Shutdown Tracker Optimization Project (STOP) – *Updated February 2023*

The #KeepItOn Shutdown Tracker Optimization Project is created and maintained by Access Now as part of the #KeepItOn campaign toolkit. This tracker aims to document and contextualize internet shutdown cases around the world under the definition developed by the #KeepItOn coalition for policy advocacy purposes. To date, the current tracker contains data from the years 2016 through 2022. **We try for this tracker to be as comprehensive as possible. But the constraints of our methodology mean it is not exhaustive and numbers are likely to change if and when new information becomes available.**

- **Data References**
  - Our data is sourced from #KeepItOn partners, the measurement community, news and media outlets, as well as other channels. Below are some databases we use for data collection and verification:
  - @InternetIntel (2018)
  - Oracle: https://map.internetintel.oracle.com/ (to date)
  - IODA: https://ioda.caida.org/
  - OONI: https://explorer.ooni.org/search?until=2020-03-10 (to date)
  - Google Transparency Data: https://transparencyreport.google.com/traffic/overview (to date)
  - Facebook Transparency Report: https://transparency.fb.com/data/internet-disruptions/ (to date)
  - CloudFlare Radar: https://radar.cloudflare.com/ (to date)
  - Censored Planet: https://censoredplanet.org/ (to date)
  - RIPE Atlas: https://atlas.ripe.net/ (to date)
  - Internet Society Pulse: https://pulse.internetsociety.org/shutdowns (to date)
  - MLab: https://www.measurementlab.net/data/ (to date)
  - Mozilla: https://blog.mozilla.org/data/2022/03/09/mozilla-opens-access-to-dataset-on-network-outages/ (to date)
  - http://internetshutdowns.in/ (to date)
  - https://www.shutdowns.yodet.org/ (to date)
  - https://moseskaranja.com/tracking-internet-shutdowns-in-africa/ (2016 and 2017)
  - https://cipesa.org/?wpfb_dl=252 (2016 and 2017)
  - http://killswitch.pk/ (2016 to 2020)
  - Home Department, Government of Jammu and Kashmir: http://www.jkhome.nic.in/orders.html
  - Ministry of Home and Administration of Justice, Government of Haryana: https://homeharyana.gov.in/
  - Home and Hill Affairs Department, Government of West Bengal: http://home.wb.gov.in/

Methodology / How our shutdown tracker works

1. Our tracker uses both quantitative and qualitative data to record the number of internet shutdowns in the world in a given year and to characterize the nature of the shutdowns, including their magnitude, scope, and causes. Sometimes we can confirm an internet shutdown through means such as technical measurement, while at other times we rely upon contextual information, such as news reports or personal accounts. We also work hard to document how a particular shutdown was ordered, and how it impacted society, including why and how it happened.

2. An internet shutdown is defined as an intentional disruption of the internet or electronic communications rendering them inaccessible or effectively unusable, for a specific population or within a location, often to exert control over the flow of information[1]. This definition was created in 2016 with the help of technologists, policy makers, and activists.
   a. This tracker includes full network shutdowns, bandwidth throttling, and service-based blocking for **two-way communication platforms**.
   b. Instances in which it is unclear whether the disruption was intentional may be included in the tracker until it can be confirmed or denied that the disruption was due to technical problems. Those instances included in a separate tab in titled "Unconfirmed (Year)"
   c. We do not limit our tracker to shutdowns involving governments; we include those disruptions solely caused or executed by non-state actors. In most cases, the **country** column is typically the same as the perpetrator (an entity or leader within some level of that country's government, a police force, etc.). However, in cases where we can verify that the shutdown was imposed by actors other than the government in the country, such as an outside military force or other third party, the **country** column will show which country was affected alongside the **ordered_by** and **decision_maker** columns which give details on the actual perpetrator. For example, in 2022, the shutdowns in Ukraine imposed by invading Russian forces in conflict zones are listed as **country** = Ukraine, **ordered_by** = Non-government, **decision_maker** = Military of the Russian Federation.

