



The Landslide Reporter's Guide

Add a
Landslide
Event to
COOLR





Contents

This guide will walk you through the steps for submitting a landslide report to the Cooperative Open Online Landslide Repository (COOLR).

The guide contains:

- Tips for finding landslide events
- Choosing your Landslide Reporter map and getting started
- Information about every field in the Landslide Reporter form
- Reviewing/editing/deleting your reports



Tips for finding landslides in person

Landslides occur most everywhere, so you may encounter a landslide in person along roads, riverbanks, or any other steep slope.



First things first, make sure you are a **safe distance away** from any landslide you encounter. Even if a landslide has happened, there is still the possibility of falling rocks or unstable debris.

- **Fresh landslides are best**—ones that have occurred right after a triggering event like a storm, etc.
- **Pictures are worth a thousand words:** take a photo of your landslide and link to it in Landslide Reporter from an image hosting service like Flickr or Imgur



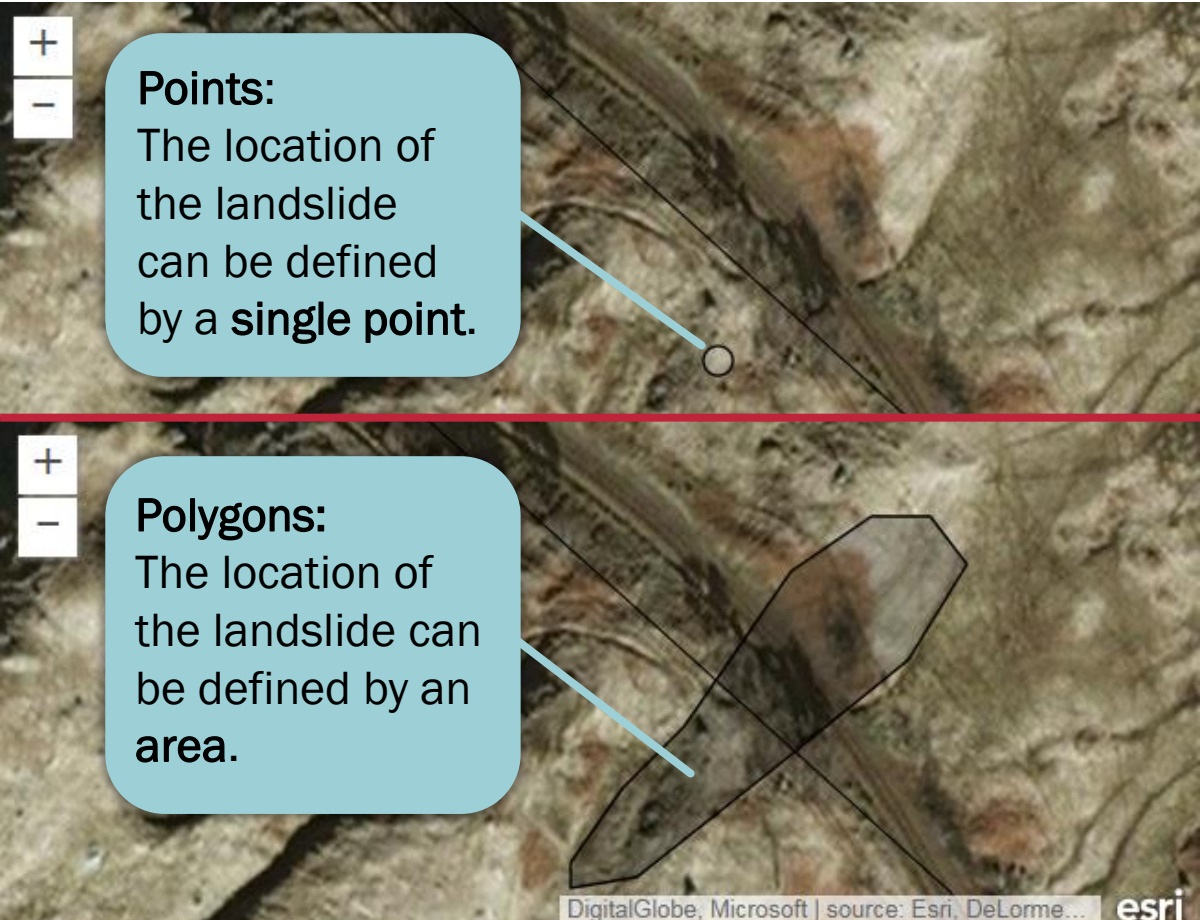
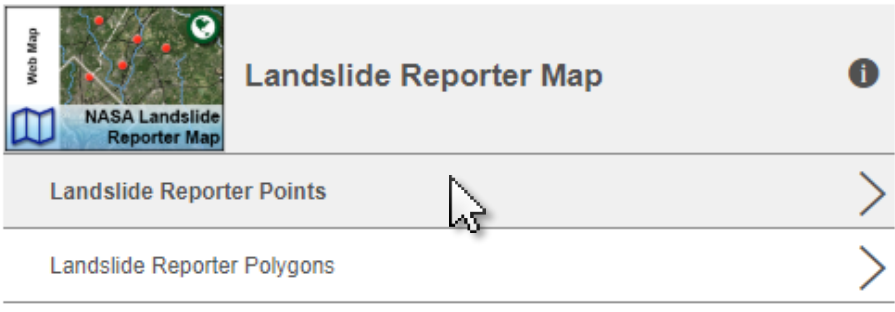
Tips for finding landslides online

