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2024

# Surveilans dalam bencana

SCAN ME



Lutfan Lazuardi

# A Primer for Understanding the Principles and Practices of Disaster Surveillance in the United States



National Center for Environmental Health



- [https://www.cdc.gov/nceh/hsb/disaster/Disaster\\_Surveillance\\_508.pdf](https://www.cdc.gov/nceh/hsb/disaster/Disaster_Surveillance_508.pdf)

SCAN ME



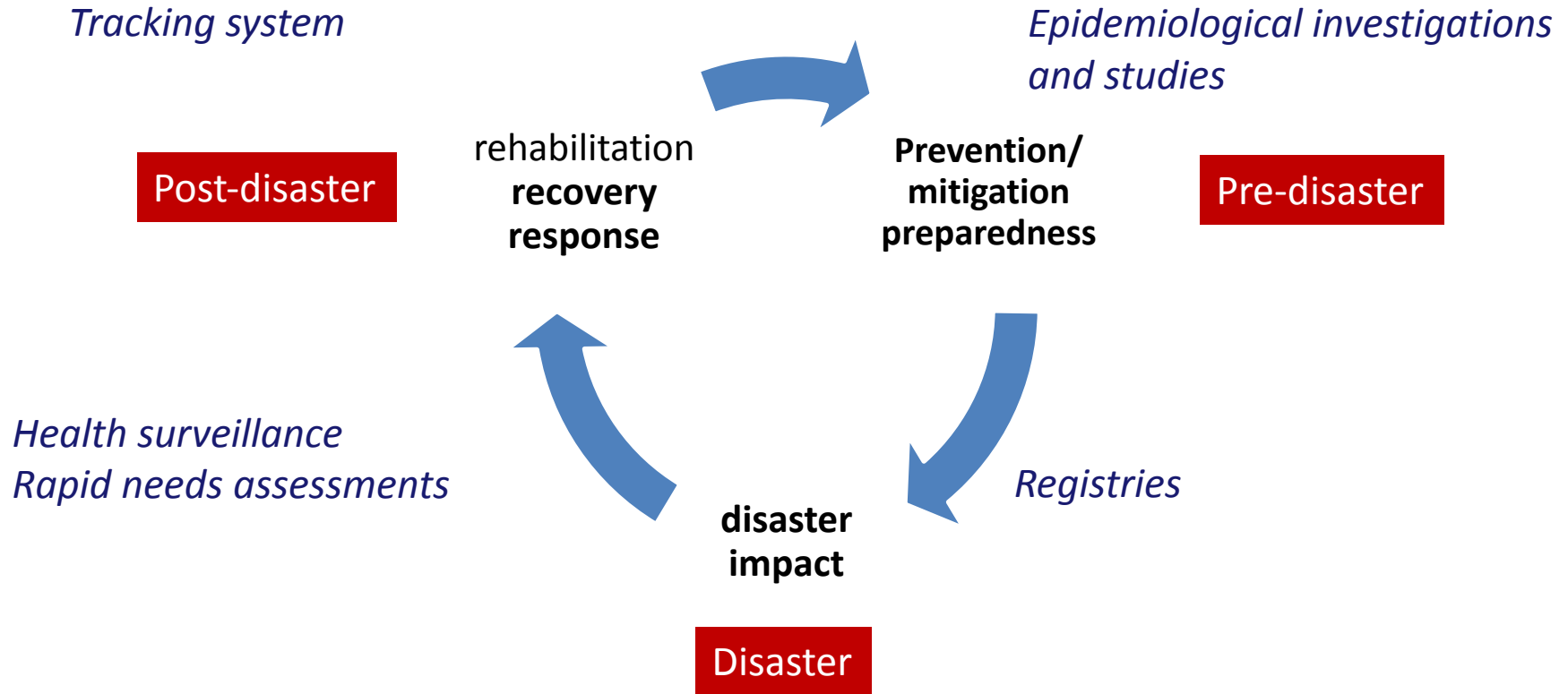
# Public health implications of disaster

- Unexpected number of deaths, injuries and illnesses that exceed available health resources
- Environmental hazards (e.g. debris, heat exposures, etc)
- Displaced populations & crowded shelters
- Overwhelmed or disruption of public health infrastructure

# Disaster epidemiology

- Prevent or reduce the number of deaths, illnesses, and injuries caused by disasters
- Provide timely and accurate health information for decision makers
- Improve prevention and mitigation strategies for future disasters

# Disaster epidemiology activities



# Disaster surveillance helps to:

- define and detect outbreaks and health problems early on;
- determine when, where, and how injuries, illnesses, and deaths occur;
- prepare for and prevent ongoing adverse health effects;
- estimate the magnitude of a health problem;
- identify at-risk groups or geographic areas;
- demonstrate the need for public health intervention or resources;
- inform and monitor the effectiveness of response and relief efforts; and
- assist with planning for future disasters and recommend ways to decrease the consequences of future disasters.

# surveillance

- Surveillance is the **ongoing, systematic** collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health

(Center for Disease Control and Prevention/CDC)



# Surveillance in emergencies

- serves as an **early warning system** for impending outbreaks that could become public health emergencies;
- enables **monitoring and evaluation** of the impact of an **intervention**, helps track progress towards specified goals; and
- **monitors and clarifies the epidemiology of health problems**, guiding priority-setting and planning and evaluation public health policy and strategies.

# Surveillance during disaster

- Morbidity
  - inform decisions about allocating resources
  - targeting interventions to meet specific needs
  - triggering public health response and planning for future disasters
- Mortality
  - The mortality (death) rate helps to measure the impact of a disaster on a population.
  - assist in determining the magnitude of event-related health effects
  - evaluating prevention policy effectiveness
  - identifying preventable disaster-related deaths

# Types of surveillance

- **Passive Surveillance**

the regular reporting of disease data by health institutions to health authorities

- **Active Surveillance**

uses designated staff members to regularly contact health care providers, laboratories, hospitals, the population, and others to seek information about health conditions.

- **Sentinel Surveillance**

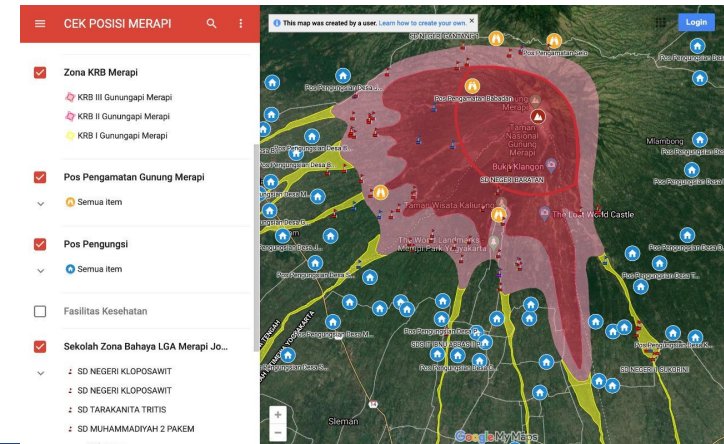
an active or passive surveillance system that collects data from a limited number of recruited participants or providers to report on specific health events

- **Syndromic Surveillance**

can be passive or active surveillance, particularly useful in the early stages of a disaster if routine surveillance has been disrupted or has not been established

