mangrove Forests Distribution, 2000 Polygon data set, the 30 meter Global Mangrove Forest Distribution, 2000 data set was aggregated to 1 km, subset to the 200 km coastal zone of West Africa, and converted to a polygon.</p> <p>Input data source citation:</p> <p>Giri, C., E. Ochieng, L.L.Tieszen, Z. Zhu, A. Singh, T. Loveland, J. Masek, and N. Duke. (2013). Global Mangrove Forests Distribution, 2000. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC).  <a href="https://doi.org/10.7927/H4J67DW8">https://doi.org/10.7927/H4J67DW8</a>.</p>
<b>Units:</b>	
<b>Limitations:</b>	
<b>Spatial Extent:</b>	The spatial extent of the Mangrove Forests Distribution, 2000 Polygon data set is the 200 km coastal zone of the ten Guinea Current countries of coastal West Africa: Guinea-Bissau, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon.
<b>Spatial Resolution:</b>	30 arc-second (~1 km)
<b>Time Period:</b>	2000
<b>Additional Notes:</b>	

## ACCESSING THE DATA

SEDAC URL: <http://sedac.ciesin.columbia.edu/data/collection/wacvm>.

Permanent URL: <https://doi.org/10.7927/H4RJ4GCJ>.

The data are available as compressed zipfiles of GeoTIFFs or shapefiles. Downloaded files need to be uncompressed in a single folder using either WinZip (Windows file compression

utility) or similar application before they can be accessed by your GIS software package. Users should expect an increase in the size of downloaded data after decompression.

The data are stored in geographic coordinates of decimal degrees based on the World Geodetic System spheroid of 1984 (WGS84).

#### DISCLAIMER

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#### USE CONSTRAINTS

Users are free to use, copy, distribute, transmit, and adapt the work for commercial and non-commercial purposes, without restriction, as long as clear attribution of the source is provided.

#### RECOMMENDED CITATION(S)

Data set:

Giri, C., E. Ochieng, L.L.Tieszen, Z. Zhu, A. Singh, T. Loveland, J. Masek, and N. Duke. 2018. West Africa Coastal Vulnerability Mapping: Mangrove Forests Distribution, 2000 Polygon. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC).  
<https://doi.org/10.7927/H4RJ4GCJ>. Accessed DAY MONTH YEAR.

Scientific publication:

Giri, C., Ochieng, E., Tieszen, L.L., Zhu, Z., Singh, A., Loveland, T., Masek, J., and Duke, N.. 2010. Status and Distribution of Mangrove Forests of the World Using Earth Observation Satellite Data. *Global Ecology and Biogeography: A Journal of Macroecology* 20(1):154-159.  
<https://doi.org/10.1111/j.1466-8238.2010.00584.x>.

## REFERENCES

de Sherbinin, A., Chai-Onn, T., Jaiteh, M., Mara, V., Pistoiesi, L., and Schnarr, E. 2014. Mapping the Exposure of Socioeconomic and Natural Systems of West Africa to Coastal Climate Stressors. Technical Report for the USAID African and Latin American Resilience to Climate Change (ARCC) project. Washington, DC: USAID.

[http://sedac.ciesin.columbia.edu/downloads/docs/wacvm/tbw04-02wacoastalmappingresults\\_cleared.pdf](http://sedac.ciesin.columbia.edu/downloads/docs/wacvm/tbw04-02wacoastalmappingresults_cleared.pdf).

de Sherbinin, A, T. Chai-Onn, M. Jaiteh, V. Mara, L. Pistoiesi, E. Schnarr, and S. Trzaska. 2015. Data Integration for Climate Vulnerability Mapping in West Africa. ISPRS International Journal of Geo-Information 4(4):2561-2582. <https://doi.org/10.3390/ijgi4042561>.