- There are many resources that report about landslides:
 - **Articles** in your local newspaper or an online news source
 - **Social media feeds** like Twitter or Facebook, using #hashtags or following specific news sources
 - **Data entries** in local databases
 - **Disaster and government agencies**
- Setting a [Google News Alert](#) will alert you about new landslide articles.
- Some keywords to get you started on finding landslide events:
 - **Landslide; landslip; mudslide; debris flow; rockslide; rockfall; cliff collapse**
 - Searching in other languages may help find other events.



Choose your Map

There are two ways to add a report to the database, depending on the information you have about the slide: **points** or **polygons**.





Get Started

Before you begin reporting:

- Do you have your **news source** open/ do you have your landslide **notes** in front of you?
- Do you have the **location** of the landslide? How accurate is that location?

Click “Submit a Landslide Report” to begin your report!

[+ Submit a Landslide Report](#)



General tips:

- Be as detailed as you can!
- Remember to include the source information
- If you do not have information for a section, leave it blank or select “Unknown” from the dropdown box.



Drawing the Location - 1

The application prompts you for the location that the landslide **originated from** on the map.

Jump to the location as best you can using the search bar to find the nearest **place** or **coordinates**. Click on the option that best matches what you're looking for.

Location

Click the map to draw the location.

56.877275, -5.563665

- Address: Esri World Geocoder (2)

X:56.877275 Y:-5.563665

Y:56.877275 X:-5.563665

Click to choose the coordinates that match the location.

Click the map to draw the location.

glenfinnan

- Address: Esri World Geocoder (4)

Glenfinnan, Queens, Prince Edward Island

Glenfinnan, Inverness-Shire, Scotland

Glenfinnan

Click to choose the place that matches the location.

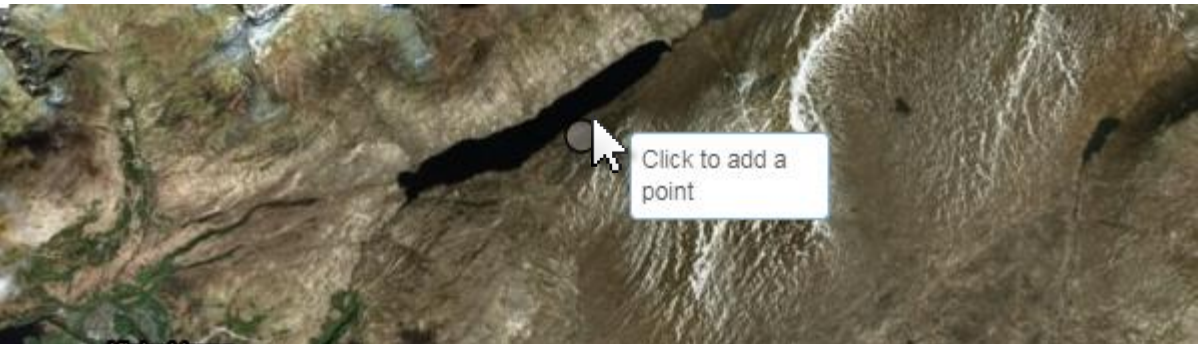


Drawing the Location - 2

Define the approximate location with a single **point** or with a **polygon** shape outlining the area of the slide.

