

Environmental Challenges Facing a Growing City: Sunyani Case Study

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Abstract

This photo essay illustrates the environmental challenges facing a rapidly growing urban settlement in Ghana. Sunyani is one of the fastest growing cities in Ghana. The population of the city increased from 38,634 in March 1984 to 61,992 in March 2000 (Ghana Statistical Service, 2002). This trend presents serious development challenges to the city as high rates of population growth are not matched with increased provision of social services and infrastructure. The city authorities will have to adopt appropriate urban planning strategies if the city is to develop sustainably.

Author's Note

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1. Introduction to the Sunyani City

Sunyani is a city in the West African republic of Ghana and is the capital of both the Sunyani East Municipal District and Brong Ahafo Region. It lies between Latitudes 70.20°N and 70.05°N and Longitudes 20.30°W and 20.10W. Sunyani also lies within the middle belt of Ghana between 750 (229 meters) to 1235 feet (376 meters) above sea level. The costs of constructing houses and roads are relatively minimal due to the nature of the topography.

Today Sunyani is home to both the regional government and high court and the region's post-secondary institutions including a polytechnic school. The city is host to the University of Energy and Renewable Resources and the Catholic University College of Ghana. Several of the country's best primary and secondary schools can be found within the metropolitan area and its suburbs. An estimated 87,642 people reside in the city as of January 2012.

