



ANGUILLA NATIONAL TRUST

Preservation For Generations

Eco-Corner

Minding the Sand: understanding the impacts of sand mining

Gazing out at a blue sky speckled with white wispy clouds and a sea that stretches out into what seems like infinity – or at least to a very distant horizon. Its colour matches the sky, so much so that it is hard to tell where the air begins and the water ends. Taking in a deep breath. Smelling only freshness. The purity of the clean air has yet to be contaminated with the exhaust of cars and the fumes of industry. A sea breeze blows and a brown pelican glides with the wind until it spots a fish and dives into the ocean. Its an idyllic scene.

But something is different. The drive to the beach seems to be the same – just a few extra large trucks on the road. But the coastline of the area has changed. The coastline used to have towering dunes made of white-pink sand that visitors had to scramble over just to get a glimpse of the expansive Atlantic Ocean. But now, there are no sand dunes and the beach, once thick and full, has been whittled down to a thin strip that gets smaller and smaller by the day. What happened to the beach? To the sand?

Sand Mining on an Anguillian Beach

Sand can be removed from a beach in two main ways. The first is natural, for example by ground seas, storms, or currents. The second is from human activities, the most destructive of which is large-scale sand mining.

Sand mining is the physical removal of sand from anywhere that it exists. It can take place on a small-scale – taking a bucket or two – or large-scale – truckloads that take it away for such things as construction. Almost all of Anguilla's beaches are protected from any form of sand mining. All except for one, that is – a beach on the north-east side of the island between Savannah Bay and the tip of Windward Point. The unregulated removal of the sand has had an enormous impact on the area. Sand dunes that once loomed over the beach and protected the inland shoreline and vegetation have been reduced to a three-foot mound that is being eroded by constant wave action and a continued sand mining effort. Activities have been expanded into the more "inland" area. Large trucks and heavy equipment have been chipping away at the sand-based land and this has created an unprotected and unstable cliff.

It is a precarious situation. Once this now small sand dune is gone, water will flood the open area, and waves will hit this newly created cliff. The erosion process and cycle will continue and the land will be washed away – the rate of which depends on the waves, the storms, and the level of continued sand mining pressure. The latter of which is largely unknown. There are no formal records indicating approximately how much sand is being removed on a daily, weekly, monthly, or even yearly basis.

The area will also become more susceptible to storm and hurricane damage. The loose and un-vegetated soil and sand that is becoming exposed can be easily washed away. The coastline for which Anguilla is so famous for is at risk.

And the effects of sand mining are felt at more than just this one beach. The coastal system is an inter-connected one and the effects can potentially be widespread. For example, through a process called sand displacement, currents can move sand from one beach to another. The loss of sand from one beach by

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The Anguilla National Trust was established in 1993 to act as custodian of Anguilla's heritage, preserving and promoting the island's natural environment and its archaeological, historical and cultural resources for present and future generations. It is in the business of ensuring the sustainability of Anguilla's heritage. The ANT is a dynamic people-centred organisation working in collaboration with public and private sector entities to manage Anguilla's natural social and cultural heritage.

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such a process, however, does not mean that it will necessarily be reduced or negatively impacted as it may also, in turn, be receiving sand from another beach. But this natural give-and-take process has to be allowed.

Sile Bay used to have large sand dunes. After significant sand mining and Hurricane Luis, the beach is gone and a breakwater (a concrete wall) is being used to stop further coastal land erosion. While the breakwater may help with the erosion, it also stops beach rehabilitation because the waves are not able to deposit any sand. Any substrate that these waves may be carrying hits the wall with such force that it cannot settle; it returns with the waves to the sea.

There is a very strong chance that the same could happen to the Windward Point beach. The eastern tip of Anguilla is very thin. The distance between the coasts is minimal. Every truckload of sand that is removed for construction or other purposes is one less truckload of sandy coastline and one more reason for us to be concerned.

While Anguillians should visit the area to see the impacts of these activities for themselves, these pictures provide a glimpse into what has happened.

So we see the activities and have a better understanding of the impacts. The question is now, what are we going to do about it?





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Effects from sand mining on Windward Point Beach (2006).

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Sile Bay prior to Hurricane Luis (1995).



Remedial action through the construction of a breakwater was necessary to address the effects from both sand mining and Hurricane Luis along Sile Bay.



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Eco-Corner is a regular feature provided by the Anguilla National Trust in co-operation with The Anguillian. The Anguilla National Trust welcomes questions, comments, and suggestions. If you would like to voice your opinions and/or concerns, please contact the Trust at 497 5297 or at axanat@anguillanet.com. Together we can make a difference. *Preservation for Generations.*

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