# Surveillance data collection during disaster

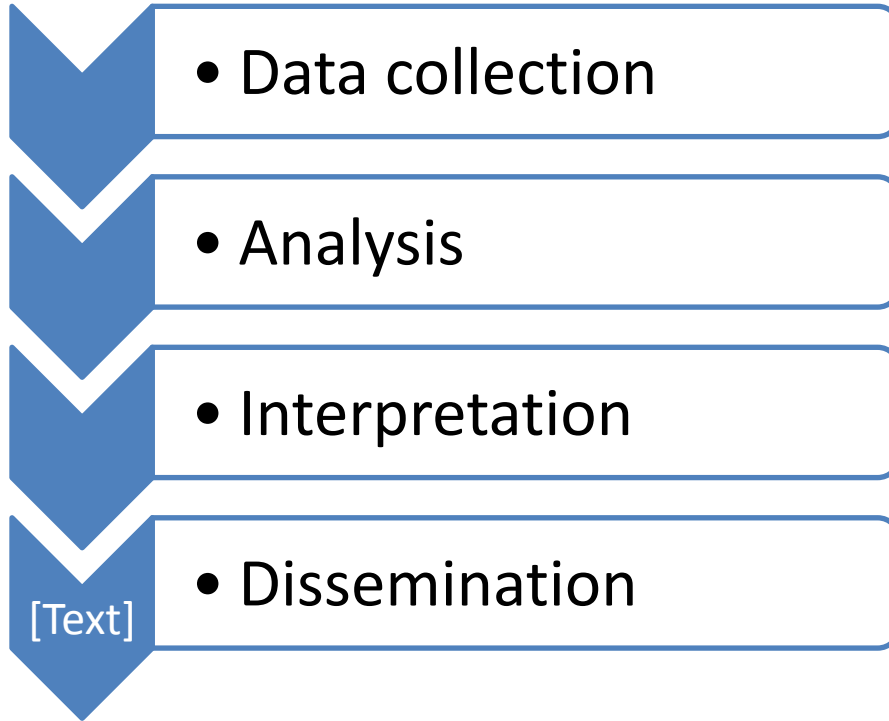
- Morbidity
  - incidence rate,
  - prevalence rate, and
  - stratified rates (e.g., by age, sex, geographic location)
- Mortality
  - demographic characteristics,
  - time and location of death, and
  - cause and manner of death



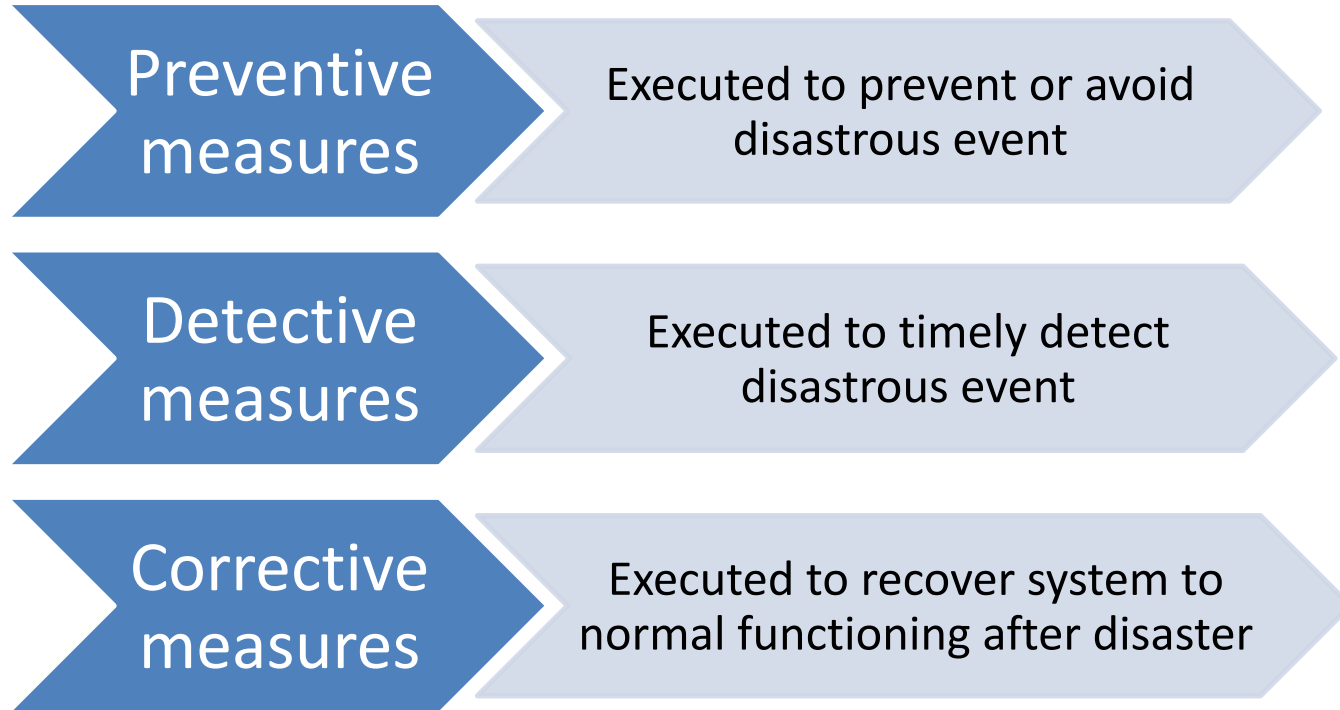
# The challenges

- Damaged healthcare infrastructure
- No baseline information
- Denominator data difficult to obtain
- Logistic constraints
- Coordination challenge

