



“How were the water-sport athletes taking part in the 2016 Rio olympics impacted by the high rates of water pollution?”



HPQ Project

“How were the water-sport athletes taking part in the 2016 Rio olympics impacted by the high rates of water pollution?”

2022-23

Assessor Name:



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### Introduction:

Why have I chosen this question? What will be included within the essay?

I chose to research and write my essay on this topic in hope to bring awareness to the often overlooked yet devastating impact of pollution, which is frequently masked by the spectacle of sport. I will be using the Rio olympics of 2016 water pollution levels as a case study. It is hoped that through research such as this, governing bodies and committees intergrate athlete’s safety and well-being into future policies, not just for the olympics but for all high-profile sporting events. By the end of this project I am hoping to improve my time management in terms of meeting deadlines, efficient research and use of resources, as well as improving my scholarly writing tone.

Brazil was the first country in South America to host the Olympics, with 3.6 billion <sup>1</sup> people tuning in globally to spectate. Rio faced immense scrutiny to put on the finest Olympics since the games started in Ancient Greece in 776 B.C. <sup>2</sup> Their success would however not solely be judged on their hospitality and sporting ambitions, but with an ever increasing focus on the global environment, their triumph would also be based on meeting high environmental standards.

With that in mind, this essay will outline some of the issues faced by the Rio Olympic Committee in ensuring that the games were as environmentally friendly as they could be.



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This will include examining specific problems that they had to tackle including poor water sanity levels, the procedures athletes took to protect themselves from the polluted waters and the pledges the Rio Olympic Committee made to control the levels of water pollution.

### Main Discussion:

#### Introduction to the levels of water pollution

The world olympic committee hailed the Rio Olympics as "a true success story."<sup>2</sup> The first-ever refugee Olympic team was welcomed, it was the second successive Olympics wherein women competed in every sport, and residents had access to first-rate public transit, according to the official olympic website.<sup>2</sup> The most striking headline, however, was that the Rio Games was the most watched Olympics ever, with over 50% of the world's population viewing coverage and 7 billion views of official content on social media platforms.<sup>2</sup> Yet, despite this vast visibility and media attention, an environmental catastrophe was unfolding that many were and continue to be unaware of, that jeopardised athletes' safety in addition to endangering Rio's famed landscapes.





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The environmental impact the games would have, was always going to be at the forefront of any international event of this scale and profile, especially with the increased focus on climate change and environmental destruction. Water treatment especially, was essential for the 2016 Olympics since Rio had struggled providing its citizens with safe water and waterways, therefore cleaning up the water was initially promoted as one of the legacies of the Games.<sup>3</sup> But just five days before the games began, Rio's water sanity levels were 1.7 million times higher than what would be deemed "worrisome" in Europe and the USA. <sup>7</sup> Including particularly alarming concentrations in places where athletes would be competing, such as the Rodrigo de Freitas Lagoon, the site of Olympic rowing and Guanabara Bay, the location for Olympic sailing. <sup>7</sup>

Furthermore, during the course of 16 months of testing, infectious adenovirus readings arose at nearly 90% of the test sites.<sup>7</sup> Dr. Valerie Harwood, head of the Department of Integrative Biology at the University of South Florida, declared, "That's a very, very, very high percentage. Seeing that level of human pathogenic virus is pretty much unheard of in surface waters in the US. You would never, ever see these levels because we treat our wastewater. You just would not see this." <sup>7</sup> These devastatingly high levels of pollution are owing to the fact that half of the sewage in the metropolitan area goes untreated, deposited into waterways that filter into the lagoon and the bay that forms the eastern border of the city. <sup>8</sup>



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#### Pledges the Rio Olympic Committee made

The Rio Olympic Organizing Committee listed water quality as their top priority for environmental initiatives for the Games,<sup>3</sup> water quality and pollution had direct implications for competitors at the Games, and water quality evaluations received heavy media attention. It was obvious that a serious environmental disaster was imminent, and the Olympic Committee needed to address it. The committee outlined this plan in the “Clean Urban Delta” framework,<sup>4</sup> with one of the three recognised issues requiring attention being the cleanup of the Guanabara Bay and the Rodrigo de Freitas Lagoon. <sup>4</sup> Their aim was to improve water conditions by capturing and treating 80 percent of the sewage flowing into Guanabara Bay. <sup>4</sup> Be that as it may, when the Games began in August of 2016, less than 45 percent of the water going into the Bay was in fact treated and out of the eight new water treatment facilities planned to be built and operational to clean the water, only one was in operational condition. <sup>4</sup>

#### What impact did the water pollution have on the athletes?

These levels of water pollution not only damaged the environment but also posed a threat to water sport athletes, many of whom were concerned for their health. At the concentrations observed in Guanabara Bay, swimmers would only need to ingest three teaspoons of water to almost definitely contract a virus that could cause stomach and respiratory illnesses as well



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as, less frequently, heart and brain inflammation.<sup>7</sup> The devastating impact of this virus can be demonstrated through examining the case of Evi Van Acker, a Belgian sailor who medaled in London, was reported to have contracted a severe gastrointestinal illness as a result of competing and training in the Bay.<sup>4</sup>

