

Problems and Solutions of International Organizations' Role in Regional Ocean Pollution Treatment

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Abstract: This essay will focus on the problems in the regional environmental treatment cooperation and use the example of CReW and GCSC to explain why international organizations need more critical roles in the final solutions.

Keywords: international relations, international organization, environment, pollution treatment, marine protection.

1. Introduction

The ocean plays a vital role in economic activity and the global climate. Etc But the pollution in marine time never stops from the Industrialization Era. The pollution of plastic and other rubbish in the ocean is significantly harming public health and the ecosystem. From the 1950s, the United States and other countries were aware of the negative impacts of human activities on the marine environment. So they decided to sign the London Convention to limit the dumping of hazardous wastes generally. Soon many other organizations to protect the marine environment are established, like IMO, some departments of WWF, and CReW.

2. Problems

Plastic marine pollution has become a globalized problem causing significant adverse effects on the marine environment. These impacts include harm to the offspring of seals, and turtles, ingestion, habitat destruction, and transportation. Moreover, two kinds of plastic exist, macroplastic and microplastic [1]. These two kinds of plastic are found on almost any coast globally due to the sea flow. Though NGOs and other organizations like GCSC, led by the WWF and the Vancouver Aquarium help the Canadian government to clean the coastline and each year the distance of cleaning is increasing, microplastics cannot be avoided on the coast since they are too small but still harming the environment and human health.

The Canadian government admitted that microplastic behavior or musical direction in the ocean is still unknown to scientists. Researchers failed to find an authentic and transparent relationship between adverse effects in organisms and microbeads. Without uncertainty, microplastic concentration in the marine environment is predicted to increase through water waste and useless garbage management policies [2]. Microplastic is responsible for 94% of the plastic debris items detected in all oceans and seas. So, Canada set up a complete plastic management system to deal with local plastic pollution. Canada also legalizes a law to limit the use of plastic bags in daily life. Though

there had been some legislating practices to control macroplastic pollution in Canada, microplastic management and collection received much less attention from the government nor the public. Although enforcement of macroplastic disposal management was set up and improved, at the same time, enforcement, knowledge, or law around microplastic is still limited [3]. Then the Canadian government put plastic in education texts to teach children to protect the environment and use less plastic. However, since it needs a long time to see the effects, the plastic problems still fail to solve on the coastline.

It is known that the plastic problem in Canada is not its duty but many other states. So whatever Canada does for itself will never solve the problem. More microplastic and macroplastic would still come from the ocean. The Canadian government failed because it did not have an idea to set up an international organization to limit plastic in laws or treaties. Global problems need international cooperation. Moreover, the Canadian government neither refuses to give environmental organizations more power, like using ships to check whether boats in Canadian ocean territory disobey the Plastic Releasing Law set in IMO, nor refuses to organize some meetings and have treaties about international cooperation. Moreover, that is why the plastic problem in Canada is still left for solving.

The problem in Canada is not a single example but happens in many other places worldwide. However, there are still ways to solve pollution problems. Even in more complex areas, local government does not have working conditions as well as the Canadian government.

3. Solutions

As people all know, Caribbean islands are famous places for tourists to visit. There are beautiful sea views and warm weather. However, in recent years, wastewater pollution has threatened these beautiful interests. Almost 85 percent of wastewater that finally filled into the Caribbean Sea area could not get well fliting, partly because many houses in the region are not contained in the national sewer systems, and stormwater networks are too small to show its effects [4]. Moreover, the flowing of wastewater into the sea caused a lot of environmental disasters such as fish kills, algae blooms, red tides, and temporary beach closures, adding concerns and worry to public health. Indeed, the pollution decreased the number of tourists and made the local budget red; this pushed some Caribbean states to turn to find international investment to deal with wastewater. The final solution was to set up a funding organization called Caribbean Regional Fund for the whole Wastewater Management. Known as CReW, the fund was established by the Global Environment Facility and cooperated with the Inter-American Development Bank and UNEP [5].

