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Inglés I UTN FRP

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Pollution by Takeaways Shops: Implementation of Ecofriendly Food Containers in Paraná

1. Introduction

Paraná is a city whose number of residents grows every day. People have moved to Paraná to work and study so they usually have little time to cook every day. This busy lifestyle causes that people decide to buy food instead of cooking it. That demand of ready-to-eat food generates contamination by the materials used for wrapping and delivering it.

The purpose of this presentation is to discuss the problem of the pollution by the containers that takeaways or restaurants use to sell their food. Also, we will talk about a solution to this problem.

First of all, we are going to start contextualizing and describing the area where the problem is located. Then, we are going to show the problem, identifying the causes that generate the problem. Also, we are going to study the consequences of that problem, in the environment. Late, we are going to state a possible solution, ending the presentation with some strengths and weaknesses of the solution stated.

2. Problem Definition and Analysis

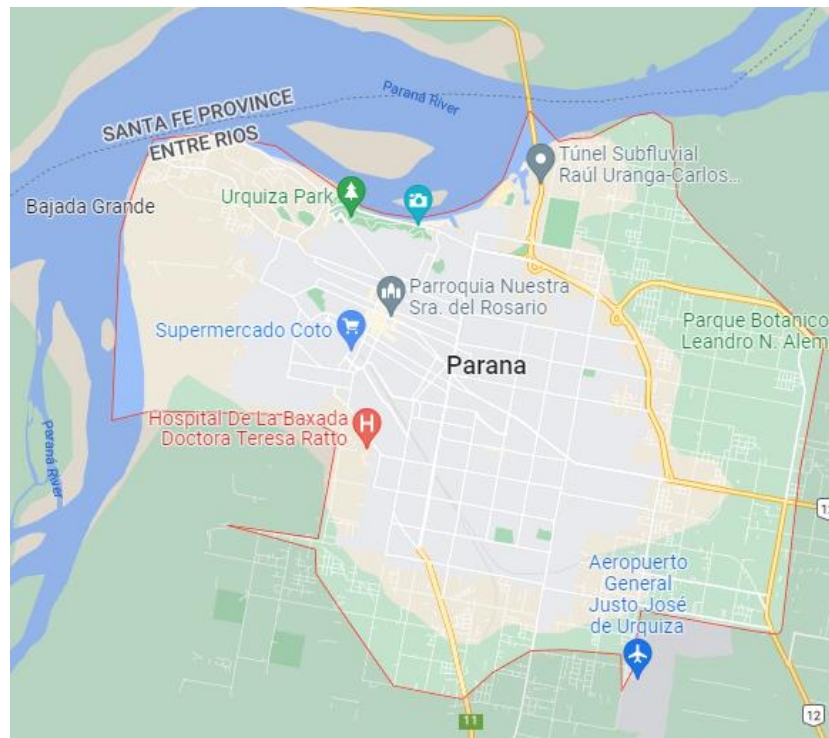
2.1. Description of the Context

Now, we are going to describe the context of the problem to be addressed. Paraná is a city from the province of Entre Rios, in Argentina. It is situated at the west of Entre Rios. It is limited by the Paraná River at the North-West, by Gov. Dr. Héctor D. Maya Street at the East and by C. Lisandro de la Torre Street at the South.