Point

- Click on the map where the landslide occurred.
- To adjust the location, click another location on the map.





Drawing the Location - 3

Polygon

- Click on the map to begin drawing the area of the landslide.
- Click to add more vertices to the area's shape. Double-click to close the shape's area.
- To start over and draw a new shape, click another location on the map.





Name and Link of Information Source

Provide the name and web URL (if available) of the source you got the event information from.

- If the source was a database or media source, provide the **name** of the database or media source.
- If the source was from your own observation, put “**in-person observation**” in the form and leave the link blank.

Details

Name of Information Source (required)

Link to Information Source

Details

Name of Information Source (required)

Link to Information Source




Event Date and Time

Provide the date and time that the landslide occurred.

- If the date is not specified, approximate the date as closely as you can and add a comment that you approximated the date in the “Event Comments” section.
- If time is not specified, select “Time not known”

Event Date

 June 12, 2018

< June 2018 >

Su	Mo	Tu	We	Th	Fr	Sa
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7

Event Time (approximate)

Select...

Select...

Time not known

00:00 (midnight)

01:00

02:00

03:00

04:00

05:00

06:00

07:00

08:00

09:00

10:00

11:00

12:00 (noon)

13:00

14:00

15:00

16:00

Note: Event time is the 24-hour clock format



Event Title

- **Name given in media source:** Name the landslide as closely as you can to the way it was referred to in the source (unless the source does not give it a clear name).
- **If the landslide does not have a name:** Title the landslide with a clear, unique description

Examples:

- State Highway 1 Mudslides at Milepost 35.49 near Davenport
- Snowmass Creek Rd Minor Mudslides, just below bridge to Snowmass Ski Area
- O'Higgins Region Landslide Swept Away Car in Chile
- Mid-Hill Highway Dry Landslide along the Baglung-Burtibang Road



Event Description

The event description should let people know the **who, what, when, why** of the landslide that has not been explained in detail.

- Who/what was affected by the landslide?
- What type of landslide was it?
- When did the landslide occur?
- Why did the landslide occur?



Location Description

Location description is the detailed account of where the landslide occurred.

