

GLOBE PROJECT
VIRTUAL STUDENT CONFERENCE

Floods that change lives

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ABSTRACT

Our research is based on the flooding in La Plata, Argentina, on April 2nd. Our research question was to find out the incident factors in the floods, and our hypothesis were that the floods occur due to natural and anthropic causes. We focused on the latter and we could found out that the main factor in the floods was the deficient public works on drainages and sewers and the lack of policies as regards flood problems.

On April 2nd there was a tragic flood in La Plata, the capital city of Buenos Aires Province, in Argentina. Because of this, around 51 people died. We had the opportunity of carrying out our research in situ, when we went to the city to take food and other necessary things to the people affected by the flood.

Those visits we made made us think about why such a thing happens. After reading some bibliography about the subject, we formulated our research question:

Which is the incident factor in La Plata floods?

Let's start by defining what a flood is:

A flooding is the occupation of areas by water that are normally free of it, either by the overflow of rivers due to rainfall or seas, because of the increase of tides over its normal level or due to avalanches caused by tsunamis.

Our hypothesis are that the recent floods in La Plata are due to a series of factors, each one with a different degree of incidence. We can summarize the causes of La Plata floods as follows:

-A variation in the precipitation regime, both on flows and modalities, that generates a strong impact over our environment, based on the conduction and piping, which are limited by the flows admitted in the design.

-The growing soil sealing in the metropolitan area, advancing over naturally absorbent green spaces that would reduct and retard surface runoff.

-The excessive piping of waterways, that seems to be the answer to the problems generated by the waterproofing of soil.

This two last items generate a triple negative effect:

-Incorporation of runoff volume normally absorbed by the soil.

-Acceleration of surface and piped water runoff.

-The elimination of the evaporation that would be produced during the trail.

This also has to do with anthropic causes, such as the speculative and irrational urbanization, the politic use of any public work as a symbol of progress, without reflecting about its real value for the community.

The inappropriate disposal of domestic waste.

To make things worse, there are electricity meters and other electric devices, which bring new dangers.

Conclusions

By making the research, plus the fieldwork and observations carried out in situ, we came to the conclusion that the floods in La Plata are due to several factors:

-The lack of sewers and storm drains, due to the lack of proper maintenance.

-The policies applied. There are no policies planned for 2013 in the area of drainages and sewers (1).

And possibly, global warming, because the amount of precipitation fell in one day corresponds to the one of a whole month in the year 2000. We consider the last statement open to discussion and as a possible research question for future investigations.

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