A Brief User Guide:

User feedback Data Map About FAQ English ♥

ThinkHazard!

Identify natural hazards in your project area and understand how to reduce their impact





What does ThinkHazard! do?

· Ultimate goal:

To help project planners build hazard awareness and risk reduction guidance into development projects.

Understandable!

ThinkHazard! helps users understand the natural hazards that exist in a project area, and how to reduce risk to a development project. Hazard levels and risk reduction guidance are presented in a consistent and easily accessible framework with global coverage of eleven natural hazards.

• Simple!

ThinkHazard! employs a simple workflow for quick, easy-to-use, non-technical hazard information and risk reduction guidance.

Open!

ThinkHazard! provides free open-access information on hazards and risk. The methodology is transparent and developers can use or adapt the platform to their needs.



Why use ThinkHazard!?

- To understand the natural hazards that exist in a project area, and how to reduce risk to a development project
- Understanding the possible impacts of a certain natural hazard usually requires expertise, time and resources. Over-reliance on information the public domain can provide overwhelming amounts of information, or less detailed, generic information that increase the chance of under- or over-estimating risk.
- Challenges include: finding non-public data (academic or commercial); accessing and processing data held in multiple formats or on data portals; Correctly interpreting specialist terminology and technical information (e.g., hazard parameters).
- ThinkHazard! provides built-in expert interpretation and processing of technical natural hazards information (both public and non-public data) and communicates a simpler interpretation of potential hazard impacts to users, using four hazard levels. Risk assessment specialists and experts in each natural hazard have determined those hazard levels according to the estimated likelihood of damage being caused by the hazard.



1. Homepage: Identify location of interest

- Search by country, province or city/town.
- Type three or more letters in the box, a drop-down list of matching locations
- Select the location in the list to navigate to the hazard overview page for that location

Additional features

- The homepage shows all of the hazards currently covered by ThinkHazard!
- The homepage also provides access to:
 - User Feedback Submit feedback to the site administrators who will make updates and respond as required.
 - Data Map —The datasets used for determining each hazard level. It provides a summary of the scale of data (global, regional, national, and subnational) and lists the datasets available for each country (view by clicking on a country)
 - **About** General information about *ThinkHazard!*
 - FAQ Frequently Asked Questions about the tool. Also provides links to the full methodology document
 - Language toggle ThinkHazard! is available in English, French, and Spanish.
- These buttons are available on all pages

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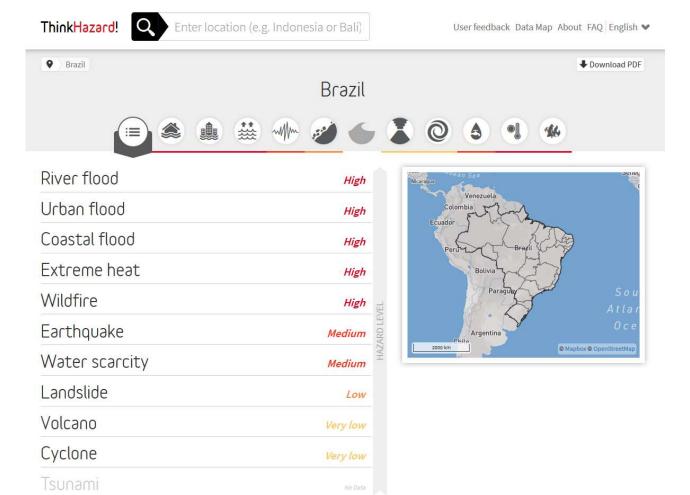
Identify natural hazards in your project area and understand how to reduce their impact





2. Location Overview: View all hazard levels

- A color-coded and text description of hazard classification for the searched location
 - Hazards are classified by administration area (e.g., country, province, district, or county) and are shown on the map.
 - Hazard level shown is the maximum that occurs in that area, (but may be lower in some parts of the area)
 - Hazards are listed from top to bottom according to classified hazard level (High, Medium, Low, and Very Low)
 - Where no data is available for the area, the hazard name and icon are shown in gray at the bottom of the list.
- To download PDF report and description of each hazard for the location:
 - Click 'Download PDF' button, available on all pages.
- To get more information specific to a hazard:
 - Click on a hazard icon or hazard name
- To navigate to another location:
 - Enter a new location in the search bar
 - Click on the map to move to a neighboring area, or use the zoom function
 - You can also scroll out to a bigger area by using the location chain (top left-hand corner)



We welcome any suggestions for improvements to the tool, including suggestions of data, recommendations, or resources to include. If you have any, please provide feedback.

3. Hazard and Risk Information

- Shows information specific to one selected hazard for the selected location
- Map of hazard level distribution
 - Shows how hazard levels varies across an area
 - A toggle button shows the data used to determine the hazard level

Description of hazard level

- Defines the hazard in terms of frequency and severity
- Advises on whether the impact of this hazard should be included in project planning

Climate change summary

 Brief information on how the hazard might be expected to change in the future, under projected climate conditions (derived from IPCC* reports).
This is not a full assessment of projected change in hazard.