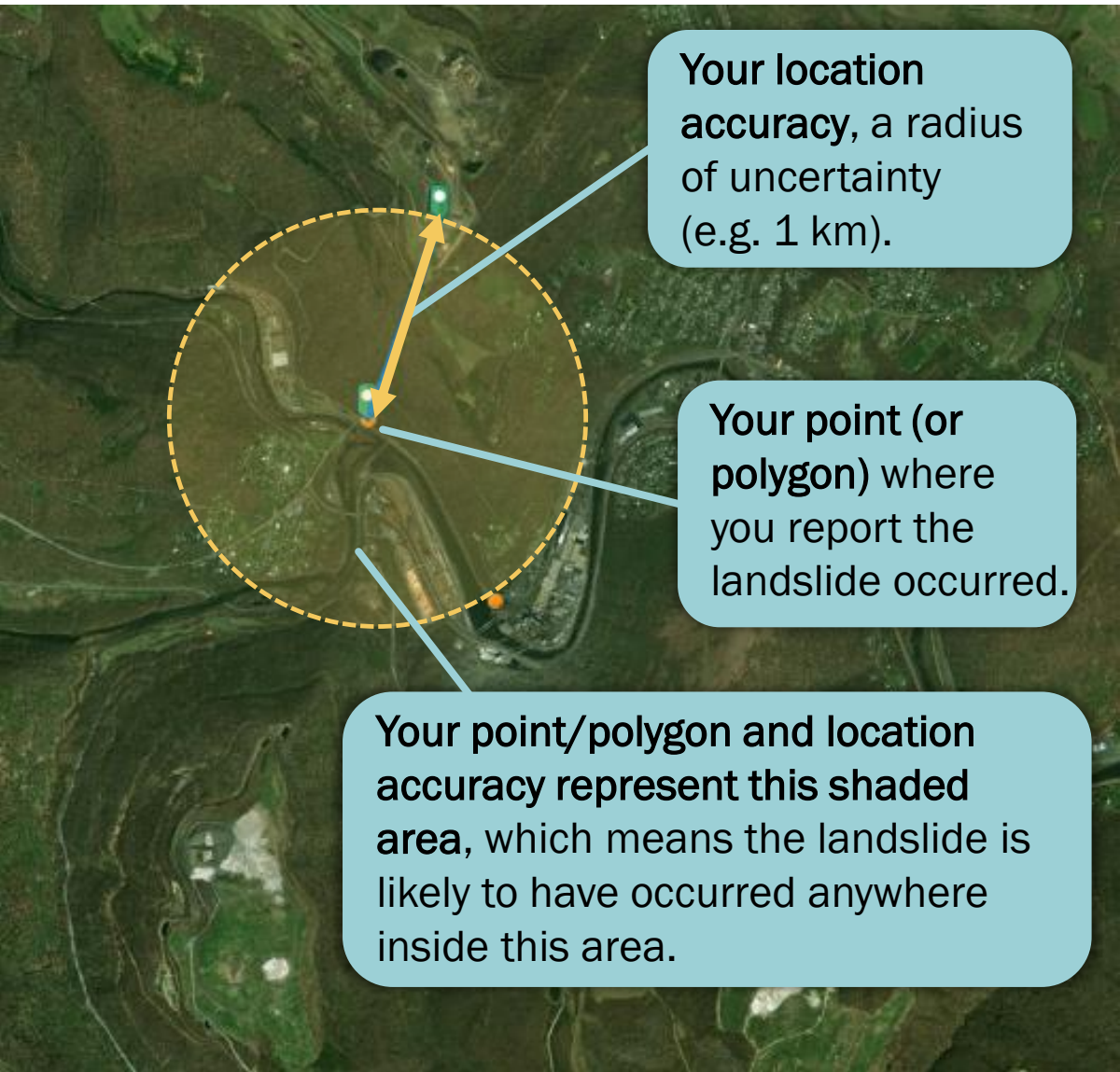
The space is autofilled with an address or coordinates based on where you clicked on the map.

Fill out additional details like you were filling out an address to mail by separating city, state, province, country, etc. with commas.



Location Accuracy

A radius of uncertainty in the landslide's location. The accuracy is the radius of a circle, whose area is where the landslide could have possibly occurred.



Your location accuracy, a radius of uncertainty (e.g. 1 km).

Your point (or polygon) where you report the landslide occurred.

Your point/polygon and location accuracy represent this shaded area, which means the landslide is likely to have occurred anywhere inside this area.



Landslide Category - 1

The type of landslide that occurred. Use the dropdown menu to select the best choice. If the event was a mass movement more detail isn't provided, then select "landslide" from the menu.

Use the following table and figure to help categorize the landslide.



Landslide Category - 2

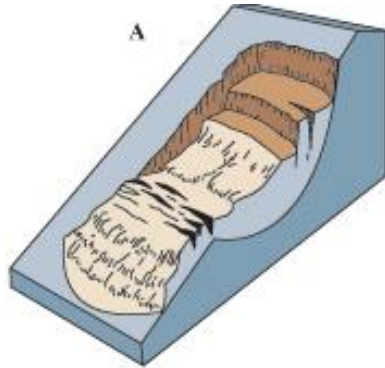
Adapted from an abbreviated version of Varnes' (1978) landslide classification. White boxes are options in Landslide Reporter. (Source: [USGS](https://www.usgs.gov/))

Type of movement ↓		Type of material →		
		Bedrock	Engineering soils	
			Mostly fine	Mostly coarse
Falls		Rock fall	Earth fall	Debris fall
Topples		Rock topple	Earth topple	Debris topple
Slides	Rotational	Rock slide	Debris slide (Landslide)	Earth slide (Landslide)
	Translational			
Lateral spreads		Rock spread	Earth spread	Debris spread
Flows		Rock flow	Earth flow (Mudslide)	Debris flow
		Rock avalanche		Debris avalanche
		Deep creep		Soil creep
Complex and compound		Combination in time and/or space of two or more principal types of movement		