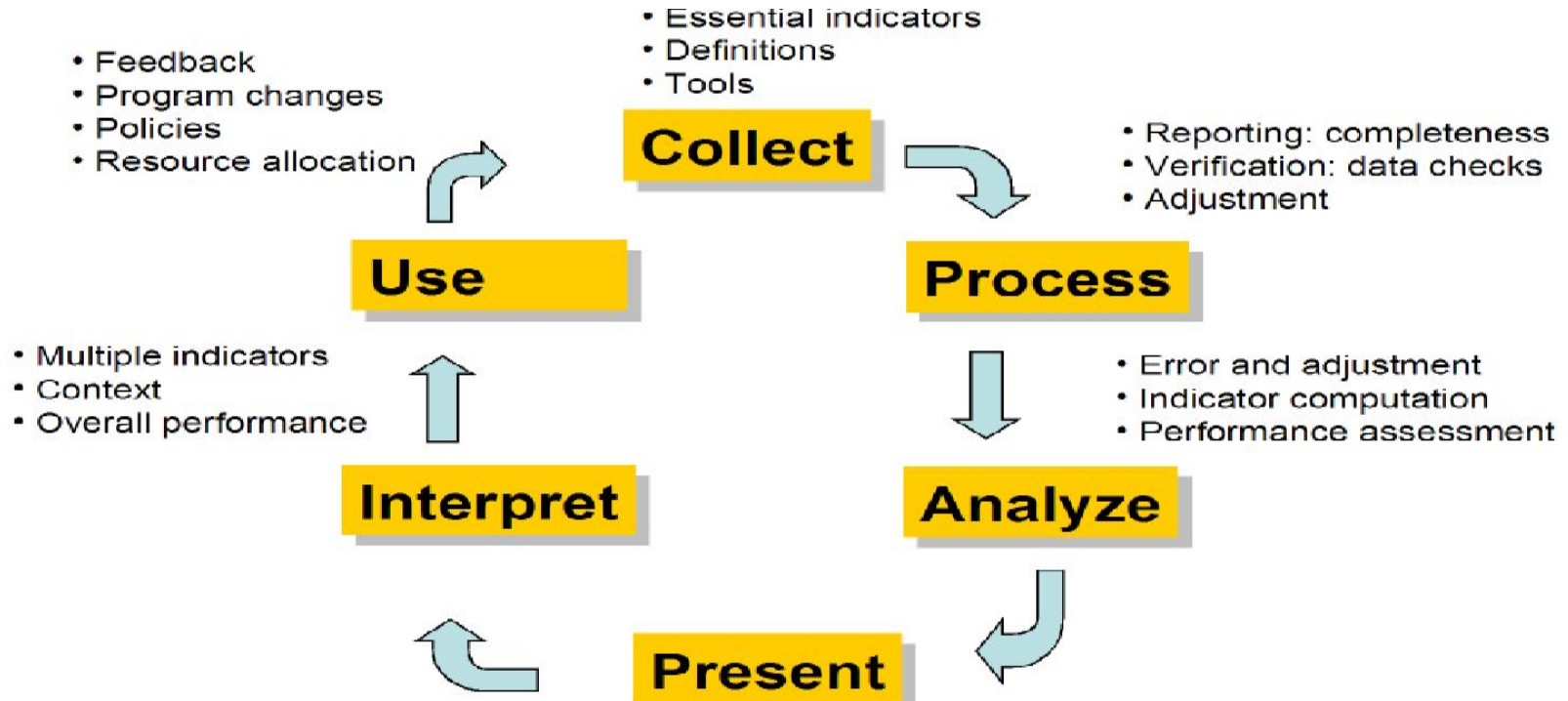




# Disaster recovery plan measures



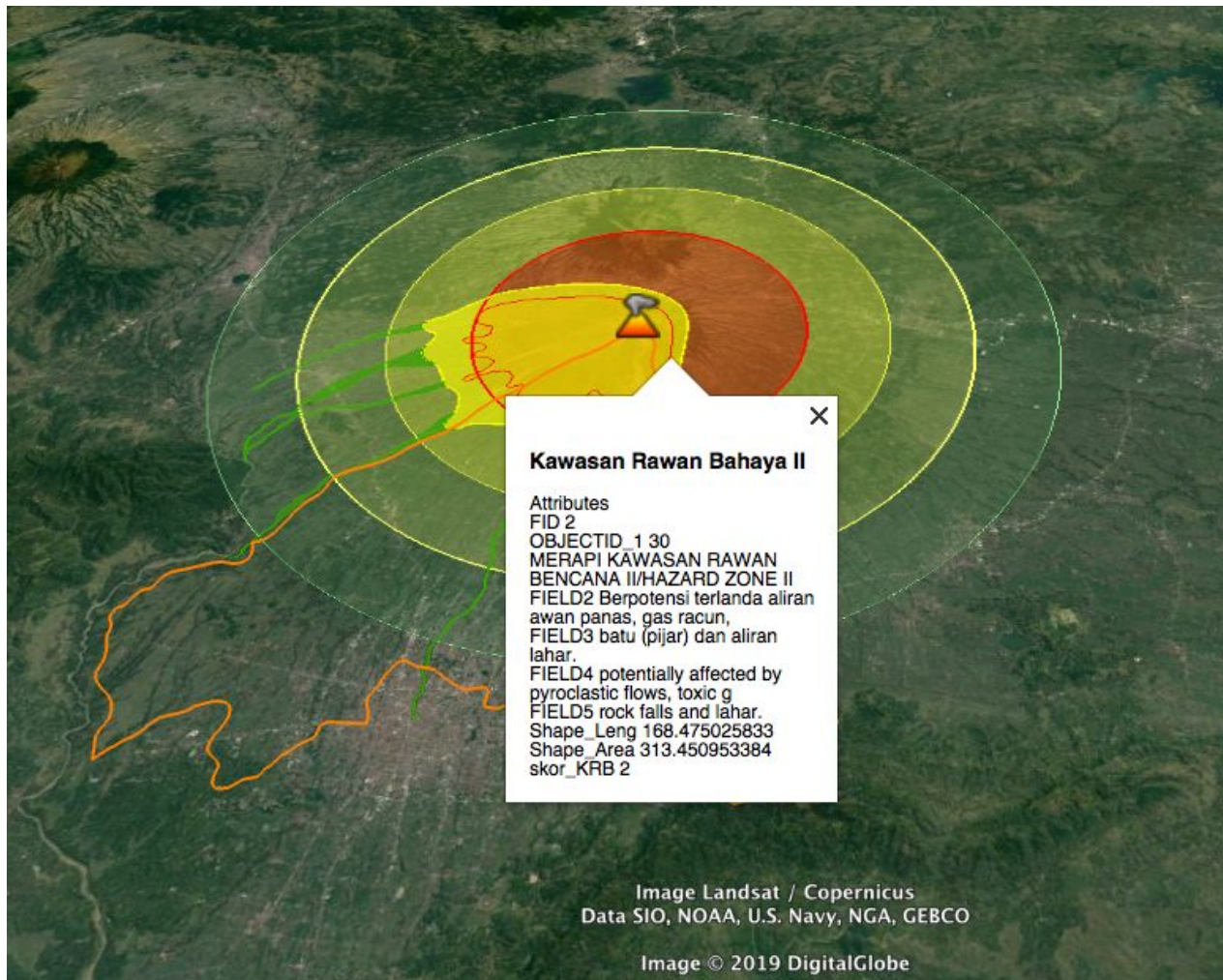
# Information Life's Cycle

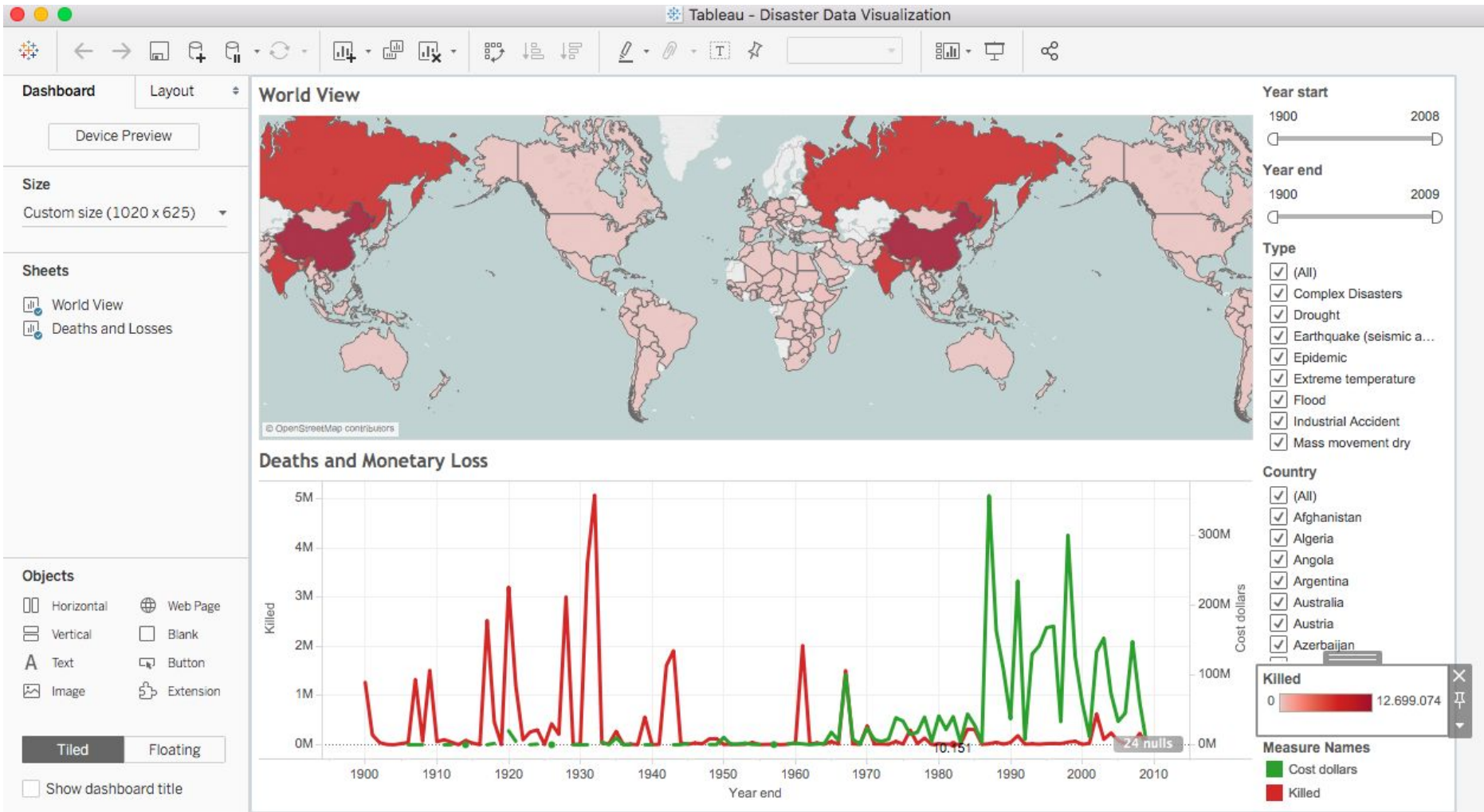


Source: WHO



[Link ke lokasi  
pengungsian](#)

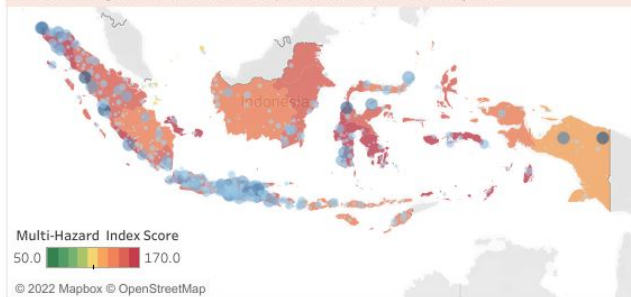




## Indonesia Disaster Knowledge Update - June 2021

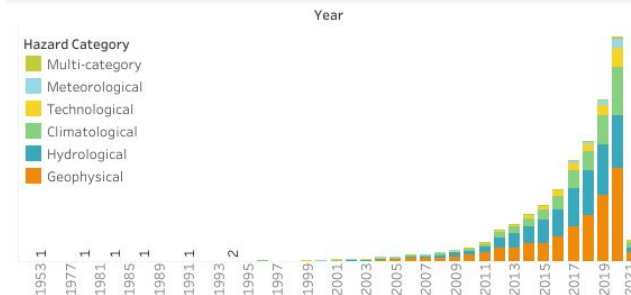


Indonesia Disaster Knowledge Update is provided by CARI! on a monthly basis. For the first edition, we are releasing the overview of research publications from 1947 to May 2021.



This map describes the distribution of disaster-related research publications in CARI! repository-of-repositories (source: DoAJ, Scopus, and Portal Garuda) and Multi-Hazard zone index data by BNPB. The point size and its color describe the number of articles in each city. The color shade on the map, describes the Multi-Hazard index. From the map above, it can be seen that disaster-related research is still focused on the Java region and the northern part of Sumatra, while other areas such as Kalimantan, Southeast Sulawesi, and Nusa Tenggara are still rarely found despite possessed the high hazard.

### Total Publications Trend



This bar chart depicts the time series of the number of disaster-related studies that are produced each year. From the sidebar graph, it can be seen that there has been an increase in the number of studies related to disasters from year to year. This implies an increase in the interest of researchers to produce disaster-related studies every year.

### Statistic



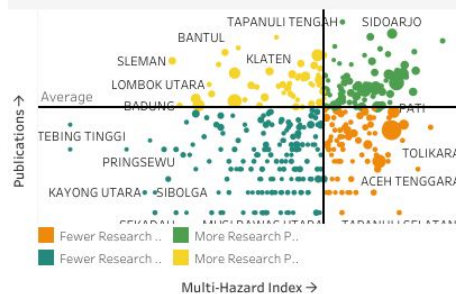
8.539 Authors



9.586 Publications

Disaster-related publications coverage from 1947 to May 2021, curated from DoAJ, Scopus, and Portal Garuda directory. This include both publications in..

### Number of Research Publications VS Multi-Hazards Risk Index



The quadrant chart shows the four category of cities based on their disaster publication(s) and its multi-hazard index (BNPB). The average publications per city is 22 articles and the average multi-hazard index per city is 134,5.

### Brief Knowledge

While world attention remains focused on the COVID-19 pandemic, the increasing number of climate-related disasters continues to be a growing challenge for disaster management agencies, according to an analysis released today of non-COVID related disasters in 2020. The report 2020: The Non-COVID Year in Disasters states that more than 90% of 389 recorded events were climate related. The year saw steep rises in floods and storms compared to the annual average over the last twenty years. These non-COVID-19 events resulted in 15,080 deaths, 98.4 million people affected and economic losses of at least US\$171.3 billion (the Centre for Research on the Epidemiology of Disasters (CRED) at the University of Louvain). Source: UNDRR, 2021





