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Water quality (pollution) management in Rio

The beauty of the Guanabara Bay has a secret it shares only upon visiting: swim and you have a decent chance of falling ill. With more than forty-five tributaries running through a watershed that covers 4,080 km², Guanabara Bay receives hundreds of tons of pollutants each day. It collects industrial waste, oil, sediment, trash, and sewage. The sixteen municipalities that contribute are filled with industry that tends to dump rather than treat their waste waters.

Petrobras, Brazil's oil company, who is expecting drilling and growth, owns many refineries and wells in and around the bay. A few oil spills have already been a major issue for the Guanabara Bay. Also, sediment is washing through at alarming amounts mainly due to deforestation and clearing for agriculture. Coming straight from the people, the citizens of Brazil, is trash and sewage. Although some like to think it is their fault, it surely is not. Yes, they lay out their trash for the rain to take away, but they have no trash collection. Also, as far as sewage is concerned, people are not connected to proper plumbing systems. Even if they are, most of it is never treated. Although it is a difficult task, it is a necessary one to begin implementing more wastewater treatment plants and trash pick-up, so that the ecosystem of the bay has a chance.

All of these pollutants take a huge toll on the waters of the Guanabara bay. It is filled with toxins, sediment, trash, and harmful microorganisms. All of these issues are creating hypoxic zones within the bay. Even with the ocean tides flushing the water, eutrophication is setting in throughout some of the worst sections of the bay. Fish are unfortunately dying off along with many other aquatic species. Fish yields have decreased in numbers and even physical

size. This is not only a huge industry around the bay, but also a major protein source for the people of Brazil.

With the 2016 Summer Olympics lots of attention was turned toward Rio and the waters of the Guanabara Bay. Although some cities have nearly 100% of the people connected to sanitation services, the City of Rio de Janeiro is oddly lacking. According to the ministry of cities, 30% of the population in Rio is not connected to a formal sanitation system. Even those that are connected, only half of the waste is treated. Before the Olympics, only nearly eleven percent of the population of the watershed was connected. A promise was made, stating that eighty percent had to be connected to proper wastewater treatment services prior to the games. By the time the 2016 Games arrived, only about fifty percent of the watershed was connected. I would have never known or even assumed that Rio de Janeiro, and the country of Brazil is not adequately connected to wastewater treatment plants. As a rising power it should have all of those issues worked out and completed. It is undoubtedly a difficult task, especially due to the favelas. However, it has been a recognized issue for decades. Even with the pressure from the Olympics, the political will was lackadaisical. For example, in case the failure to reach the eighty percent goal was not convincing enough, only one of the seven river treatment plans were in effect just two years before the games.

Historically, the government always chose to invest in industry first, and used leftover money for urban projects. Of course these projects began with high income areas. Although visiting Rio might not seem so dirty, it must be understood that these issues have much larger impacts on the poor of the country, who make up most of the population. Before true intellectual and economic growth, Brazil needs sanitation for the people or things will never truly move forward as a united country. Most sickness comes from water borne microorganisms, constantly

keeping kids from school and adults from work. This is an ongoing issue that needs not only political attention, but more public will. If more people knew the true physical issues happening in the Guanabara Bay, they might be more attentive to their actions each day. Although people are busy and working, things change slowly and in small steps. With public will, political will must follow in order to keep a pleased population. Rio de Janeiro, former capital, should have full sanitation access and wastewater treatment. As a former capital, it is a well know industrial area and a top destination for people around the world. It should really be doing everything it can to work out sanitation issues, especially among the favelas, in order to set an example for the rest of the country.