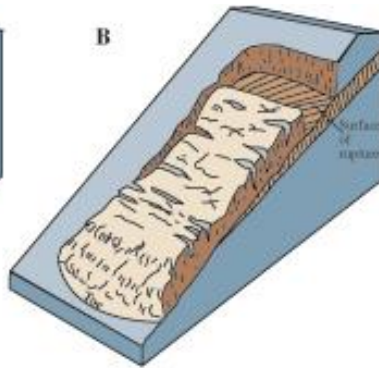


Landslide Category - 3

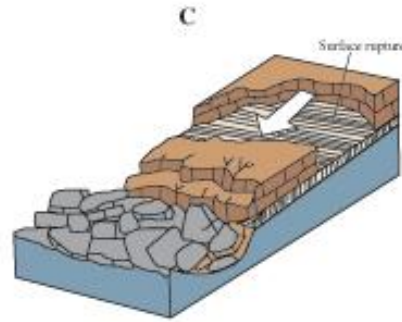
Landslides as classified by the United States Geological Survey (Source: [USGS](https://www.usgs.gov))



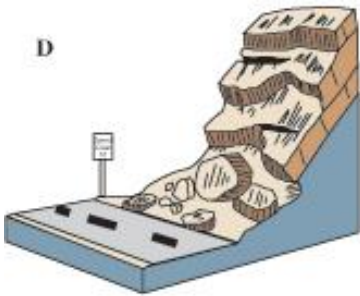
Rotational landslide



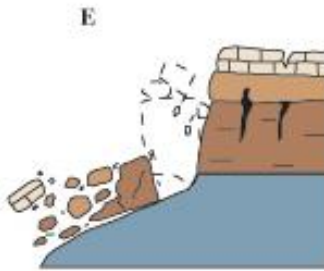
Translational landslide



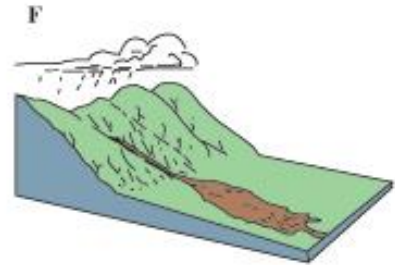
Block slide



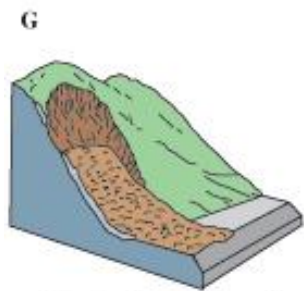
Rockfall



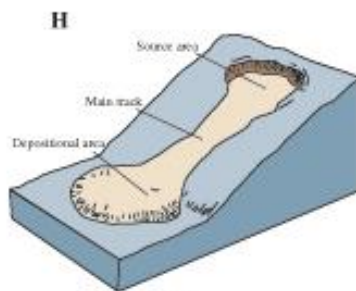
Topple



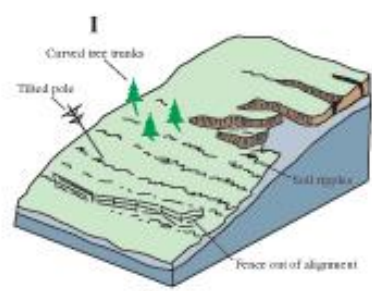
Debris flow



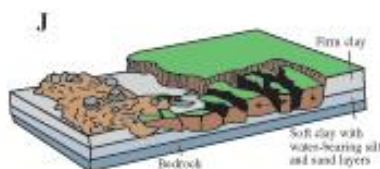
Debris avalanche



Earthflow



Creep



Lateral spread



Landslide Trigger

The cause of the landslide. Select the best option from the dropdown menu, or “unknown” if the cause isn’t specified/can’t be inferred from weather data.



During the 2017 Sierra Leone mudslide, three days of torrential rain caused a hillside in Freetown to collapse, killing more than 1000 people. (Source: Reuters)



Estimated Size - 1

The relative size of the landslide. Use the table below to approximate the size. Select “unknown” if no information/photos are available.

