

Grids & Datums

REPUBLIC OF HAÏTI

by Clifford J. Mugnier, C.P., C.M.S.

“Before the arrival of Europeans, Arawak (also known as Taino) and Carib Indians inhabited the island of Hispaniola. Although researchers debate the total pre-Columbian population (estimates range from 60,000 to 600,000), the detrimental impact of colonization is well documented. Disease and brutal labor practices nearly annihilated the Indian population within 50 years of Columbus’s arrival. Spain ceded the western third of the island of Hispaniola to France in 1697. French authorities quelled the island’s buccaneer activity and focused on agricultural growth. Soon, French adventurers began to settle the colony, turning the French portion of the island, renamed Saint-Domingue, into a coffee- and sugar-producing juggernaut. By the 1780s, nearly 40 percent of all the sugar imported by Britain and France and 60 percent of the world’s coffee came from the small colony. For a brief time, Saint-Domingue annually produced more exportable wealth than all of continental North America. As the indigenous population dwindled, African slave labor became vital to Saint-Domingue’s economic development. Slaves arrived by the tens of thousands as coffee and sugar production boomed. Under French colonial rule, nearly 800,000 slaves arrived from Africa, accounting for a third of the entire Atlantic slave trade” (*Library of Congress Country Profile, 2006*).

an area of 2,000 square kilometers. The north’s major mountain range, the Massif du Nord, buttresses this plain. The central region consists of the Central Plateau, which covers an area of more than 2,500 square kilometers, as well as two smaller plains and three mountain ranges. The Guayamouc River splits the Central Plateau and provides some of the country’s most fertile soil. Haïti’s southern region contains a series of small coastal plains as well as the mountains of the Massif de la Selle” (*ibid., Library of Congress*).

“Haïti issued a decree in 1972 that altered its claimed territorial sea and contiguous zone. The basic system utilized in the establishment of the limits of the Haïtian territorial sea is obscure. While the law calls for measurement of the territorial sea from the low-water baseline of the coast, this system has not been utilized. Furthermore, the turning points were plotted on a very small-scale map and not from a reasonably-scaled nautical chart. As a result, the problem of interpretation is compounded by positional difficulties. The Haïtian Government described the system as utilizing *droites paralleles* from the most seaward points of the Haïtian coast. The government has basically drawn a “system of straight baselines” in a unique manner. The Convention on the Territorial Sea and the Contiguous Zone, for example, states that a system of straight baselines may be utilized

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“After a prolonged struggle, Haïti became the first black republic to declare independence in 1804. The poorest country in the Western Hemisphere, Haïti has been plagued by political violence for most of its history. A massive magnitude 7.0 earthquake struck Haïti in January 2010 with an epicenter about 15 km southwest of the capital, Port-au-Prince” (*World Factbook, 2010*).

Slightly smaller than Maryland, Haïti borders the Dominican Republic (360 km) (*PE&RS, December 2005*). The lowest point is the Caribbean Sea (0 m), and the highest point is Chaîne de la Selle (2,680 m) (*spelling courtesy of the NGA Geonames search engine, 2010*). “Haïti occupies the mountainous portion of the island of Hispaniola. Its land area includes numerous small islands as well as four large islands: Île de la Gonave to the west, Île de la Tortue off the north coast, and Île à Vache and Île Grande Cayemite, situated, respectively, south and north of the southern peninsula. Five mountain ranges dominate Haïti’s landscape and divide the country into three regions — northern, central, and southern. The northern region has the country’s largest coastal plain, the Plaine du Nord, which covers

for deeply-indented coasts or coasts fringed with islands. The Haïtian coastline, in places contains islands. These, however, have not been used as the basepoints with the exception of Tortuga. Gonave represents an indentation of the coast but the scale of the resulting system dwarfs the physical features upon which the system has been developed. The breadth of the territorial sea (as plotted) measures not 12 nautical miles as decreed but from less than 12 to more than 40 nautical miles” (*International Boundary Study, Series A, LIMITS IN THE SEAS No. 51, Straight Baselines: Haïti, Office of the Geographer, U.S. Dept. of State, 1973*).

The first known geodetic surveys of the Republic of Haïti were performed by the U.S. Army Map Service Inter-American Geodetic Survey (IAGS) in 1946. The triangulation connected all of the islands in the Caribbean to the North American Datum of 1927 of which the origin is at Meades Ranch, Kansas where: $\Phi_0 = 39^{\circ} 13' 26.686''$ N, $\Lambda_0 = -98^{\circ} 32' 30.506''$ W., the reference azimuth to station Waldo is $\alpha_0 = 75^{\circ} 28' 09.64''$, and the ellipsoid of reference is the Clarke 1866 where $a = 6,378,206.4$ m and $b = 6,356,583.8$ m. The IAGS

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established a secant plane coordinate system for Haïti based on the Lambert Conformal Conic projection, the Central Meridian (λ°) = $71^{\circ} 30'$ West of Greenwich, a False Easting of 500 km, and a scale factor at origin (m_0) = 0.999911020, a Latitude of Origin (ϕ_0) = $18^{\circ} 49'$ North, and the False Easting = 277,063.657 meters.

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