# EM-DAT

## The International Disaster Database

Centre for research on the Epidemiology of Disasters — CRE

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PUBLICATIONS

EM-DAT ATLAS

### WHAT'S NEW



10 years of the Syrian conflict: a time to act and not merely to remember

[Read Article](#)

### EM-DAT: DISASTERS OF THE WEEK

Week 12-2022: March 21 - March 27

#### Natural disasters:

- 2022-0147 Flash floods; Nangarhar province, Pakistan
- 2022-0148 Wildfires; Texas, United States
- 2022-0149 Floods and landslides; Rio de Janeiro state, Brazil
- 2022-0150 Earthquake; Leyte Isl., Philippines
- 2022-0152 Floods; southern Peninsular Malaysia and northern Indonesia
- 2022-0157 Tornado; Louisiana, United States
- 2022-0171 Earthquake; Taiwan
- 2022-0172 Flood; Vietnam
- 2022-0176 Taal volcanic eruption; Balangas province, Philippines
- 2022-0177 Earthquake ; Esmeraldas, Ecuador
- 2022-0178 Floods and landslides; Azuay province, Ecuador
- 2022-0179 Wildfires; Colorado, United States
- 2022-0186 Severe convective storm; Vietnam
- 2022-9156 Drought; Morocco

# SAHANA EDEN

<https://sahanafoundation.org>

- Sahana EDEN is the world's most popular open-source information management system for disaster and humanitarian aid management. With over 20 modules, it can support all phases of the emergency cycle

## Directories



Manage details about organizations, offices, facilities, contacts and more.

## Resources



Manage staff, volunteers, physical assets and inventories and supply catalogs.

## Projects/4W



Visualize Who is doing What Where (4W) and with charts, graphs and maps.

## Logistics



Manage assets, inventories, warehouses and requests for supplies.

# Social network for disaster management

- Social network services have been used to collect disaster information
- **Safety check; marked safe**



Facebook

September 29, 2018 · 🌐

👍 Like Page



Komunitas Facebook mengaktifkan Safety Check atau Pemeriksaan Keselamatan setelah bencana gempa bumi di Indonesia pada pukul 3:34 pagi Waktu Standar Pasifik (PDT) atau pukul 17:34 WIB pada tanggal 28 September, 2018: Gempa bumi yang terjadi di Palu dan Donggala, Sulawesi Tengah, Indonesia.