	Descriptors	Volumes
Small	Small landslide affecting one hillslope or small area. Minimal impacts to infrastructure and roads. One road is blocked, cleaned in a few hours; one dump truck needed to clear the dirt; usually no fatalities	<10 cubic meters
Medium	Moderately sized landslide that could be either a single event or multiple landslides within an area, and involves a large amount of material. Road is blocked for multiple days; multiple roads blocked; multiple houses damaged; multiple dump trucks needed to clear the dirt; sometimes at least one fatality	10 to <1000 cubic meters

(table is continued on next page)



Estimated Size - 2

The relative size of the landslide. Use the table below to approximate the size. Select “unknown” if no information/photos are available.

	Descriptors	Volumes
Large	Large landslide or series of landslides that occur in one general area but cover a wide area. Substantial impacts to infrastructure and roads, likely moderate to high number of fatalities. Tens to hundreds of people displaced.	1000 to <100,000 cubic meters
Very Large	Very large landslide or multiple events that affect an entire region (often encompassing an entire village). Thousands of people may be displaced, may be high numbers of fatalities.	100,000 to <1 million cubic meters
Catastrophic	Catastrophic impacts to infrastructure and roads. Multiple villages, neighborhoods, towns buried. Tens of thousands of people may be displaced. May be hundreds to thousands of fatalities.	≥1 million cubic meters



Landslide Setting

The type of environment in which the landslide occurred.

This is important to know because secondary factors like deforestation, erosion, and human activity could have contributed to the landslide.



An April 2016 landslide along the Karakoram Highway in Chuchang, Pakistan caused by heavy rain. Roads cut into the sides of mountains may increase the chances of a landslide. (Source: Wasif Shakil / [AGU](#))





Number of Fatalities and Injuries

The number of people dead or injured by the landslide event. This includes people who died days after sustaining an injury from a landslide.

If no deaths or injuries occurred, put a zero in the form. If deaths or injuries are unknown, then leave blank.



Landslide events reported in the Eastern Hemisphere by number of fatalities.
(Source: Landslide Viewer)

