Flood Model Report

Portfolio Analysis

Cliente ABC

Abril 2025

Contenido

Considerations

The technology used and the references provided for the generation of this information are based on scientific data, mathematical models, and encoded experience from researchers and specialists in the field of Data Management.

- The present report, as well as the analysis, models, and predictions contained in this document ("Information", are based on data provided by MARSH through our client: Cliente ABC and managed through the risk assessment computer technology owned by JBA Risk Management.

- It is important to mention that the accuracy of the predictions depends largely on the accuracy and quality of the data provided by the client: Cliente ABC to the MARSH specialists

- The management of the information provided by Cliente ABC is carried out through the licensing of MARSH in JBA Risk Management, using regulatory frameworks for the protection of confidential information, prohibiting its distribution to third parties without the prior written consent of MARSH and JBA Risk Management.

- The information described within the report generated by Marsh can only be used for the purpose of studying and interpreting results for Cliente ABC. This document cannot be used under any circumstances in the development and/or calibration of any product or service offerings that competi with JBA Risk Management and MARSH..

The global flood maps from JBA Risk Management, and the information management from Marsh, provide indicative information about the extent and depth of flooding for undefended rivers and surface water flood risks for return periods of 20, 50, 100, 200, 500, and 1,500 years.The underlying digital elevation data is a combination of Digital Terrain Models (DTMs) from a variety of sources.

For post-2020 map updates, Airbus WorldDEM's DTMlite is widely used. When MDT is not available, Intermap Technologies Inc.'s NEXTMAP World 30 Digital Surface Model (DSM) is used. Flood risk mapping is provided globally at a resolution of 30m for all rivers and surface waters. The maps are created by simulating design rainfall totals and river flow volumes, allowing the associated flooding to spread across the surrounding terrain using hydraulic modeling software. In order to estimate river flows and rainfall amounts for each return period anywhere in the world, JBA has developed suitable hydrological models for global-scale mapping.

Summary

This probabilistic report serves as a tool to assess and quantify your flood risk. This analysis uses mathematical and statistical models to simulate different flood scenarios and determine the probability of their occurrence at a given time. Historical, topographic, and precipitation data are used to create this report for specific areas. The results are presented for return periods of 20, 50, 100, 200, 500, and 1500 years, showing the affected areas and their extent.

The purpose of this report is to provide Cliente ABC with a Flood Risk Assessment.

The scope of the project includes directly importing input data, as provided by the client, into the model and running the analyses. The JBA Global Flood Event Set allows for examining flood patterns and assessing regional, continental, and global exposures for Cliente ABC. The model utilizes sophisticated statistical methods, along with physical rainfall and runoff modeling processes, to capture potential spatial and temporal correlations of floods caused by tropical cyclones, extreme precipitation, and river discharge. Hydrological accumulation zones are used to better understand flood correlations and identify areas that may be simultaneously affected by the same event, providing an alternative geographic unit for aggregation and accumulation analysis beyond political administrative boundaries. River flood results represent floods caused by any moving water (rivers, streams, drains). Surface water results represent floods caused by water stagnation and overflow of water bodies deposited in depressions of the terrain.

The country-level catastrophic models of JBA incorporate their high-resolution flood data and internationally recognized climate projections, allowing for the assessment of current baseline and future risk of river and surface water flooding with confidence for all countries worldwide.

The results provided by this report are important for making decisions regarding land use prevention, infrastructure construction, and post-flood recovery planning. It is recommended to take preventive and mitigation measures to reduce the impact of floods and protect human life, property, and infrastructure, as well as to consider it in order to safeguard machinery, supplies, or important inventories that may cause total or partial business interruption.

The following considerations were considered for Cliente ABC:

