

Land Use and Climate Change on an Island: Chalk and Cheese?

By Jamilla Sealy 22.5.2015

What does land use have to do with climate change? Everything. They are not like 'chalk and cheese' like persons may think. How our 166 square miles are managed, directly determines our future on this beloved rock.



Browne's Beach Flooded 2015. Photo Credits: Richard Burke Facebook

Land is definitely a key limiting factor to a Small Island Developing State (SIDS) and can definitely determine our resilience to potential climate change impacts. When land is limited, there are several competing uses for the same space such as industrial and manufacturing, educational, residential, agriculture, tourism, urban areas, solid waste disposal, and not to be forgotten, natural ecosystems such as forests, streams and mangroves. Therefore, sustainable land management is critical. When conducting my thesis on the effects of changing land use patterns and climate change impacts on food security in Barbados, coincidentally enough, the first question some persons I pitched it to asked me was 'what's the link between climate change and land use?'

According to a United States' Environmental Protection Agency's publication, land use planning plays a significant role in mitigating greenhouse gas emissions and adapting to a changing climate. Additionally, it is critical in assisting communities to adapt to sea level rise, more intense weather conditions and other climate-related hazards. Land management has energy implications as well. The more developed or built-up areas are, the hotter it gets, and therefore, an increased need for air conditioning, resulting in higher electricity or fuel bills.

Correspondingly, as the United Nations Environment Programme (UNEP) reported in a 2010 National Environmental Summary for Barbados, it was revealed that land management was inefficient in Barbados pertaining to climate change adaptation. It was further stated that land use has changed rapidly over the years from agriculture to a more built-up environment, which may have potentially devastating consequences such as flooding and land degradation. This would therefore increase our already vulnerable state.

From a 2015 report from the Barbados Chapter of the Caribbean Youth Environment Network (CYEN), preliminary results showed that 99% of 400 surveyed young Barbadians - aged 15-31 years - believed that

sustainable land management is important for Barbados. However, 92% were of the opinion that the land was not being managed well at present. Also, climate change was ranked as one of the top threats to sustainable land management, only second to pollution. What will we do about this?

Thus, despite the fact that we like to blame the government for several shortcomings, we as 'proud Barbadians' have to do our part to help ourselves. What we do on the land will determine as a nation, how much water we conserve, how much oxygen we get, whose houses and businesses will be affected first by flooding from sea level rise, what our food and energy bills will be and overall how resilient we are to weather systems, earthquake and volcanic activity which the region is very prone to. Note that we are just weeks shy of the hurricane season and Tropical Storm Ana has graced the Atlantic with her presence. If we are not usually prepared for the regular season, how will we defend ourselves against an off-season trough like that which devastated our neighbouring isles in 2013?

Most importantly, education and change in attitudes of our citizens, especially young people, is highly recommended to create a culture of a better appreciation for land as a precious resource and further, to adapt to climate change impacts. We need to start with us.

As our National Environment Month approaches in June, I want persons to not only **think** about what actions they will take for climate change but to actually **do** positive actions so we can all survive.