Hingga saat ini, sudah lebih dari 250 permintaan bantuan yang masuk melalui Community Help.

Doa kami menyertai semua masyarakat di Palu dan Donggala yang terkena dampak dari bencana gempa dan tsunami ini.



Fauzan Mukrim

October 1, 2018 · 🌐

Tiga hari ini rasanya tak berselera menengok medsos, tapi ingin tetap memastikan kondisi teman-teman di Palu dan Donggala. Meski sehari-hari jarang juga bertegur sapa, setidaknya ada rasa bahagia kalau melihat mereka "marked safe".

Saya veteran assignment g...  
bencanaanya lebih brutal, t...  
dari Palu ini terlihat lebih p...  
medsos belum semasif se...  
Atau, bisa jadi, saya yang l...

👍 🥰 🍷 221

👍 Like

**Sebegitu parahkah banjir  
jakarta sampai ada menu  
'marked safe'?**

# Mobile App for disaster



Siap Siaga Bencana  
Bangkit Laboratory



Tanggap Bencana  
Mentari Edu



inaRISK Personal  
Badan Nasional Penang



InDRA  
BNPB

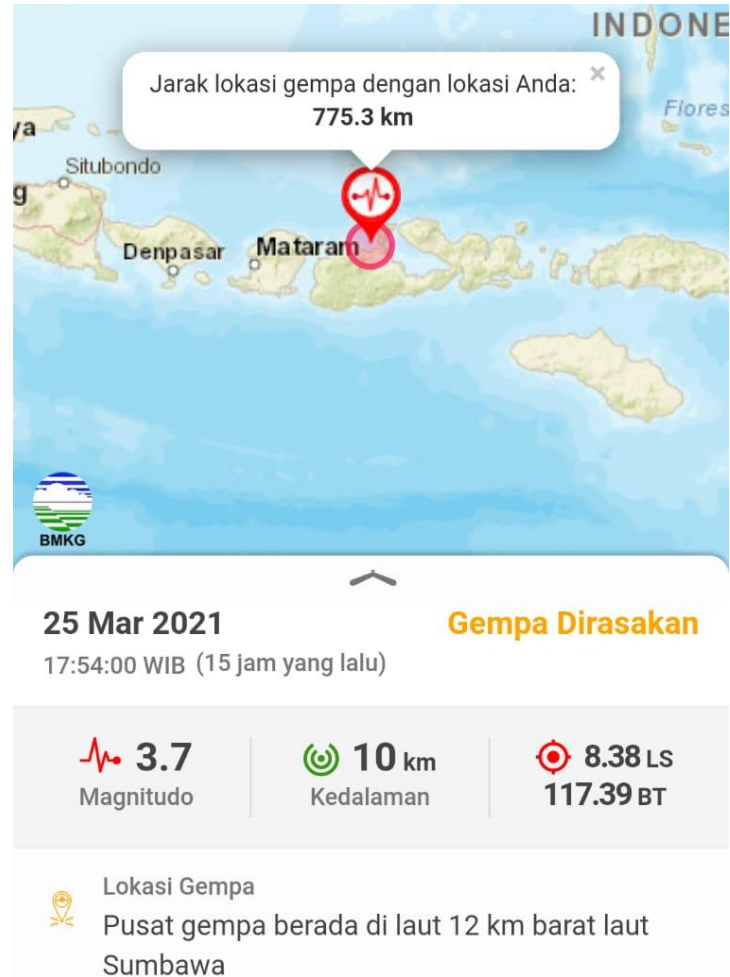
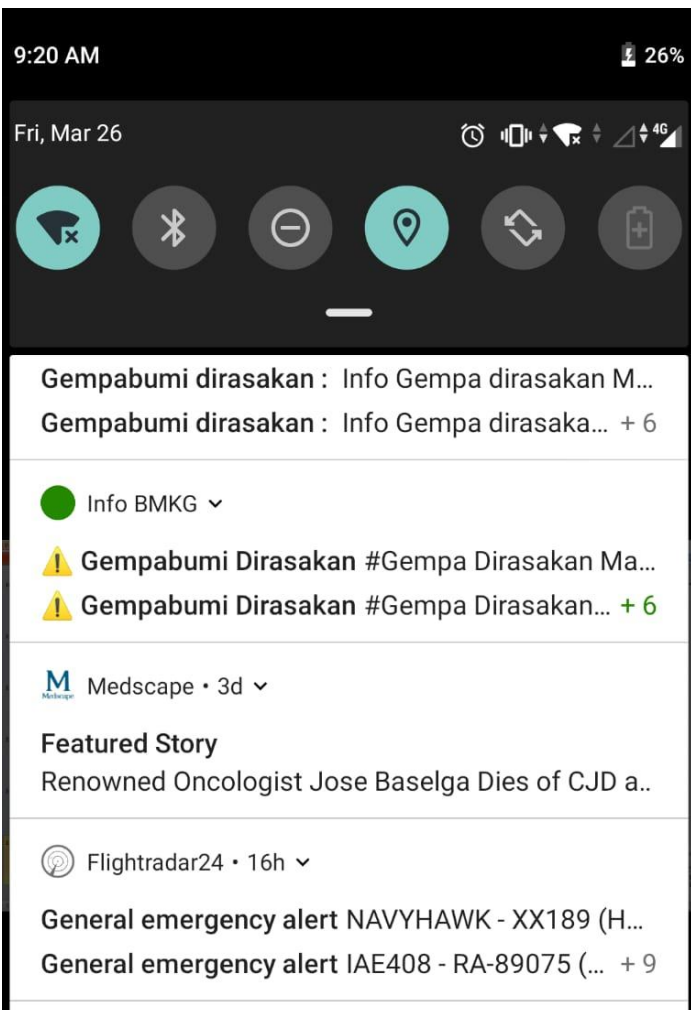