Furthermore, according to a study conducted in the lead-up to the Olympics, scientists have advised athletes to “not put your head underwater” because “almost 100 percent of the people who come in contact with this water will get infected”.<sup>7</sup> Additionally, 1,400 participants who compete in aquatic events faced the danger of becoming seriously ill, according to reports. <sup>7</sup> Ivan Bulaja, the coach of Austria’s sailing team, witnessed the devastating impact firsthand; his sailors had lost valuable training days after falling ill with vomiting and diarrhoea. “This is by far the worst water quality we’ve ever seen in our sailing careers,” said Bulaja.<sup>6</sup>

However, in contrast, a number of athletes had decided to shift their attention from the Bay's pollution to competing there. Sofian Bouvet, a member of the French sailing team, was one of these athletes. Sofian declared in a statement, “It’s not a big issue for us. I think the problems have been exaggerated in the media” “This bay is a great place to sail,” he continued. “I have trained here 11 times and I have never become sick”.<sup>11</sup>

### What precautions did athletes take to protect themselves?

After learning about the dangerously high levels of viruses in the water they were to compete in, many water sports competitors took elaborate precautions to prevent illnesses that could



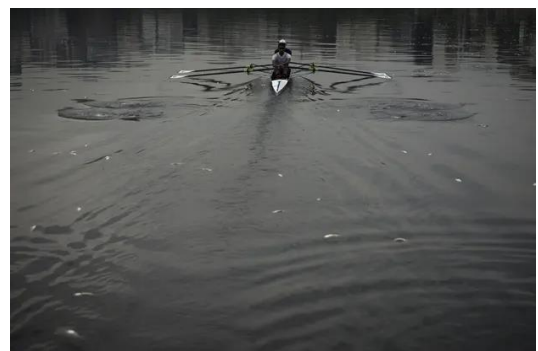


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potentially force them out of the competition. These measures included preemptively taking antibiotics, bleaching oars, and donning plastic suits and gloves to limit contact with the water.<sup>7</sup> One of the most noticeable provisions seen was that of the American rowing team, who’s uniforms weren’t what they had initially planned to wear for when they entered the water at the Rio Olympics, instead they wore antimicrobial suits to protect themselves from pollutants.<sup>5</sup>

The Austrian sailor David Hussl, said that during training in Guanabara Bay leading up to the Olympics, he and his teammates took extreme measures, washing their faces straight away with bottled water when they were splashed by waves and immediately taking a shower when they returned back to shore. And yet Hussl said he had still been ill multiple times. He published a statement saying, “I’ve had high temperatures and problems with my stomach,” he said. “It’s always one day completely in bed and then usually not sailing for two or three days.”<sup>6</sup>

(Diego Nazario, back, and Emanuel Dantas Borges, train in the Rodrigo de Freitas Lake, surrounded by dead small silvery fish. Photograph: Felipe Dana/AP)<sup>6</sup>





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Conclusion:

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From my research, it is evident that the 2016 Rio Olympics was a success that had a global outreach stretching approximately half of the world's population.<sup>1</sup> And yet despite being heralded as a victory, the impact the games had on water sports athletes was disastrous given the Olympics recent occurrence.

In response to the question “How were the water-sport athletes taking part in the 2016 Rio olympics impacted by the high rates of water pollution?”. I contend that they were undoubtedly harmed.

Scientists issued a plethora of health warnings prior to the games, which overall lead to fewer than expected numbers contracting an illness. However, these extreme safety warnings would not have been necessary if the Rio Olympic organising committee had conformed to its unfulfilled promises. Only 45% of the pledged 80% of sewage that was intended to be cleaned by the committee was treated before it entered the Bay, and only one of the eight water treatment facilities that were supposed to be built and put into service was in use.<sup>3</sup> Less athletes would have developed severe illnesses as a result of lower levels of water contamination if the committee had carried out these objectives. From this case study, I conclude that for future Olympic games to be deemed triumphant in terms of athletes safety, pledges made by any committee must be met, especially when they entail implications that could jeopardise safety of competitors and spectators. If the Rio Olympic



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Organising Committee had met their ambitious plans to clean up Guanabara Bay and the Rodrigo de Freitas Lagoon, the water sanity levels would have been improved, thus decreasing the chances of as many athletes contracting severe illnesses.

Prior to a sporting event of a similar magnitude, research could be conducted into the connection of harmful bacteria and the temperature of water. In the case of the Rio Olympics, the water temperature in Guanabara bay can reach 26°C , compared to the 16°C the water of weymouth bay,<sup>10</sup> the site of four 2012 olympic sailing courses could reach. If this research confirms the connection between the rate of bacteria and the temperature of the water, this should be taken into consideration through enforcing a range of temperature that the water could fall between. Additional policy adjustments could then be implemented, such as the enforcement of fines on countries that are unable to deliver athletes safe competition environments or the prohibition of such nations from submitting bids to host the event. These could benefit athletes by ensuring safe conditions and lowering the risk that such a significant number will develop preventable illnesses.

In terms of the success of this project, I conclude that this report has only begun to uncover the effect of the water pollution on water-sport athletes. What I think prevented me from reaching a forgone conclusion, was the lack of accessible documentation regarding the number of athletes directly impacted by the levels of water pollution. Had I had access to these numbers, I believe my report and its summary would have a more accurate depiction on the scale of the pollution. However, through the research I could access and my evaluations which stemmed from this, I believe that my report offers an analysis which is



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reflective of the pollution and its impact. Through the use of primary sources such as direct  
statements from competing athletes and the agenda the Rio Olympic committee used as  
well as the inclusion of counter arguments, I state that my report is well balanced and  
successful.



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