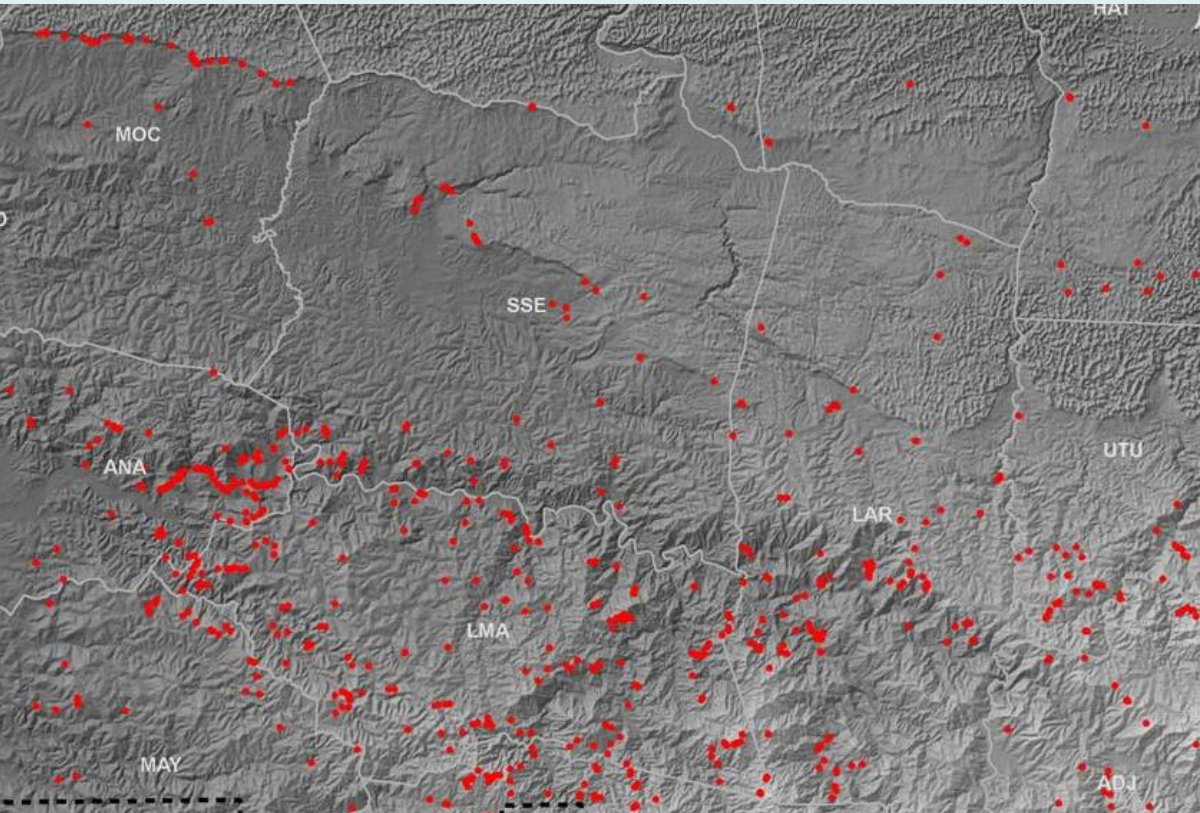


Associated Storm Name

The name of the hurricane, typhoon, tropical storm, or other storm that caused the landslide.
If none, leave blank.



Preliminary map of landslide impacts (in red) caused by Hurricane Maria in October 2017 in northwest Puerto Rico. (Source: [USGS](https://www.usgs.gov))





Link to Photo

Insert a direct link to the photo. If the photo comes from an online source, right click to **copy its image address** and paste in Landslide Reporter.



The 2013 Kedarnath debris flow disaster in Uttarakhand, India, which killed more than 5000 people. (Source: [AGU](#))



Link to Photo

https://blogs.agu.org/landslideblog/files/2013/06/13_06-Kedarnath-3-e1371796737660.jpg

Did you take a photo? First upload the photo to an image-hosting platform (like Flickr or Imgur) and then copy/paste the image address.



Event Comments

Insert other details that you would like the viewer to know about how you wrote your landslide report.

For example, if you need to note the date is estimated or if the information source did not have a lot of details about the event.

If there is nothing to comment, leave blank.



Imported Event Source Catalog and Event Source ID

If you are submitting a landslide from another database, Event Source Catalog is the name of the catalog/database you are importing an event from.

Event Source ID is the ID of the event in the source catalog.

If left blank, the Imported Event Source Catalog will be automatically filled in with 'LRC' or 'GLC', depending on whether the landslide event is reported through Landslide Reporter (LRC = Landslide Reporter Catalog) or by members of our NASA team (GLC = Global Landslide Catalog).



Ready to Submit?

- Did you fill out the fields you could fill out, and leave blank the ones you couldn't?
- Are all your event details as descriptive as possible?
- **The Event Date and Location Description were automatically filled. Make sure they're accurate to your event!**

When you have made your report, click the black “Report It” button.

Report It

You should receive confirmation that the report has been received.