MAGMA Indonesia  
Pusat Vulkanologi dan



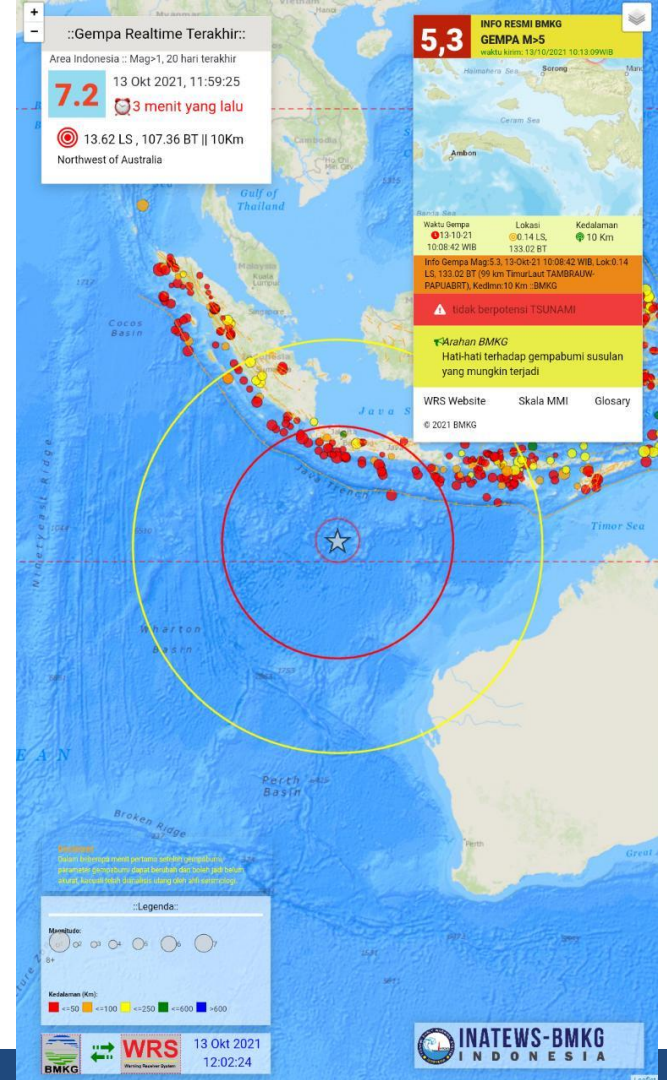
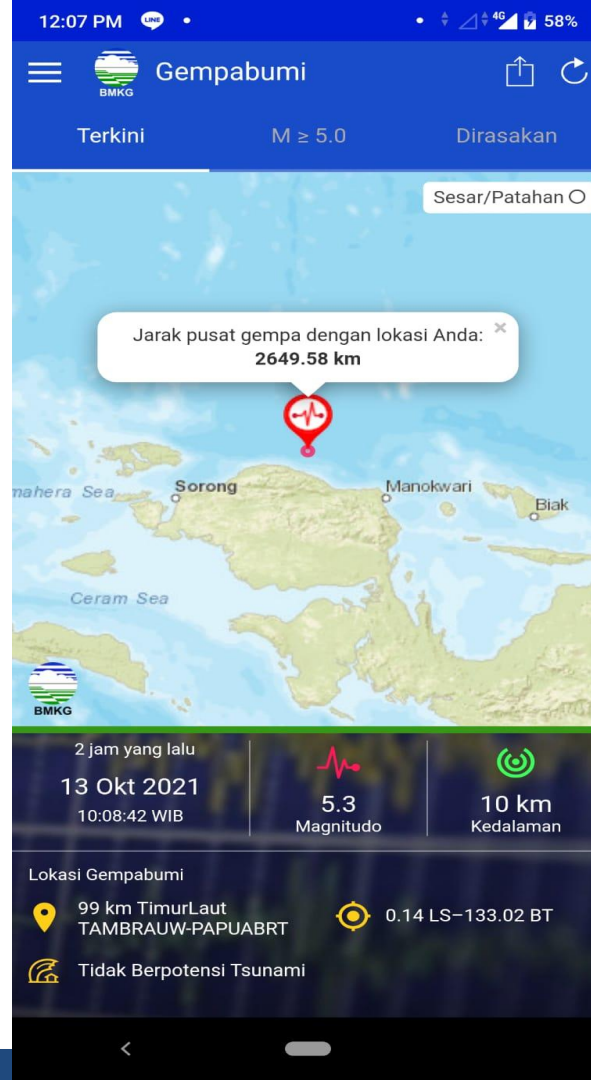
BNPB E-TANGGUH  
Torche Indonesia







today's  
event



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# Public health surveillance for COVID-19: interim guidance

Interim guidance

16 December 2020 | COVID-19: Surveillance, case investigation and epidemiological protocols

[LINK TO FORM](#)

## Overview

This document summarizes current WHO guidance for public health surveillance of coronavirus disease 2019 (COVID-19) in humans caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This guidance combines and supersedes two earlier documents: [Global surveillance guidance for COVID-19 caused by human infection with COVID-19 virus: Interim guidance](#) and [Surveillance strategies for COVID-19 human infection: Interim Guidance 10 May 2020](#).

[All available languages can be found here](#)

<https://www.who.int/publications/i/item/who-2019-nCoV-surveillanceguidance-2020.8>

# Covid-19 surveillance objectives

- Enable rapid detection, isolation, testing, and management of cases
- Detect and contain clusters and outbreaks, especially among vulnerable populations
- Identify, follow-up and quarantine contacts
- Guide the implementation and adjustment of targeted control measures, while enabling safe resumption of economic and social activities
- Evaluate the impact of the pandemic on health care systems and society
- Monitor longer term epidemiologic trends and evolution of SARS-CoV-2 virus and monitor trends in covid-19 deaths
- Contribute to the understanding of the co-circulation of SARS-CoV-2 virus, influenza and other respiratory viruses, and other pathogens.

>> 3tT di Indonesia → track, trace and treatment



World Health Organization

Search by Country, Territory, or Area



Covid-19 Response Fund

Donate

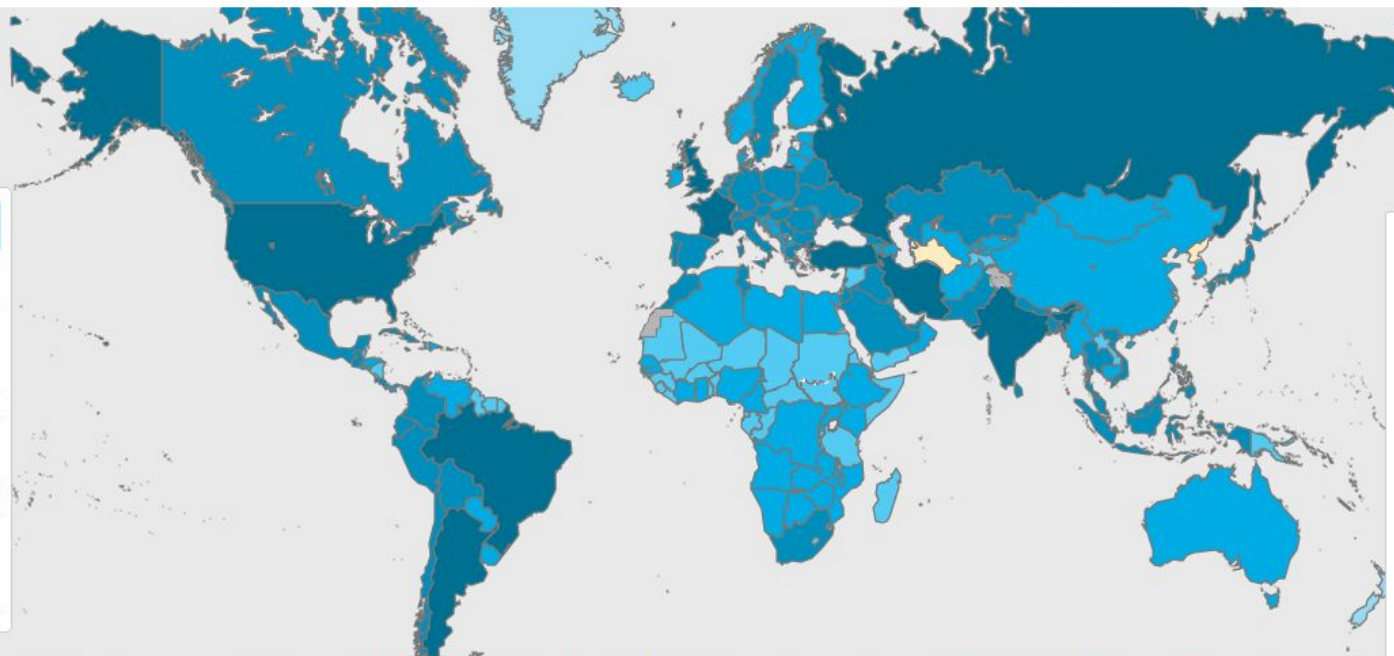
## WHO Coronavirus (COVID-19) Dashboard

Overview

Measures

Data Table

Explore



Cases



Total



**257,154**

new cases in last 24hrs

**237,655,302**

cumulative cases

**4,846,981**

cumulative deaths

Cases - Count



> 5,000,000

500,001 - 5,000,000

50,001 - 500,000

5,001 - 50,000

1 - 5,000

0

Not Applicable

Globally, as of 6:08pm CEST, 12 October 2021, there have been 237,655,302 confirmed cases of COVID-19, including 4,846,981 deaths, reported to WHO. As of 9 October 2021, a total of 6,364,021,172 vaccine doses have been administered.