Recommendations for risk reduction

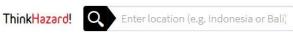
 Guidance on key issues and strategies to consider for reducing risk to this hazard when planning projects. High level guidance is shown, click on 'more information' for greater detail

Relevant contacts

 Up to three national-level contacts are provided. These have been identified as an important source of further information or specific knowledge for that location and hazard

Further resources

- Links to documents or websites that provide more information on the hazard or location; these include previous risk assessments, risk data, implemented risk reduction strategy, or reports on historical events
- To view a different hazard in the same location:
 - · Click on a hazard icon along the top bar
- To navigate to another location:
 - Use the search bar, map, or location chain



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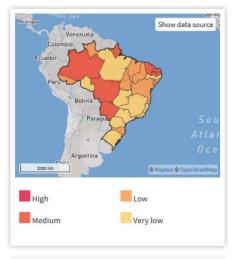
Earthquake

Hazard level: Medium

In the area you have selected (Brazil) earthquake hazard is classified as medium according to the information that is currently available. This means that there is a 10% chance of potentially-damaging earthquake shaking in your project area in the next 50 years. Based on this information, the impact of earthquake should be considered in all phases of the project, in particular during design and construction. Project planning decisions, project design, and construction methods should take into account the level of earthquake hazard. Further detailed information should be obtained to adequately account for the level of hazard.

Recommendations

- EARTHQUAKE HISTORY AND HAZARD: Get information about major earthquakes and secondary hazards (fires, landslides, liquefaction, tsunami in coastal areas) that have affected the project area in the past and the effects these caused. Community memory and historical accounts of earthquakes can provide useful information to supplement scientific studies. Contact the governmental organisations (e.g. Ministry of Environment and Geological Survey/ Ministry of Earth Sciences) responsible for earthquake risk management in the project country to obtain more detailed information on the potential earthquake hazard. More information
- LOCAL BUILDING REGULATIONS: Find out if the local building regulations provide for earthquake protection. To do this, engage the local engineering community, especially those serving with the local government or consult external experts. If regulations do include earthquake protection, comply with the regulations with respect to planning, design and construction, including typology of construction, and materials of appropriate quality suitable for use in areas of low seismic hazard. If they do not, consider adopting and complying with standards from other low earthquake hazard areas. More information
- INTERACTING HAZARDS: Determine whether the project site is likely to be affected by ground failure or other site hazards during an earthquake. Soil investigations should be conducted by a geotechnical engineer to determine physical properties of the soil including its liquefaction potential, the stability of natural slopes and other considerations for design. Select a project location with minimal site hazards if possible. Ensure that the proposed project is not built on or near active earthquake faults. More information
- TECHNICAL EXPERTISE: Engage qualified and experienced local (or international)



Contacts

- ► Centro de Sismologia USP
- ► Observatorio Sismologico, University of Brazil
- ► Institute of Astronomy, Geophysics and Atmospheric Sciences

Further resources

For further information the following resources could be consulted:

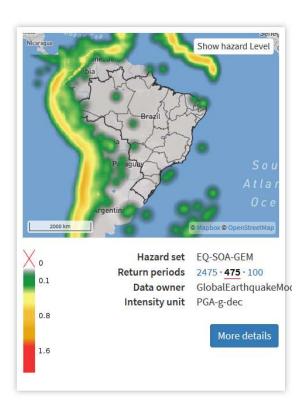
- ► Global Earthquake Model SARA project
- ▶ Defining disaster resilience: a DFID approach paper
- ► Comprehensive Safe Hospital Framework

^{*}IPCC: Intergovernmental Panel on Climate Change

4. Accessing underlying information

Raw Hazard Data

- You can view and access any publicly available hazard data ThinkHazard! has used to classify hazard levels
- Click on 'Show Data Source' in the map: The map will show the hazard data, with unit, legend, and source organization. Data can be viewed at multiple return periods where available.
- Click on 'More Details' to access the data and view the metadata on the GFDRR Innovation Lab GeoNode (https://geonode-gfdrrlab.org)

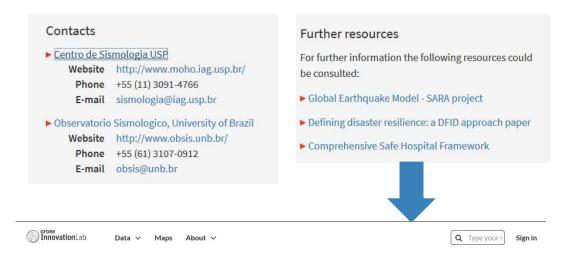


Contacts

 To obtain further information on a contact, click the contact name. This will provide a URL, email, and or telephone for the organisation

Further resources

- Each resource links to an entry on the GFDRR Innovation Lab GeoNode (https://geonode-gfdrrlab.org)
- This in turn provides a link to the PDF report or URL containing that resource



Global Earthquake Model - SARA project