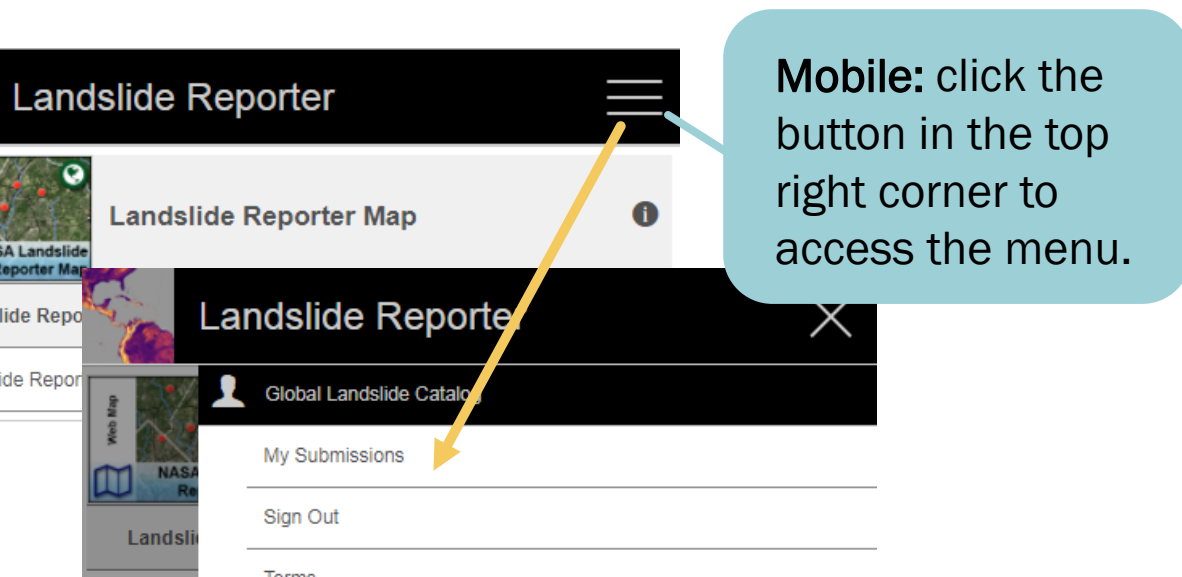
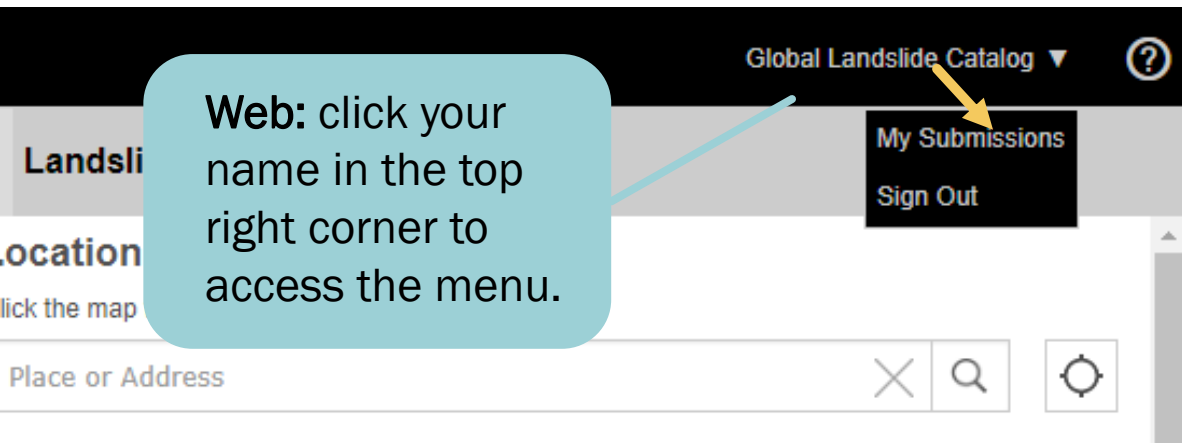
Thank you! Your landslide report has been submitted.



Review Your Reports - 1

Your submissions appear on the map as **red** points.


Review your submitted reports in the menu in the tab “**My Submissions**”.





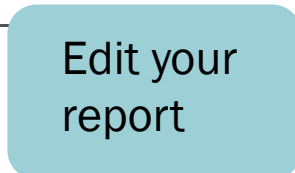
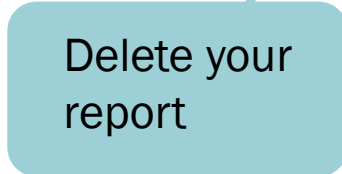
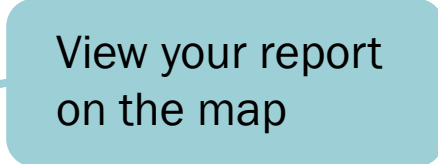



Review Your Reports - 2

In My Submissions, you can see a list of your previous submissions that have not yet been approved yet. Clicking on a report, you can review, edit, or delete points.

 **Landslide Point: 7888**

Landslide Point: 7888  

Name of Information Source	HeraldNet	
Link to Information Source	More info	
Event Date	January 24, 2018	
Event Time (approximate)	Time not known	
Event Title	7000 block Norma P	
Edited by arcgis 3 hours ago		
		



Finish and Next Steps



Congratulations,
you completed your
landslide report!

- Next, your report will be reviewed by our team at NASA. If approved, it will be added to COOLR.
- In the meantime, you can submit more landslide reports or edit your submitted reports.

Thanks to your help, we are one step closer to completing our global picture of landslides.



Landslide Reporter

LANDSLIDES @ NASA

landslides.nasa.gov