

# Grids & Datums

## REPUBLIC OF GUINEA-BISSAU

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“More than 1,000 years ago the coast of Guinea-Bissau was occupied by agriculturists using iron implements. They grew irrigated and dry rice and were also the major suppliers of marine salt to the western Sudan. At about the same time, the area came under the influence of the Mali Empire and became a tributary kingdom known as Kaabu. After 1546 Kaabu was virtually autonomous; vestiges of it lasted until 1867” (*Britannica Concise Encyclopedia, 2010*).

“The rivers of Guinea and the islands of Cape Verde were among the first areas in Africa explored by the Portuguese in the 15th century. Portugal claimed Portuguese Guinea in 1446, but few trading posts were established before 1600. In 1630, a ‘captaincy-general’ of Portuguese Guinea was established to administer the territory. With the cooperation of some local tribes, the Portuguese entered the

Portugal in 1974, Guinea-Bissau has experienced considerable political and military upheaval.

Bordered by Guinea, (386 km), Senegal (338 km) (*PE&RS, May 2010*), and the Atlantic Ocean (350 km), the lowest point is the Atlantic Ocean (0 m), and the highest point is an unnamed elevation in the eastern part of the country (300 m). Slightly less than three times the size of Connecticut, the terrain is mostly low coastal plain rising to savanna in the east (*World Factbook, 2010*).

In 1912, a geodetic/hydrographic mission (*Missão Geo-hidrográfica*) was undertaken. Geodetic survey work was also undertaken between 1948 and 1955 as control for a 1:50,000 scale topographic map series, now complete. The results were also published as Rio Geba Hydrographic Charting 1956 (*Engenharia Geográfica nos Séculos*

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**With the cooperation of some local tribes, the Portuguese entered the slave trade and exported large numbers of Africans to the Western Hemisphere via the Cape Verde Islands. Cacheu became one of the major slave centers, and a small fort still stands in the town.**

slave trade and exported large numbers of Africans to the Western Hemisphere via the Cape Verde Islands. Cacheu became one of the major slave centers, and a small fort still stands in the town. The slave trade declined in the 19th century, and Bissau, originally founded as a military and slave-trading center in 1765, grew to become the major commercial center. Portuguese conquest and consolidation of the interior did not begin until the latter half of the 19th century. Portugal lost part of Guinea to French West Africa, including the center of earlier Portuguese commercial interest, the Casamance River region. A dispute with Great Britain over the island of Bolama was settled in Portugal's favor with the involvement of U.S. President Ulysses S. Grant. Before World War I, Portuguese forces, with some assistance from the Muslim population, subdued animist tribes and eventually established the territory's borders. The interior of Portuguese Guinea was brought under control after more than 30 years of fighting; final subjugation of the Bijagos Islands did not occur until 1936. The administrative capital was moved from Bolama to Bissau in 1941, and in 1952, by constitutional amendment, the colony of Portuguese Guinea became an overseas province of Portugal” (*U.S Dept. of State Background Notes, 2010*). Since independence from

*XIX e XX, João Matos*). The coordinate system used was the UTM on the Hayford (International 1909) ellipsoid where  $a = 6,378,388$  m, and  $1/f = 297$ . The local datum is based on Bissau Base North West Pillar. Thanks to John W. Hager, “Extrême NW de la base géodésique de Bissau where  $\Phi_0 = 11^\circ 51' 27.60''$  N  $\pm 0.08''$ ,  $\Lambda_0 = 15^\circ 37' 06.77''$  W  $\pm 0.10''$ ,  $\alpha_0 = 304^\circ 11' 16.0'' \pm 0.34''$  to SE Base End **from south**, International ellipsoid. Reference is: *Rapport sur Les Travaux Géodésiques Exécutés Dans Les Provinces Portugaises D'Outre-Mer, Junta Das Missões Geográficas E De Investigações Do Ultramar, Toronto, September 1957.*”

TR 8350.2 lists the transformation from Bissau Datum to WGS 84 as:  $\Delta X = -173$  m,  $\Delta Y = +253$  m,  $\Delta Z = +27$  m,  $\pm 25$  m in each of the three components, and is based on collocation at 2 points as of 1991.



*The contents of this column reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the American Society for Photogrammetry and Remote Sensing and/or the Louisiana State University Center for GeoInformatics (C<sup>4</sup>G).*