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A few months ago I wrote about the problems of water runoff along the upper Hastings area and the potential debris and pollutants that seem to be finding its way into the adjacent sea and coral coastline. That situation seems to have improved but will need constant monitoring due to the increasing heavy commercial activity in the area.

However, on this occasion I would like to address the Graeme Hall Mangrove Swamp area, its ecosystem and its relationship, or rather its increasingly lack thereof, with the south-western coral reefs of the island.

Normally when one considers a mangrove swamp area, there is a direct and continuous connection between its freshwater origins and the saltwater ocean into which it flows and ebbs. However, there is no longer any such link at Graeme Hall. There is a narrow canal and sleuth gate, built many years ago, that when used as designed (and when in working order) will allow water to flow between the swamp and the sea periodically when opened for short periods of time.

This arrangement is certainly not the best solution as there is a build up and concentration of sediment and mostly natural debris, that because of its natural origins begins to decompose, which when eventually released make the ocean in the immediate area quite undesirable for bathing and I'm certain that it does not do the coral reefs any good either, especially in these high doses.

Under more natural circumstances, the exchange of water and any other material, natural or otherwise, would occur constantly, as the tides ebb and flow, all day and all night, and therefore we would not experience the bad effects of the release of built up matter. If

this was facilitated, we would hardly notice any problems. Consider this.

As the high tide comes in the seawater would flow in through the estuary system or canal, carrying with it certain life forms and some nutrients, mixing with the fresh water upstream to some point until the tide starts to ebb, then as the tide recedes, this brackish water will move seaward carrying with it its own set of life forms and nutrients

The only times that you would get a high amount of freshwater moving down stream would be when there is heavy rainfall, and at such time there would also be associated debris, like mud, silt and sediment which will contain some pollutants but would be quite diluted too. Certainly this should be better than blocking the canal for days or weeks at a time, which causes a build up at the gates and then to be released in high concentrations on the fragile coastal ecosystem.

By the way, I notice that the sleuth gate is quite damaged at this time. One side of it seems to have dropped, possibly due to erosion of its foundation. One pulley is no longer attached to the structure which compromises the whole gate, so my guess is that there has been no flow between mangrove and ocean for sometime – maybe months since the heavy rains last year that could have caused the damage.

This brings me to my main proposal and that is to remove the sleuth gate altogether. Many years ago it had some purpose in

regulating the water level within the swamp when it was used for hunting purposes and maybe for some agricultural purpose before that.

So what is its purpose today? Please don't worry to go and look at the water at the end it now or at any other time and say, well it looks very dirty, so its there to stop that from getting into the sea and/or to release such at more opportune times – which is a bone of contention anyway. For when the gate is operational, many people don't agree on when it should be opened, least of all on weekends and more so during the day when tourist and locals alike are on the beach, in particular Sandy Beach or even further westward (normally down-tide) along Worthing and Rockley Beach.

My main point is that if the 'system' was open 24/7 then we would not have this problem, unless there was a heavy rainfall which is quite natural. I would have to assume that many years ago, possible before major settlement, there was a completely open system between swamp and ocean, and thus the mangroves. Other inland water areas do not have mangroves, so you need the close proximity of the sea for this type of ecosystem to flourish. Now the mangroves are indeed flourishing but what of the other aspects that taken as a whole could be very beneficial to the coral reefs and our fisheries.

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