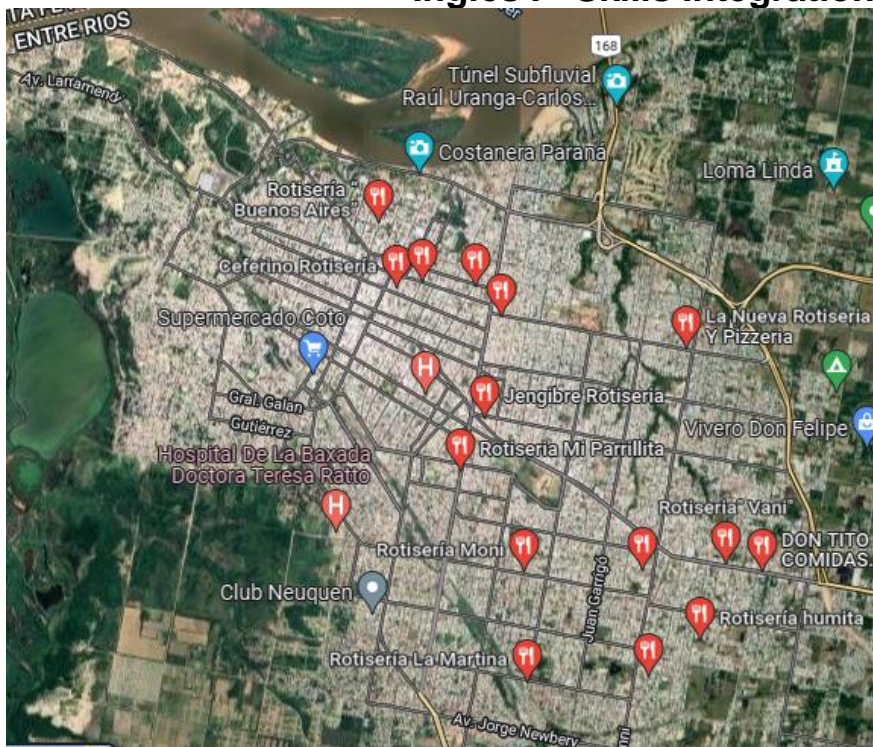
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Paraná is the capital of Entre Ríos, which means that a lot of people spend their days here. Paraná has a busy lifestyle. People have no time to do some activities like cooking home-made food and they finally resort to fast food takeaways or takeout restaurants (or just “takeaways”) to buy their meals. Fast food takeaways have increased in the city due to the increasing demand of food by the increasing number of people living in Paraná.





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In the picture, we can see some fast-food takeaways and there are a lot of them that don't appear on Google Maps. Also, we can include restaurants that offer the customers to take away the food left, houses that only give you the food by delivery and some small companies that offer pickup service.

The most important aspect of these companies is that you as a customer can buy food and eat it in another place.

2.2. Problem Statement

We are going to refer to the problem to be addressed now. Most of these companies offer meals in bags or containers made of plastic, aluminum or cardboard. People go to those takeaways shop and buy food without being aware of all the materials used as containers. Once people have eaten their food, the packaging is thrown away and a big amount of this generate pollution.

As we said, most of these containers are made of plastics. Plastics are high molecular weight organic polymers composed of various elements such as carbon, hydrogen, oxygen, nitrogen, sulphur and chlorine. They can also be produced from silicon atom (silicone) with carbon. Plastics are made from raw materials like natural gas, oil or plants, which are refined into ethane and propane. Ethane and propane are treated with heat in a process called "cracking", which turns them into ethylene and propylene. These materials are combined together with other substances to create different polymers. The reason for the slow degradation is that these materials don't exist in nature so there aren't naturally organisms, as bacteria, that can break them down effectively or at all. If there aren't any organism able to break down these chemical bonds, the plastic will accumulate and generate contamination.



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Other food containers are made of aluminum. Aluminum foil is a metal-based material. Usually it's used for cooking, wrapping or covering food while you are cooking or after cooking to pack it. Fast food takeaways use aluminum as containers because it's able to withstand both hot and cold temperatures. Also, it keeps food protected from liquids, gases and light. The aluminum needed for the creation of aluminum foil comes from other minerals as bauxite. The bauxite extraction process is very contaminating because it generates a lot of waste. Another aspect is that aluminum has a slow degradation because microorganisms don't need any nutrient from aluminum foil. It disintegrates by the action of the sun and oxygen but it takes hundreds of years.

Food containers are made of cardboard, too. It's a material made from paper pulp. It's true that this material is biodegradable but it is usually in contact with the food when the takeaway shops sell us the meal. This makes the cardboard dirty, so it can't be recycled. If you throw away the dirty cardboard, it will pollute because of the food impregnated in it.

2.3. Description of scenes that help picture the problematic situation



We are going to show you some scenes that help describe the problematic situation. In this picture, we can see a McDonald's shop with the option of take the order from the car. The man in the car previously bought and paid the food and now he is taking his order. Inside the cardboard bag, there is food with more plastic or cardboard wrapping. It can't be recycled because it's dirty now.



