



## Section : 2. Earthquake

### Module : 2.2. Earthquake User Interface

#### **i** The InaSAFE Earthquake Realtime User Interface

*“In this module we will explore the user interface of earthquake realtime and learn how to find relevant reports when you need them.”*

Earthquake realtime provides a quick and easy to use landing page that lets you browse historical reports generated by the platform. The map is interactive – you can scroll to zoom in and out (or shift-drag a box to zoom to a specific area), and click on event icons to view more information. New events are automatically posted to the page and will be shown whenever you refresh the page.

New features include 'shakemap corrected' products and reports and the new InaSAFE 4 reports.

A few minutes after the raw shakemap is pushed to realtime and processed, another one is sent by BMKG that includes input from ground sensors. This second one is a more accurate indication of MMI. The Realtime user interface now lets you choose either of these products for a shake event.

The screenshot shows the InaSAFE Realtime Earthquake Reports interface. The top navigation bar includes 'Menu Bar' and links for 'Earthquake', 'Flood', 'Ash', 'API Browser', and 'Indicator'. The main content area is divided into several sections:

- Description Area:** A text block explaining that the page contains near realtime earthquake impact assessments for the Indonesia region, produced by the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG) and used by the Indonesian National Disaster Management Agency (BNPb).
- Map Area:** A map of Indonesia with a 'Shake Event' popup. The popup displays: Date Time: 17 hours ago, Shake ID: 20170905095213, Location: Sumatera Barat, Magnitude: 4.2.
- Filter Area:** A section for filtering events. It includes 'Start Date' and 'End Date' (Date Range Filters), and 'Minimum Magnitude' and 'Maximum Magnitude' (Magnitude Filters). There is a 'Clear Filters' button and an 'Apply Filters' button.
- Context filters:** A section with three buttons: 'Recent Large Earthquakes', 'Recent Small Earthquakes', and 'Recent Felt Earthquakes'.
- Event Descriptions:** A table listing earthquake events. The table has columns for Time, Location Description, Magnitude, Depth, Shake id, and Action. The first row shows an event from 17 hours ago in Sumatera Barat with a magnitude of 4.2 and a depth of 20. The Action column contains icons for search, zoom, report download, and data download.

Annotations on the right side of the screenshot point to specific UI elements: 'Apply Filters', 'Table headings (click to sort)', 'Search box', 'Zoom To Event', 'Event Report Download', and 'Event Data Download'.

Time	Location Description	Magnitude	Depth	Shake id	Action
17 hours ago	Sumatera Barat	4.2	20	20170905095213	[Search] [Zoom] [Report] [Data]
a day ago	North Indian Ocean	5.5	10	20170905024756	[Search] [Zoom] [Report] [Data]
3 days ago	Tanibar Islands Reg., Indonesia	5	94	20170903021144	[Search] [Zoom] [Report] [Data]
4 days ago	Sunda Strait, Indonesia	5.4	65	20170902103710	[Search] [Zoom] [Report] [Data]
4 days ago	Sulbeng	4.2	10	20170901193444	[Search] [Zoom] [Report] [Data]

## You try:

### **Goal: To explore the capabilities and features of Earthquake Realtime.**

Go to the earthquake realtime website and use the tools and options you find there to discover the answers to the questions in the table.

### **Check your results:**

Swap your list with a neighbouring group and see if they had the same results as you.

Name	Expectation
What is the location description and magnitude of the largest earthquake recorded on the platform?	
How many earthquakes are there with a magnitude of $\geq 5$ ?	
Find the report for event ID 20161207050336. What was significant about that event?	
How many different shakemaps can you download per earthquake?	



### **More about**

The earthquake history on InaSAFE Realtime can be filtered by date range and earthquake magnitude. You can clear the filter by using the **Clear Filters** button. When you change the filter criteria, press **Apply Filters** button and the table and map will update to display the results of your filter.

If you **click** on any event in the map, a popup will display the elapsed time, shake ID, location and magnitude. You can dismiss the popup again by clicking on any area of the map that does not have an earthquake marker.

You can use the **table headings** to sort the table contents. For example, clicking the 'Shake ID' heading will sort the records in descending and then ascending order of the summary table based on the shake ID (which essentially produces a date-based sort).

You can use the **Zoom To Event** icon in each row to view that event on the map. You can download reports and map data for each event (which we will cover in separate modules), based on both the raw and the corrected shakemaps.

The table lists only entries for each earthquake event recorded since InaSAFE Realtime Version 3 was introduced – we have not retrospectively processed shake events prior to that date. The InaSAFE version powering the current version of Realtime was upgraded to version 4 in March 2018.

When there are a large number of filtered (or unfiltered) records, the summary table will paginate. You can adjust how many records are shown on each page and use the **pagination** buttons underneath the table to jump from one page of results to the next.

## Check your knowledge:

1. The realtime web site allows you to upload shake events after which it will generate new earthquake reports:
  - a. true
  - b. false
2. Mark all the correct statements:
  - a. *The realtime platform displays shake events from around the globe.*
  - b. *You can filter the shake events by depth.*
  - c. *When you zoom out on the map, the points will cluster. The number on the circle indicates the number of events in that region.*

## Further reading:

- use the earthquake realtime platform: <http://realtime.inasafe.org/realtime/earthquake>
- See the USGS web site for more on the Modified Mercalli Intensity scale (MMI): <https://earthquake.usgs.gov/learn/topics/mercalli.php>
- See the BMKG web site for more details on the sources of the hazard data: <http://www.bmkg.go.id>