3. A **shutdown instance** refers to a disruption event lasting longer than one hour, or a series of disruption events that we attribute to the same or similar circumstance (i.e. protest, election, exam), justification, method, and perpetrator. An instance can continue even if internet services are restored and subsequently shut off again; if different

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[1] As of February 2023, the #KeepItOn coalition has been working collaboratively to renew this definition to capture the evolving and emerging trends and traits around internet shutdowns. The coalition and our global partners will continue the work to have a timeline for confirming and adopting the renewed definition throughout 2023.

services are suspended at various points throughout the shutdown; or if the scope of the shutdown expands or contracts during the shutdown. An example would be a "digital curfew" of shutting down the internet during the same hours every night for several days in a row. This determination, while grouping together disparate technical events, enables us to achieve policy and advocacy goals like attribution, media attention, mitigation, and remedy.

4. The recorded instances of shutdowns include events reported through local or international news sources which are included in the document, from local actors through Access Now's Digital Security Helpline or the #KeepItOn Coalition email list, or directly from telecommunication and internet companies.
    a. If the shutdown was not caused by a particular event or was in response to a larger political struggle without a particular triggering event, each shutdown is recorded as a distinct instance once the service has been restored for a period of 24 hours or more before it is shut down again.

5. Other comments
    a. **Discrepancy in number**: due to the methodological difference, there are slight variations in number between trackers. As the tracker keeps updating, new retrospective information and discoveries may also change the number of shutdowns as well as the duration of them.
    b. **Unconfirmed shutdowns and gray area**: to avoid confusions or skewed analysis result, this tracker does not include shutdown instances that are not yet verified through the #KeepItOn Coalition or other trusted sources. This tracker does not record network/service disruptions caused by factors beyond our scope, such as natural disaster, technical issues, etc.
    c. **"Curfew" style shutdowns**: these kinds of shutdowns present frequent disruption instances of one or multiple networks/services within a period of time, in which each instance takes place for several hours. In scenarios like India, we followed the approach in http://internetshutdowns.in to record such kinds of shutdowns individually, as each of them may be caused by standalone government order. In other scenarios, such as Iraq and Syria during school exams, we recorded consecutive shutdowns as one instance, as they are often caused by one conglomerate government order during the exam period. When technical measurement data shows clearly repeating curfew-style shutdowns over a multi-day or week period attributed to the same cause, we also treat this as a single shutdown instance (e.g. Iran curfew-style shutdowns from 9/21/2022 to 10/3/2022 as studied by numerous #KeepItOn coalition partners https://ooni.org/post/2022-iran-technical-multistakeholder-report/).

Column indicators[2]

start_date_type (categorical data)
Whether the start date is known through measurement data or other trusted sources, or is just our best estimate based on the available information
- Actual
- Estimate

start _date (count data)
The date when the disruption began according to the sources

continent (categorical data) *[used in 2016-2019 data]*
The categories below are for the use of annual reports. Raw data are generated using categories in the [Kaggle library](#).
- Asia Pacific
- Africa
- Middle East and North Africa (MENA)
- Europe
- North America
- Latin America and the Caribbean (LatAm and the Caribbean)

sub_region *[used in 2016-2019 data]*

country (categorical data)
Based on [UN Country Classification 2014 edition](#)

geo_scope (categorical data)
The scope of areas that are affected by the shutdown instance
- Level 1: It only affected one city, county, or village
- Level 2: It affected more than one city in the same state, province, or region
- Level 3: It affected locations in more than one state, province, or region

area_name (random vector)
Where the shutdown instance happened

shutdown_type (categorical data)

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[2] The definition, criteria, and inclusion of these indicators are not finalized and remain open to discussion. These indicators were designed to generalize information about the scope, scale, and technical impact of current or past shutdown instances, to guide policy and advocacy strategies to prevent and mitigate future instances. We seek feedback on the clarity and accuracy of these indicators in particular. The next iteration of this tracker will consolidate indicators in order to most effectively reach our goal of informing target audiences of the existence and context around internet shutdowns, globally.

