Transport in Haiti

As of 2000 Haiti had 4,160 km of roads, 1,011 km of which was paved and 3,149 km of which was unpaved. A 2004 assessment of Haiti’s roads showed that only 5% were in good condition. Since 1991, Haiti has lost more than a 1,000 km of rural roads. In Haiti, 70% of all travel is done on foot while 85% of vehicle traffic is congested in the Port au Prince metropolitan area. Public transportation is provided through Tap Taps, colourfully painted buses, pick up trucks and minivans that provide transport within cities as well as between cities. Haiti has no public rail system, only small sections of private rail serving the ports.

The following map denotes Haiti’s busiest ports. They are all connected by the country’s primary highway, the RN1. After Port au Prince, Cap-Haitien and Miragoane are Haiti’s main ports for exports. Saint Marc is currently the preferred destination for the import of goods because of its central location and the volatility in Port au Prince. Saint Marc shows high potential for future development as it is increasing in economic capacity, has a central location, and does not lie in a flood plane.
Precedent - Bogota, Columbia

Bogota, Columbia is a city of approximately 7.5 million people with a density of 4,670.5 per sq km. It is a large city in terms of land area occupying 1,587 sq km. The population of the metropolitan area is close to 9.6 million. Bogota was a city faced with severe problems concerning its transportation system. The city was highly congested and polluted. In order to alleviate these problems, the city devised a plan to implement a bus rapid transit system as well as an extensive network of bicycle paths. The BRT system, known as Transmilenio, was opened to the public in December of 2000. After 10 years in existence, the system now has 9 lines, 84 km of busways, 104 stations, 10 integration points, integrated feeder services and advanced centralized control. The fleet of buses numbers over 1,000 and usage is estimated at 1.6 million passengers a day with peak usage of 43,000 passengers per hour in each direction. They are still adding to the system and wish to eventually have 388 km of busways.

The bike system, known as CicloRuta, is comprised of 303 km of bike lanes and had a recorded usage of 213,000 trips per day as of 2005. Estimates for current usage are 320,000 trips per day, 4% of the total number of daily trips in Bogota. The system is divided into 3 sections, the main network which connects key city centres, the secondary network which mostly serves as a feeder for the Transmilenio system, and the complementary network which mostly runs along river banks and through parks.
Copenhagen, Denmark has a population of approximately 531,000 with a density of 6,019 per sq km. The area of the city is 88.25 sq km. The surrounding urban area is 455.61 sq km with a population of 1.18 million while the entire metropolitan area is 2,673 sq km with a population of 2.8 million. There are 2 main rail systems that serve Copenhagen, the S-Train and the metro. There are 7 S-Train lines and 2 metro lines. The S-Train currently comprises 170 km of dual track, 85 stations, and serves over 300,000 passengers a day. The S-Train lines are built in accordance with Copenhagen’s finger plan. The metro system currently is comprised 20.5 km of track, 22 stations and had a ridership of over 50 million in 2009. A new city circle metro line, which will encircle the core of the city, is scheduled to open in 2018.

In Copenhagen 36% of residents commute by bicycle. The city wishes to increase this number to 50%. There were 339 km of bicycle lanes in the city as of 2004. The city is also developing bicycle ‘greenways’ which are totally separated from the road network, unlike the cycle lanes. There was 37 km of greenways in the city as of 2004 and the completed network will comprise 22 routes totalling 100 km. Copenhagen was also the first city to launch a public bike sharing program. There are currently 110 stations in the downtown area providing 2,500 bikes. The bikes can only be used in the daylight hours from mid-April to November and are taken out by depositing a 20 DKK coin which is refunded when the bike is returned. The city is also developing an anti theft program which uses GPS tracking.
Barcelona, Spain has a population of approximately 1.6 million with a density of 15,991 per sq km. The area of the city is 101.9 sq km. The metropolitan area is 803 sq km large and has a population of around 5 million people. Barcelona has an extensive metro system. Currently there are 11 underground lines, 209 stations and 157.51 km of track. In addition to the metro there are 4 lines of above ground trams. Barcelona currently has the most metro route kilometres per person in the world. Ridership of the Barcelona metro was recorded at 361 million trips in 2009.

In 2007 Barcelona launched the Bicing program. It is a community bicycle program designed for shorter trips within the urban core. Users pay an annual 30 Euro fee to register. There are currently 400 stations located around 300 to 400 metres apart that supply over 6,000 bikes. Stations are usually located close to other forms of transit. Users are issued a stripe card to take out the bicycles. Trips under 30 minutes are free, then each half hour costs 50 cents up to a maximum of 2 hours when the charge becomes 3 Euros per hour. The bicycles can be returned to any station after use. There are currently 175,000 registered users and an average of 50,000 trips on Bicing bikes each day. The city is now considering how to expand the program.
Port au Prince

Given the topography of the country, widespread rail implementation has severe limitations in Haiti. As such, the rapid bus system of Bogota (which has a similar topography) sets an excellent precedent. Buses can easily ascend the mountainous terrain where rail cannot. However, the drawback with bus transportation is the reliance on imported diesel fuel, which will become increasingly less available over the next 30-50 years, especially for a country like Haiti. Haiti currently has limited electrical capacity so the implementation of light rail would require a substantial increase in electrical production. For the future development of Port au Prince, Copenhagen’s finger plan which utilizes linear growth could be applied. Linear growth along the tamer terrain of the coasts and mountain valleys allows for easier construction and the avoidance of flood plains. The primary road network is already built along these areas and provides basic infrastructure to facilitate this growth. Based on the precedent studies, Port au Prince would require around 10 lines of light rail or rapid bus transit to adequately accommodate a populace of 2-3 million and remove the current traffic congestion in the city. Given the density of Port au Prince, it is possible that the same routes would have to be covered by multiple lines.

Being that Haitians have a communal society, the implementation of communal bicycle programs like those of Copenhagen and Barcelona have great potential. A well-run program would allow for masses of impoverished Haitians to substantially improve their mobility.
References

Transport in Haiti


Images

Source for Haitian roads

Further info on Transport: Air Travel

Precedent - Bogota, Columbia


Images

Source for Transmilenio and CicloRuta routes