# Situasi COVID-19 di Indonesia

Satuan Tugas Penanganan COVID-19

Pilih berdasarkan Provinsi:  
Silahkan Pilih

Pilih berdasarkan Tanggal  
10/13/2021 and before

## Kasus per Provinsi

### DKI Jakarta

Terkonfirmasi: 406,205

Sembuh: 393,166

Meninggal: 6,625

### Jawa Barat

Terkonfirmasi: 277,553

Sembuh: 243,650

Meninggal: 3,678

### Jawa Tengah

Terkonfirmasi: 183,027

Sembuh: 162,823

Meninggal: 8,001

### Jawa Timur

Terkonfirmasi: 146,808

Sembuh: 134,525

Meninggal: 10,600

### Kalimantan Timur

Terkonfirmasi: 68,136

Sembuh: 64,718

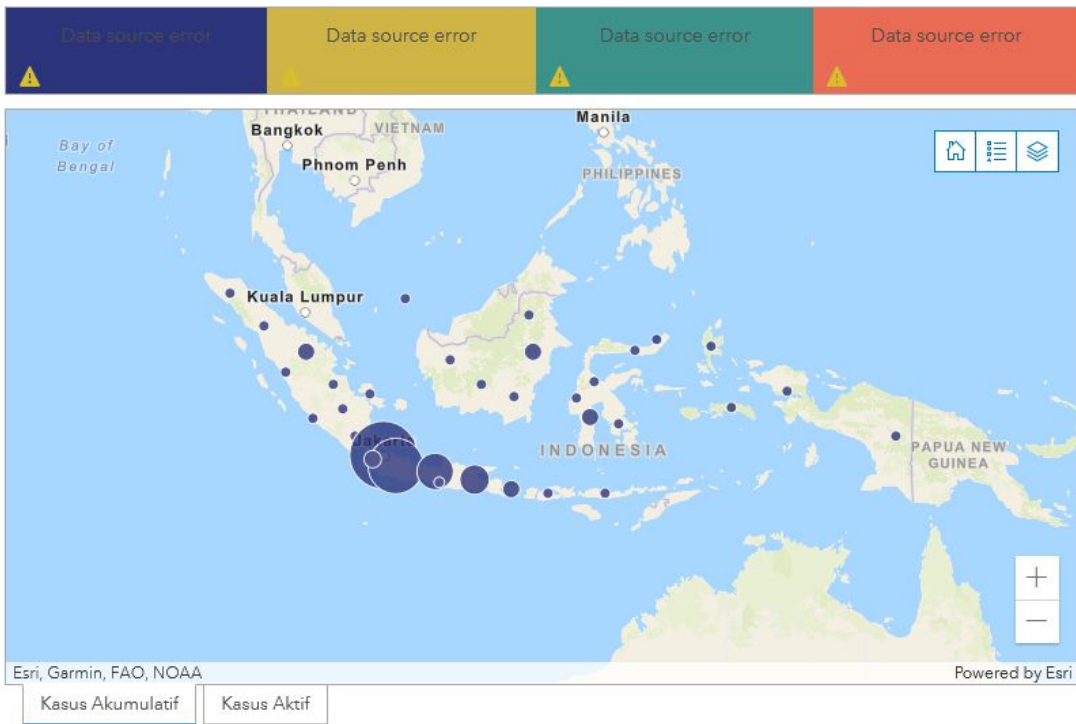
Meninggal: 1,631

### Sulawesi Selatan

Terkonfirmasi: 61,419

Sembuh: 60,164

Meninggal: 931



### Catatan:

1. Titik lokasi yang ditunjukkan pada peta didasarkan pada centroid geografis dan mewakili kasus terkonfirmasi COVID-19 pada tingkat provinsi, serta tidak mewakili alamat tertentu,

Data source error

Data source error

Data source error

### Terkonfirmasi Akumulatif



### Sembuh Akumulatif



### Meninggal Akumulatif

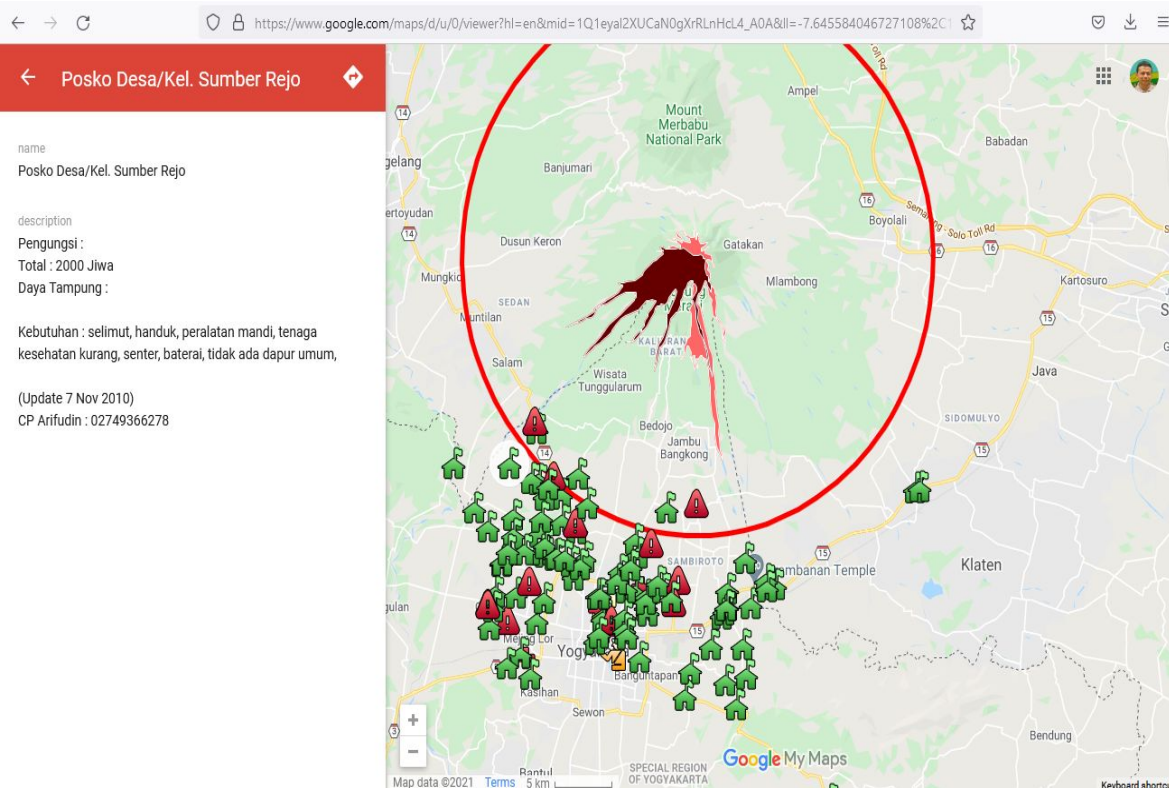


Akumulatif

Harian

Uji PCR

## Posko pengungsi Merapi an kebutuhan logistik



## Data donasi covid-19



## ← Posko Desa/Kel. Margoagung



This map was created by a user. [Learn how to create your own.](#) ×

name

Posko Desa/Kel. Margoagung

description

Pengungsi :

