

**Caribbean Regional Trialogue on Pollinators, Food Security  
and Climate Resilience**

**Santo Domingo, Dominican Republic, 4-6 September 2018**

**Triálogo Regional del Caribe sobre Polinizadores, Seguridad  
Alimentaria y Resiliencia Climática**

**Santo Domingo, República Dominicana, 4-6 de Septiembre 2018**

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## POLLINATORS

Bats are the only native mammals on Antigua and Barbuda today. They are critical to forests, native plants and the control of insects: being major pollinators of native plant species, dispersing native fruits, and consuming tons of insect pests, including disease-carrying mosquitoes, flies and agricultural pests. But despite the significant roles they play Antigua and Barbuda, relatively little is known about the local species, and sadly, there is no conservation work being done.

Bats, being nocturnal, often go unnoticed by local residents and there are strong cultural myths and superstitions about them, and much of these are based on erroneous information gleaned from television, from fictional novels and through fear nurtured by peers and misinformation. As a result, many residents view bats as evil, vampires, messengers of the devil, arise from the depths of hell, are disease-ridden, carry rabies and cause considerable physical harm, even to babies. These views and beliefs make conservation of the only native mammals to Antigua and Barbuda quite challenging.

The Tree Bat, was discovered by Kevel Lindsay during a survey of Wallings Forest in 2008. This subspecies of the Tree Bat (*Ardops nicholli siannectens*) is endemic to Antigua and to Guadeloupe, meaning that it is found nowhere else on earth. On Antigua, it is quite rare, found only in the south of the island, and in small numbers. Without the forests of that area to support it, this species faces an uncertain future and has serious implications for saving the islands' native biodiversity.



## Status of pollinators

The *Varroa destructor* mite in 2005 destroyed an entire industry and came into the island through imports. The road to recovery has been slow but interest is growing in beekeeping with multiple benefits to increase and sustain the agriculture sector, increase in honey and wax production and this has led to the cultivation of flowers such as sunflowers (Orange and yellow), marigold, a variety of herbs such as thyme, rosemary, mint balsam, medicinal herbs and other wild plants that supports the wild food supply. Social benefits also accrue in poverty alleviation, livelihoods support, income generation, cross pollination, increase in crop yields, value added components, opportunities for commercial components and the provision of ecological services through advance pollination management for forest and agro-biodiversity maintenance.



**THREATS**

Inappropriate land use practices in semi-arid or dry sub-humid environment:

- improper disposal of wastes, sewage, chemicals, pollutants and mercury and other land based sources of pollution, such as the state-owned power plant
- significant degradation of water and soil resources
- degradation of landscapes adjacent to crop and farm lands where mixed and integrated farming is taking place
- Soil contamination and land-based pollution of groundwater water
- Loss of water availability (Antigua and Barbuda ranked as one of most water-stressed countries in the Caribbean)
- loss of biological and/or economic productivity of rain-fed or irrigated land used for crops, pasture, forest or woodlands. Good agricultural Practices (GAPS) are being sought, especially those operating in or near watersheds and coastal areas because of the perceived dangers their current practices are causing directly to the watersheds in terms of decreased water supply and water quality and the harm caused by nutrient run offs to the down stream water bodies and coastal areas.
- Climate Change and Sea Level Rise, which very often are causing more frequent and severe droughts and long dry spells, thereby destroying food sources, decimating, dry up ponds, streams, lakes and reservoirs, destroy crops, which some bats rely on for food and for the insects that feed on them, cause severe flooding, which may wash away roosts, forests and destroy habitats, and rising seas may flood and destroy caves. Also, the frequency and intensity of hurricanes may decidedly result in the starvation of animals and wipe out entire populations, even driving some extinct.
- coupled with a weak enabling environment that includes lack of sufficiently robust policy, enforcement of regulation and institutional response and capability has compounded the problems face by farmers growing food crops that support pollinators.



## Loss of soil productivity

- from three main competing uses of land agriculture, housing and tourism
- the constant adding of fertilizers does not address the problems for when the rains do fall the poor state of our soils prevent them from holding the water.

Calls are currently being made to the farming community to introduce good agricultural Practices (GAPS) especially those operating in or near watersheds and coastal areas because of the perceived dangers their current practices are causing directly to the watersheds in terms of decreased water supply and water quality and the harm caused by nutrient run offs to the down stream water bodies and coastal areas. ***Target 8: “By 2020, 20% of pollution including from excessive nutrients within specific Demonstration areas are brought to levels that are not detrimental to ecosystem functions and biodiversity.***

With the ridge to reef implications, we must be concerned about a multiplicity of impacts from excessive run offs of pesticides, soil mineral balancing; climate change mitigating and reduced ocean acidification efforts through carbon sequestration from compost



## Water Shortage

The island has no available ground water-all wells, dams and reservoirs all completely dried up. .Could this have been avoided? Wallings a watershed of 1365 acres, had the capability of supplying water for 13 villages. It has been neglected, not maintained and overrun by invasive alien species whose root systems suck out most of the available water and kill out the native plants



Water utility company had to close down one major well in this area due to serious sanitary contamination as a result of no toilet facilities by the One Luv Rastafarian community of 60 persons.

The systems built for water storage are not functioning, have been broken, not maintained and overrun by weeds and damaged by tree roots so the farms many headed by women supporting vegetable production fruit trees for foraging by bees are severely impacted



**THANK YOU.**