Belize is one of the countries supported by CReW for its water-sewer system. However, Belize did create an efficient system for non-revenue water. The Water Industry Act covers national water services and became the duty of the Public Utilities Commission and Belize Water Services Limited. Among CReW participating countries, only Belize Water Services Limited shows a relatively efficient level of non-revenue water at 27 percent [6,7]. So, the department of environment in Belize must find other ways to recycle wastewater in cities and poor rural area where only 40.7% percent of water use pipe water connected to the water system. The chosen financial model for Belize was a revolving wastewater fund that would provide unbelievably low-interest rate loans in ordinary banks to instruct wastewater treatment projects. Through GEF CReW, the Belize Wastewater Revolving Fund (GWRF), which includes US\$5 million, was created in 2012. The CReW funds were provided directly to the Government of Belize as a capitalization grant for the BWRF. Under the terms of the CReW grant agreement, the first project to be financed under the Belize Wastewater Revolving Fund (BWRF) would be a regional wastewater treatment system for the Placencia Peninsula near the eastern Caribbean Sea. The initial \$5 million from GEF CReW was supplemented with another \$5 million from a loan provided by the Inter-American Development Bank because of the amount of work needed to introduce wastewater treatment to the Placencia Peninsula [8].

A possibility study for this project was completed by an international organization called Engineers Without Borders in 2006. Different people recommended many solutions and suggestions, checked several times, and began a new program by Belize Water Services Limited. These solutions were full of consideration to local geography conditions, just like the design of a pressurized sewer system on the high-water table was significantly changed again and again, and the selection of a treatment system with few footprints makes people concerned about space and noise. Total capital spending prediction for the whole construction sites in the nation, assuming within an entirely constructed well, was predicted by accountings to be between \$6 million to \$9 million, counting the building material using facultative and aerated lagoons with a yearly repairing fee of between US\$350,000 and US\$500,000. More study shows that many small hotels and houses in Placencia Peninsula were not connected to the centralized sewage system.

Furthermore, the current water delivery system was near its most ability, and the sustainability of the water source was unknown. This had impacts and effects on the wastewater management system which was to be designed [9]. The project entailed consolidating the existing sewerage network (established in 1967) and paying money for the new financing construction of an equipping lagoon in Belmopan's capital city. The final financial possibility and pressure study pointed out that the plan would quickly build a complete wastewater fliting system that would create regular and annual repayment back to the revolving fund payer like a bank or other organizations. In December 2013, IDB disbursed US\$5 million to the BWRF [10].



Figure 1: Two Volunteers watching the collection of plastic products [11].



Figure 2: A consolidated water storage tank built by BWSL [12].

The work of BWSL in the program of Belize wastewater system is quite helpful. The new water delivery system in Placencia decreases the nutrient level in water in this area to meet the national standard and prevent red tide near the coast. Also, more people could use clean piped water in Belize, which benefits public health. The success in Belize should praise international cooperation in the environmental area. The BWSL shows a well-organized working level and led to the setting up of design by a global engineering league. In addition, local governments will be quite important, too. If the Department of Environment did not legalize the environment law or establish a well-work non-revenue water deal progress, the job for BWSL would be more challenging. International Banks provide enough funds for the environmentally friendly program in a low interest or zero interest; their little pressure promised the work of BWSL does not need to consider too much payback for the program. Without each side's cooperation, the wastewater system will not be improved in Belize and will still harm the Caribbean Sea.

4. Conclusion

In the case of Canada and Belize, the involvement of International Organizations is the fundamental difference between them. Canada tries to use international organizations to solve problems, but Belize lets the CREW plan the whole system and cooperates with banks. Also, the local government attended to the plan with great effort, unlike the Canadian Coast Guard failed to monitor the behavior of boats throwing plastic near the coastline. That is why Belize successfully solve the problem of wastewater. We can see that international cooperation is acting as a more and more important role in environment protect operation. Especially for those developing countries which lack funds and technology, helping from global organization or other countries will be more significant in future.

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