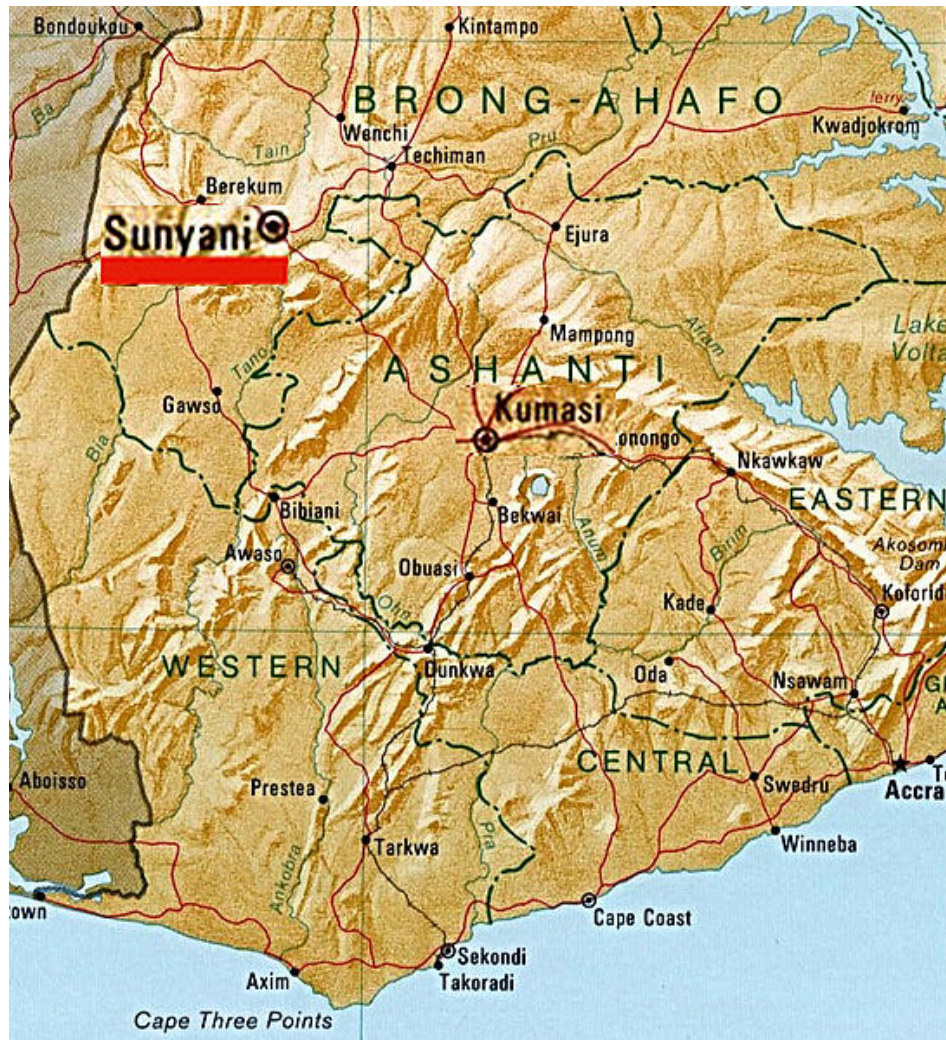


Figure 1: The location of Sunyani in Ghana (Perry-Castañeda Library Map Collection, 2006)

Surrounded by the forested Southern Ashanti Uplands, the city of Sunyani originally developed as an outpost camp for elephant hunters during the 19th century. The name Sunyani is derived from the Akan word for elephant: ‘Osono,’ and the area is an important hub for the distribution of cocoa, kola nuts, and staple foods such as maize and yam.

The city falls within the wet Semi-Equatorial Climatic Zone of Ghana. The mean monthly temperatures vary between 23°C and 33°C with the lowest observed around August and the highest around March and April. The relative humidities are high, averaging between 75 and 80 percent during the rainy seasons and between 70-80 percent during the dry seasons of the year creating an ideal climate for luxurious vegetative growth. (Ghana Districts, 2006)

The average rainfall for between 2000 and 2009 was high, at approximately 88.987cm. The city experiences a double maxima rainfall pattern and the main rainy season between March and September and the minor between October and December.



Figure 2: Among the city's attractions is the Cocoa House, a high rise that dominates the Sunyani skyline. The building houses the headquarters of several regional companies.

In 1924, The British colonial government designated Sunyani as district headquarters following the construction of roads connecting it with the city of Kumasi. Since then, the city has attracted a number of financial institutions including a branch of the Bank of Ghana, Stanbic Bank, Ecobank, and Barclays Bank. Sunyani is a clean and well maintained city and was voted the cleanest city in Ghana by the Ghana Tourist Board in 2007.



Figure 3: Aerial view of Sunyani New Town from the top floor of the tallest building in the City - the Cocoa House. (Source: author's field work, December 2012)

The first four localities of the city, created in 1924, are areas that today house recreational centers, a market, a Lorry Park, a hospital, and other relevant facilities. The city currently has over 15 localities. Over 6 localities created since the country gained independence in 1957 lack the facilities that the first 4 localities have. For example, New Town, Penkwase, and New Dormaa lack recreational centers, lorry parks, community halls, and health centers.

2. Environmental Challenges Facing the City

Low crime rate, a relatively clean environment, the availability of good secondary and tertiary educational institutions, and an abundance of affordable produce are some of the factors that have made Sunyani a very attractive city for Ghanaians. Consequently, rapid rates of population growth are expected to continue. As a result, there are signs that the city is facing increasing pressure on the environment. A recent study of the city has revealed the following challenges:

- Pollution of water bodies
- Lack of drainage systems in some areas
- Poor waste management in some areas
- Traffic congestion in the central business district

- Inadequate sanitation facilities
- Poor access to roads in some areas
- Gully erosion
- Lack of car parking spaces in the central business district
- Lack of neighborhood parks

The city authorities will have to address these challenges if the city is to grow sustainably.



Figure 4: Polluted city water body. This area was an attractive water body a few decades ago (source: author's field work, December 2012)

Sunyani has many small rivers and streams which feed into the main source of treated water for the city, the River Tano. Seven of the rivers are polluted. These seven water bodies are located in the districts of Sunyani (stretches across four neighborhoods of the City), Akokora Kwadwo (Sunyani Estate), Agyei (Number 2), Nsakonsuano (Nkwabeng North), Aboshyensua (Ministries Area), Danyame, and Tuasua (Sunyani Estate). An estimated 60% of the Sunyani water bodies are under threat from human activities.