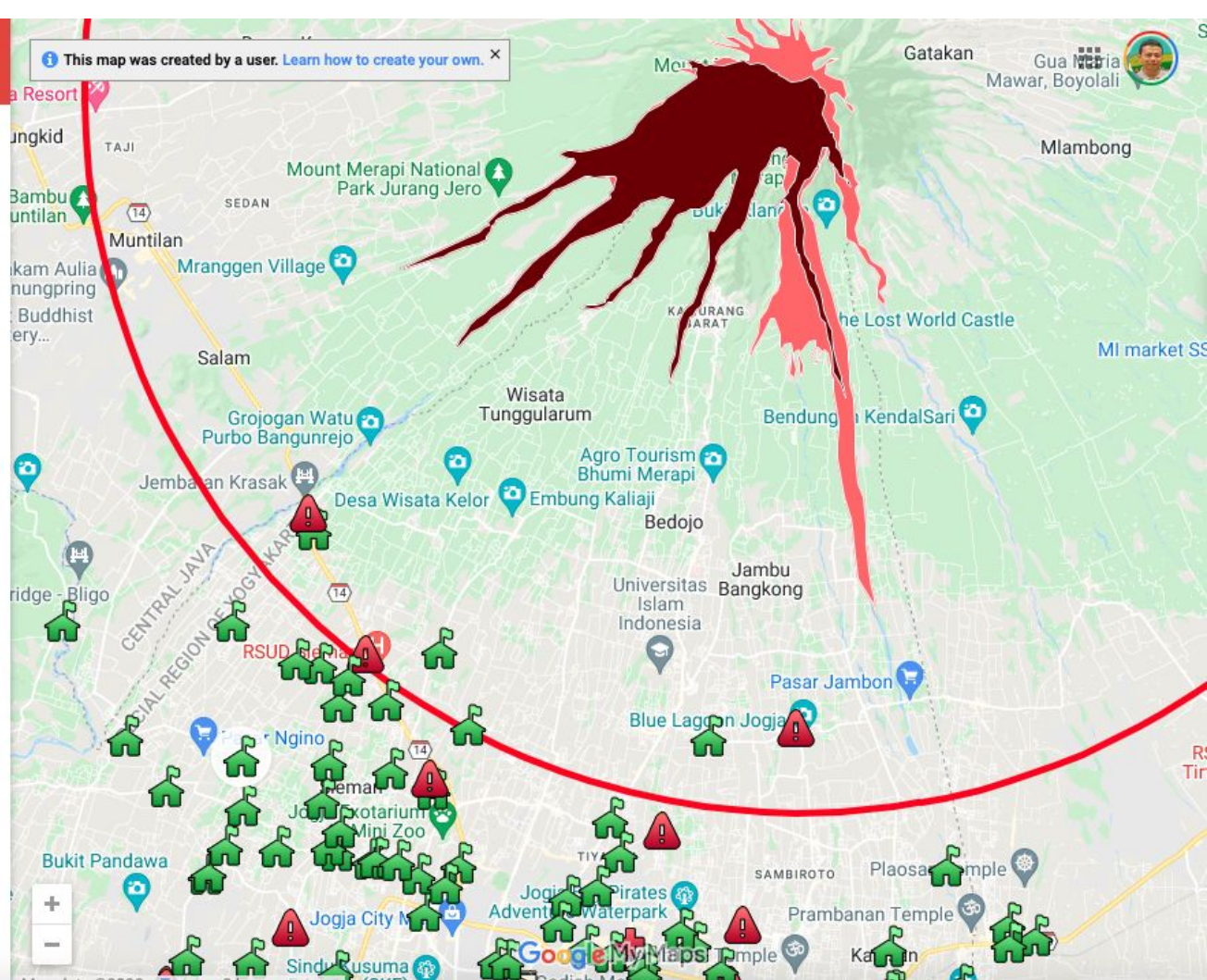
Total : 901 Jiwa

Daya Tampung :

Kebutuhan : sembako, bumbu dapur, snack, peralatan masak, pampers, pembalut

(Update 17 Nov 2010)

CP da : 08 : 3





## Statistics and Research

# Coronavirus Pandemic (COVID-19)

Research and data: Hannah Ritchie, Edouard Mathieu, Lucas Rod s-Guirao, Cameron Appel, Charlie Giattino, Esteban Ortiz-Ospina, Joe Hasell, Bobbie MacDonald, Diana Beltekian, Saloni Dattani and Max Roser

Web development: Lars Yencken, Daniel Bachler, Ernst van Woerden, Daniel Gavrilov, Marcel Gerber, Matthieu Bergel, and Jason Crawford

The data on the coronavirus pandemic is updated daily. Last update: 38 minutes ago. [Reuse our work freely](#) [Cite this research](#)

Coronavirus > [By country](#) [Data explorer](#) [Deaths](#) [Cases](#) [Tests](#) [Hospitalizations](#) [Vaccinations](#) [Mortality risk](#) [Excess mortality](#) [Policy responses](#) [Exemplars](#)



Explore all metrics – including cases, deaths, testing, and vaccinations – in one place.



Get an overview of the pandemic for any country on a single page.



Download our complete dataset of COVID-19 metrics on GitHub. It's open access and free for anyone to use.



Explore our global dataset on COVID-19 vaccinations.



See state-by-state data on vaccinations in the United States.



Explore the data on confirmed COVID-19 cases for all countries.



Explore the data on confirmed COVID-19 deaths for all countries.



Explore our data on COVID-19 testing to see how confirmed cases compare to actual infections.

dataset  
COVID-19



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## Download Options

Data Harian Kasus per Provinsi COVID-19  
Indonesia

Records: 35

### CSV

File created: Apr 27, 2021, 16:43

File size: 1.3 KB

[Download](#)

### KML

File created: Apr 27, 2021, 16:43

File size: 2.1 KB

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### Shapefile

File created: Apr 27, 2021, 16:43

File size: 2.9 KB



## Data Harian Kasus per Provinsi COVID-19 Indonesia



Private Member ⓘ

Gugus Tugas Percepatan Penanganan COVID-19 RI

[View Map](#)[Download](#)[More ▾](#)

### Summary

Data perkembangan penyebaran kasus COVID-19 di Indonesia pada tingkat provinsi.

Data yang menyajikan perkembangan penyebaran kasus COVID-19 di Indonesia pada tingkat provinsi. Data ini diperbarui setiap jam 16.00 WIB setelah selesai dilaksanakannya konferensi pers oleh Juru Bicara Pemerintah RI untuk COVID-19 yaitu Bapak Achmad Yurianto dari Kementerian Kesehatan RI.

### Details



**Dataset**

Feature Layer



**April 27, 2021**

Info Updated



**April 27, 2021**

Data Updated



**March 19, 2020**

## NATURAL DISASTERS IN INDONESIA

Total Disasters  
**5,420**

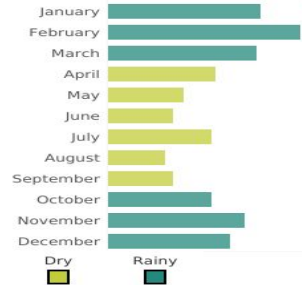
Total Victim  
**27,317**

Houses Affected  
**367,142**

Facilities Affected  
**4,857**

Year  
All

### Seasons



© 2024 Mapbox © OpenStreetMap

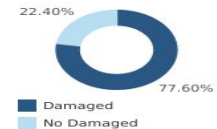
### Total Victims



Sumber: National Disaster Mitigation Agency



### Houses Affected



All



# Terima kasih



Picture: Sahana foundation