ID	Name	Country	Latitude	Longitude	Buffer
1	Centro ABC	Dominican Republic	18.52248	-69.74553	Polygon
2	Centro xyz	Dominican Republic	18.52779	-69.83790	Polygon
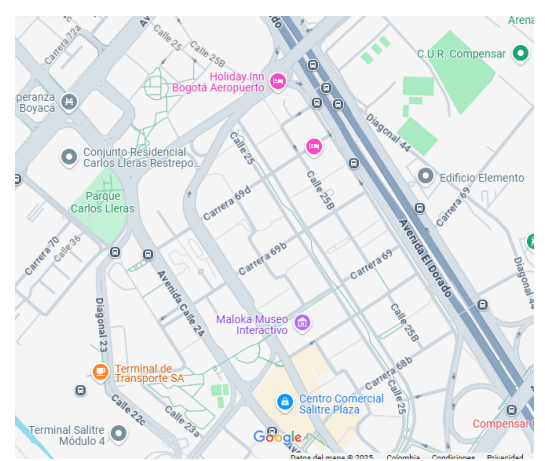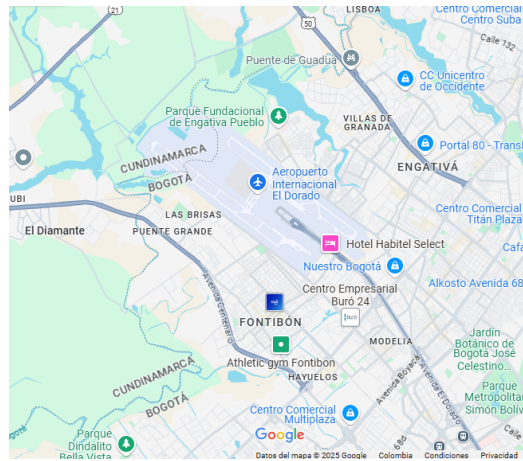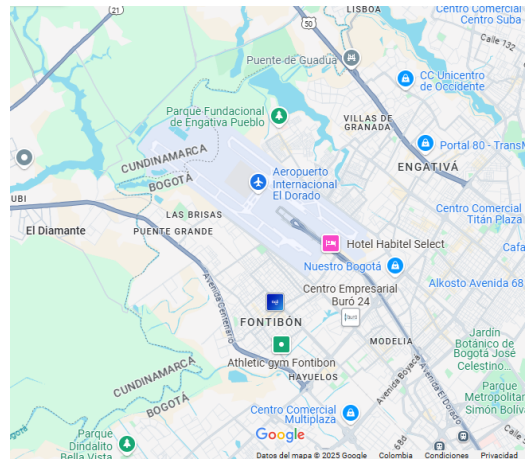
Results

Centro ABC

The following table shows the average and maximum flood in meters for the location Centro ABC.

Periodo de Retorno		Profundidad Inundación Ríos			Profundidad Aguas Superficiales		
Año	Probabilidad	Área Afectada (%)	Promedio (m)	Máxima (m)	Área Afectada (%)	Promedio (m)	Máxima (m)
20	1%	20	20	20	20	20	20
50	10%	50	50	50	50	50	50
100	1%	100	100	100	100	100	100
200	10%	200	200	200	200	200	200
500	1%	500	500	500	500	500	500
1500	10%	1500	1500	1500	1500	1500	1500

Centro SDF

The following table shows the average and maximum flood in meters for the location Centro SDF.

Periodo de Retorno		Profundidad Inundación Ríos			Profundidad Aguas Superficiales		
Año	Probabilidad	Área Afectada (%)	Promedio (m)	Máxima (m)	Área Afectada (%)	Promedio (m)	Máxima (m)
20	1%	20	340	4230	230	320	320
50	10%	50	4530	4530	530	350	350
100	1%	100	4100	4130	1300	3100	3100
200	10%	200	4300	4300	3200	3200	3200
500	1%	500	4300	4300	3500	3500	3500
1500	10%	1500	43500	13500	31500	31500	13500

Centro XYZ

The following table shows the average and maximum flood in meters for the location Centro XYZ.

Periodo de Retorno		Profundidad Inundación Ríos			Profundidad Aguas Superficiales		
Año	Probabilidad	Área Afectada (%)	Promedio (m)	Máxima (m)	Área Afectada (%)	Promedio (m)	Máxima (m)
20	1%	20	30	230	230	320	320
50	10%	50	530	530	530	350	350
100	1%	100	1300	1300	1300	3100	3100
200	10%	200	2300	2300	3200	3200	3200
500	1%	500	5300	5300	3500	3500	3500
1500	10%	1500	13500	13500	31500	31500	13500

Return Periods

Marsh

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The data is the result of modeling natural hazards that are uncertain. No guarantees are made regarding the integrity, correctness, or timeliness of the information. JBA cannot predict the future, and all data on climate change should be used with caution and based on a solid understanding of the limitations and uncertainties of such data.

JBA's climate data and services are based on data from third-party organizations (climate modeling) that JBA considers scientifically credible, as well as JBA's own robust development methodologies. At the same time, these models have known deficiencies and limitations in their representation of relevant physical systems, and since there are no observations of the future, they present deep uncertainties regarding their ability to simulate climates under possible future conditions. Like the available data from third-party climate models, JBA's data is only an illustration of one of the many possible changes that could occur based on one or more idealized climate scenarios. Consequently, JBA cannot and does not represent, guarantee, or ensure the accuracy of the output, its indications, and estimates.

Should not:

- Use JBA data or evaluation results for commercial purposes.

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