Residents of densely populated and low income Sunyani localities such as Number 2 and Penkwase do not have access to adequate pipe-borne water supplies. The city's water supplier, Abesim head works, ensures less than 50% of the water demand of the city's 87,642 residents. The pollution of the seven water bodies is one of the major causes of the water supply deficit. Furthermore, there are not enough waste collection containers in some of the areas. Residents dump solid and liquid waste into the water bodies which are washed into the Tano River, a source of water

for the Abesim water treatment plant. This often creates water shortages for both domestic and agricultural needs during the dry season.



Figure 5: Poor drainage system in a section of Sunyani Area 2. (Source: author's fieldwork, December 2012)

There are areas in the city which lack drainage systems. An estimated 20,000 residents live in areas with no proper storm drains, such as in Number Two, Penkwase and New Town. In addition, the population densities in these areas are very high. Consequently, it is estimated that 22.8% of all residents live in these flood risk areas and face damage and losses every time it rains. City authorities must therefore pay attention to the infrastructural needs of these flood risk areas if future disaster is to be averted. For instance, the incidence of malaria is already high in these neighborhoods and the chances for an epidemic are immense.



Figure 6: Buildings at risk due to gully erosion (source: author's fieldwork, December 2012)

Due especially to the flat topography, houses are easily and cheaply constructed. However, the lack of drainage in some areas has exposed houses to gully erosion. An estimated 3000 houses are at risk with the most affected areas being Number Two, New Town, and Penkwase where the poorest residents live. This problem has worsened the already poor housing conditions of the areas.

Residents of low income localities in the city use gullies created by erosion as waste dumpsites (Figure 7). Authorities currently service roughly 40 communal collection container sites. 40 collection sites are collecting roughly 40% of the solid waste generated in the city with the remaining 60% of uncollected waste being dumped in open areas. Children who do not have access to sanitation facilities in their homes use the dump sites as toilets. The under five mortality is consistently high, mostly attributed to sanitation-related diseases, including malaria, typhoid, cholera, and diarrhea.



Figure 7: Exposure of children to disease pathogens at dumpsite (source: author's fieldwork, December 2012)



Figure 8: One of the many open air final waste disposal sites (source: author's fieldwork, December 2012)

It has been estimated that the city generated 12,010 tons of solid waste in 2010; however, only 4,805 tons were actually collected. Organic matter constitutes 69% of the total solid waste. The city has one landfill site only about 1000 meters from 40 residential buildings. The landfill is a non-engineered site with limited supervision and, due to ashes in the garbage, there are numerous fires in the waste with smoke heading towards the nearest and largest neighbor, the Sunyani Polytechnic. The over 8000 students of the Polytechnic and the health of the students residing in the affected residential buildings will be at risk if the landfill is not relocated.



Figure 9: One of the sites of the metal waste collectors (source: author's fieldwork, December 2012)

Waste generated in the city ranges from plastics and food waste to metals, paper, wood, and glass. Solid waste is burnt at landfill sites and little is recycled in the city. Scavengers collect metal and e-waste from households, which are shipped to the national capital, Accra, for recycling. Under such conditions, city authorities will have to implement sustainable waste management programs before conditions worsen beyond recovery as is the case in larger cities such as Accra (largest city in Ghana) and Kumasi (second largest city).



Figure 10: A section of the central business district with street vendors (source: author's fieldwork, December 2012)

Another challenge facing the city is a lack of parking spaces for cars. Private cars parked on the streets come into conflict with street vendors, especially in the Number One, Number Two, and Number Three districts. These three areas constitute the city's central business district. The streets of the city are becoming congested, noisy, and filthy, and there are very few litter bins. Therefore, private car parks must be created, and the lack of markets to accommodate street vendors must be addressed as well as the installation of litter bins on the streets.