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The photo shows food for sale in a takeaway. For little amounts of food, people who cook the food use a lot of plastic to wrap and contain it. As a consumer, we pay more for more the plastic than for the food. We will then throw the plastic containers away, generating pollution.



This is an image from the television media El Once, which shows one of the parks in Paraná. Here, people usually go there to eat and drink, and then throw plastics containers away. Municipal workers take up all the trash in the city. However, if the trash remains there, it will generate contamination.

2.4. Identification and analysis of causes or factors that give rise to the problem

Now, we are going to make reference to the causes and consequences of this problem. There are many causes for the problem of pollution by takeaways shops. The contamination is caused because people throw away the containers that the shops give them. Both paper and plastic containers are thrown away because they get dirty by the food. However, people don't think about recycling clean containers.



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Another aspect is the use of paper when you want to take your food. These companies select paper bags because they are good for absorbing excess steam and oil from fries. Paper bags are an optimal option when we talk about of take food, so fast-food companies use it without thinking in other way of give food.

The use of plastic is dangerous for the environment too. Fast food takeaways use it as a cheaper option of aluminum foil when isn't necessary keep the heat. Plastics can protect the food of oxygen, water and gases.

2.5. Identification and description of the consequences

There are many consequences of the pollution by takeaways shops. Non-biodegradable materials generate problems to the environment. They can end up in the nature and become a danger for animals because they can eat it. Also, it's dangerous for the soil, killing its ability to supply nutrients to plants nearby. That's a problem for us too because it affects the vegetables and fruit we eat.

Plastic containers can also impact the water conditions. They may end up in the Paraná River, contaminating water, flora and fauna. Another problem is that those materials can end up in the street, blocking the water pass through drains, which means flooding and overflow.

Another consequence of accumulated food packaging waste is that it ruins the aesthetics and health of the city. Paraná has a long river accompanying with a beautiful park called "La Costanera" but the river and part of the park present areas with garbage. An unhealthy aspect of accumulate rubbish is that it's a good food source for rats, cockroaches or other animals, which is unhealthy for the human environment.

3. The Way Forward

3.1. Problem approach

The possible solution that we are going to introduce is the implementation of ecofriendly food containers. This type of containers is made of recycled paper, polylactic acid (PLA), cellulose, bamboo paper, among others. Their raw materials are wood (paper and carton used before), fermentable sugar (from corn, sugar cane or tapioca root), cellulose from the cell walls of the plants and bamboo itself. They are all from natural sources and it means that there are microorganisms that can decompose these ecofriendly containers when they are discarded.

Our idea is that takeaway shops avoid the use of plastic or aluminum and that the containers generate the least amount of pollution possible. They can sell their food at a little higher price but with an ecofriendly container.

Another solution is encouraging clients to take their own reusable containers. The next time you go to buy food you can bring your container with you, so the food houses can sell the meal at the normal price and put the food in it. A special discount can also be implemented to meals



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which are sold to clients who take their own containers, so as to raise awareness of this solution to the environmental problem discussed.

3.2. Strengths and Weaknesses of the Proposal

The idea of using ecofriendly containers presents some strengths and weaknesses. As regards the strengths, this type of containers can degrade in the nature faster than plastic ones, generating less pollution. Another aspect is that people will use less plastic and aluminum because they use these containers and that means that there will be a reduction in the amount of trash dirty with food. Finally, the use of ecofriendly containers to take the food is a good way to start an ecofriendly lifestyle, reducing our carbon footprint.

In connection with the weaknesses of this proposal, there are some. First, some containers are made of paper. This makes it difficult to wash and reuse them if they get dirty by the food. Another problem is its cost of production. Producing ecofriendly packing with biodegradable materials is more expensive than the traditional one. Finishing with the weaknesses, these containers can generate pollution, even when it is less than the one produced by traditional containers. The government, institutions and people have to go ahead with the separation of garbage, taking biodegradable containers as garbage, like fruit or vegetables.

4. Conclusion

4.1. Final statement

As a conclusion, sometimes we are not aware of the consequences of little actions like throwing away plastics or aluminum. They generate pollution so they damage our lifestyle, the animal health and the nature. Although this solution only addresses an aspect in the reduction of the contamination of the environment, it paves the way for other changes in our everyday actions. Our idea has strengths and weaknesses but it may help caring for the environment.