Whether the instance cut off the internet connection or slowed internet connection
- Shutdown
- Throttling

affected_network
Which internet network access points were affected
- Mobile
- Broadband
- Mobile and Broadband

shutdown_extent
Was this a full-network, or service-based, shutdown?
- Full: it affected the whole internet via that specific access point
- Service-based: it targeted a specific internet service, such as a social media platform

ordered_by (categorical data)
Whether it's ordered by a local or executive body of government
- Local government
- State government
- Executive government
- Law enforcement
- Military
- Judiciary
- Non-government
- Unknown

decision_maker (random vector)
Name of the person (and position) or the governmental body who ordered the shutdown

actual_cause (categorical data)
*Based on the source of information. When there are a mix of causes of the shutdown (e.g. protest during a government official's visit or protests during an economic crisis), this column will give the <u>primary</u> cause, while the **event** column will give additional causes and context.*
- Communal Violence
- Economic crisis
- Elections
- Exam cheating
- Information Control
- Political Instability
- Protest
- Religious holiday/anniversary
- Visits by Government Officials
- Unknown
- Other

actual_cause_details (random vector)
What was the actual cause for the shutdown?

info_source (categorical[3] data)
- News Media Article
- Social Media
- Confidential
- CSO KIO Partners
- Other

info_source_link (random vector)
Reference link of the info_source

shutdown_status
Current status of the shutdown
- Ended
- Ongoing
- Unknown

end _date (count data)
The date when the disruption ended according to the sources

duration (count data)
Number of days between the start date and the end date of one shutdown instance, including the first day. E.g., if a shutdown starts and ends on the same day, even if only a few hours, ***duration*** *= 1.*

gov_justification (categorical data)
Official Stated Cause

- Fake News / Hate Speech / Incendiary Content or Promoting Violence
- Illegal Content
- National Security / Counter-Terrorism
- Public Safety / Quell Unrest / Restore Public Order
- Sabotage / Third-party Action
- School Exams
- Technical Problems / Infrastructure Failure
- Unknown
- Other
- None

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[3] Categories with categorical data entries are subject to change following community input.

gov_just_details (random vector)

gov_ack (boolean)
Whether the government made a public statement
- Yes
- No
- Unknown

legal_just
Did the government or relevant authority give any legal justification or refer to a law?
- Yes
- No
- Unknown

legal_method (random vector)
Did the government or relevant authority use a memo, court order or similar instrument? Please provide a brief summary.

gov_ack_source (random vector)

gov_ack_quote (random vector)

Service-based shutdowns
- Facebook (**facebook_affected**)
  - True
  - False
  - Unknown
- Twitter (**twitter_affected**)
  - True
  - False
  - Unknown
- WhatsApp (**whatsapp_affected**)
  - True
  - False
  - Unknown
- Instagram (**instagram_affected**)
  - True
  - False
  - Unknown
-
- Telegram (**telegram_affected**)
  - True
  - False
  - Unknown
- Other services (**other_affected**)

- ○ _____
- SMS and Mobile (**sms_affected**)
  - ○ Yes,
  - ○ No
  - ○ Unknown
- Phone calls (**phonecall_affected**)
  - ○ Yes
  - ○ No
  - ○ Unknown

telcos_involved (random vector)
Which telecommunications companies were given the shutdown order

telco_ack
Did the Telco acknowledge the shutdown happened?
- *Yes*
- *No*
- *Unknown*

telco_ack_source (random vector)

telco_ack_quote (random vector)

election (boolean)
Whether the shutdown instance happened around an election
- Yes
- No
- Unknown

violence
Whether there was a violent incident during the shutdown?
- Yes
- No
- Unknown

hr_abuse_reported
Have any human rights abuses been reported that specifically relate to this shutdown?
- Yes
- No
- Unknown

users_targeted
Which of the following groups, if any, were impacted by the internet shutdown?

- Ethnic minorities
- LGBTQ groups
- Religious minorities
- Others

users_target_detail (random vector)

users_notified
Did users affected by the shutdown receive advance warning?
- Yes
- No
- Unknown

econ_impact (real-valued)
What was the estimated economic impact of the internet shutdown, if known?

event (random vector)
A short one- or two-sentence summary of the shutdown and the event that triggered it

an_link (random vector)
Blog post, statements, documents, or press releases published by Access Now

For inquiry and comments, contact Zach Rosson, #KeepItOn Data Analyst (zach@accessnow.org) and Felicia Anthonio, #KeepItOn Campaign Manager (felicia@accessnow.org).