



India: August 5, 2019 - February 5, 2021

Jordan June 24 - July 14 2021

Nigeria June 4, 2021 - January 13, 2022

Myanmar February 14 - April 28 2021

THE RETURN OF DIGITAL AUTHORITARIANISM

Internet shutdowns in 2021

#KeepItOn 

#KeepItOn

The #KeepItOn campaign unites and organizes global organizations and efforts to end internet shutdowns. The campaign was launched by a coalition of about 70 organizations in 2016 at RightsCon in Silicon Valley. Membership of the coalition has since increased rapidly to 282 organizations from 105 countries around the world ranging from civil society, rights, and advocacy groups to research centers, detection networks, foundations, and media organizations.

This report is a publication of Access Now for the #KeepItOn coalition and was written by Marianne Díaz Hernández and Felicia Anthonio in collaboration with the Access Now team.

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Design and data visualization by Sage Cheng.

A note on our data

This #KeepItOn report looks at incidents of internet shutdowns documented by Access Now and the #KeepItOn coalition in 2021. While we try to build a comprehensive database, our data relies on technical measurement as well as contextual information, such as news reports or personal accounts. The constraints of our methodology mean that there may be cases of internet shutdowns that have gone unreported, and numbers are likely to change if and when new information becomes available after publication. For further reading, please visit <https://accessnow.org/keepiton-data-methodology>.

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I. Internet shutdowns in 2021: A global overview

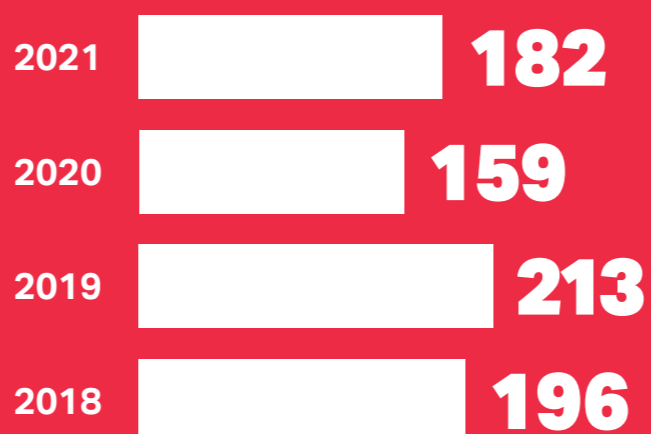
With a gradual return to normalcy following the outbreak of the global COVID-19 pandemic, we saw a dramatic resurgence of internet shutdowns¹ in 2021. During this year, Access Now and the #KeepItOn coalition documented at least **182** internet shutdown incidents around the world in **34** countries, as compared to at least **159** shutdowns in **29** countries in 2020. We saw a global increase of **23** shutdowns from 2020 to 2021.

Following trends we've seen developing for years, in 2021 governments imposed both prolonged and increasingly targeted internet shutdowns, and relied on many of the same justifications for deploying these inherently disproportionate and drastic measures. Authorities in many countries imposed shutdowns in transparent efforts to silence critics and suppress dissent. Others wielded shutdowns to control the flow of information during elections and active conflict and war, including coups. In some cases, countries persisted in the harmful practice of disrupting internet access during school exams, a blunt method to discourage cheating.

India was responsible for **106** incidents of shutdowns documented in 2021, making it the world's biggest offender for the fourth consecutive year. After India, Myanmar imposed the highest total number of shutdowns in 2021, with **15** disruptions, followed by Sudan and Iran with **five** shutdowns in each country. Over the past five years, our documentation shows that authorities have increasingly moved to disrupt the internet during events that affect the country's political situation, such as elections, protests,

¹ An internet shutdown has been defined as "an intentional disruption of 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." An internet shutdown happens when someone — usually a government — intentionally disrupts the internet or mobile apps to control what people say or do. Access Now (n.d.) Retrieved March 30, 2021, from <https://www.accessnow.org/keepiton-faq/>.

Documented internet shutdowns by year



Number of countries that shut down the internet



* These numbers reflect the latest research in this report. In retrospect, a number of stats from previous years have been updated with the newly found information.

Impact of shutdowns in the COVID-19 pandemic

2026 days

From 2016 to 2021, 4.5 million residents of Pakistan's Federally Administered Tribal Area (FATA) had to endure a nearly four-year-long internet shutdown. This almost destroyed the education, healthcare, and business opportunities for the already isolated local groups, especially during the COVID-19 pandemic.

15 times

The Myanmar junta shut down the internet at least 15 times in 2021. The longest nationwide internet disruption lasted nearly 2.5 months.

18 months

In Ethiopia, people in the Tigray region have been cut off since November 2020: that's 18 months and counting.

85 times

People in Jammu and Kashmir experienced at least 85 internet shutdowns in 2021. Most of these shutdowns were part of "counterterrorism" measures by the state government. As a result, people in the Kashmir Valley spent another year with a shattered internet.

coups, and violent conflicts. In particular, **seven** countries on our record that had never shut down the internet before joined the shame list in 2021: Burkina Faso, Niger, Palestine, Senegal, South Sudan, Eswatini (formerly Swaziland), and Zambia. On the other hand, in a positive development, countries including Benin, Iraq, and The Gambia, which had previously shut down the internet during key national events, kept access to the internet open during elections in 2021.

A close look at the 2021 data shows that what could have been a story about the global decline of internet shutdowns after the pandemic instead reveals a return to the rights-harming tactics of the pre-pandemic period. And these tactics are spreading. That's especially troubling given our continued reliance on the internet to stay safe and healthy, connect to our loved ones, and fully participate in today's digital world.² It's also yet another warning sign of **the rise of digital authoritarianism** across the globe.³

In 2021, we saw shutdowns in conflict zones, and as a form of attack in conflicts, including before, during, and after two coups (Myanmar and Sudan). The shutdowns in Eastern Europe and Central Asia, including in Russia, point to the increased geopolitical tensions that we see exploding today. The continued trend of long shutdowns (in Ethiopia, Myanmar, India, Pakistan, and elsewhere) is an agonizing indicator of the willingness of government authorities to disconnect and deepen the suffering of their own people.

When we look at the resurgence of internet shutdowns in 2021, it is the human impact that matters most. Network disruptions can serve to cloak human rights abuses⁴ during crises,

² Pew Research Center: Internet, Science & Tech (2021). *The internet and the pandemic*. Retrieved January 14, 2022, from <https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/>.

³ Deutsche Welle (2022). *Digital authoritarianism: A global phenomenon*. Retrieved April 6, 2022 from <https://www.dw.com/en/digital-authoritarianism-a-global-phenomenon/a-61136660>.

⁴ ARTICLE 19 (2021). *Iran: Internet shutdowns curb protests and conceal human rights violations in Sistan and Baluchistan*. Retrieved March 25, 2022, from <https://www.article19.org/resources/iran-internet-shutdowns-curb-protests-and-conceal-human-rights-violations-in-sistan-and-baluchistan/>.

including war crimes and acts of genocide.⁵ They obstruct humanitarian aid,⁶ and hinder journalism and the documentation of rights violations.⁷ They also leave people who have loved ones in these conflict zones in fear, unable to reach family and friends or get them to safety. In Myanmar, for example, shutdowns have blocked the capacity to report air strikes on civilians, the burning of houses, and extrajudicial killings and arrests, including of children.⁸

Regardless of the context or rationale, internet shutdowns are an attack on human rights. The

global COVID-19 pandemic has only highlighted the severity of disconnecting people from the internet when it is used for everything from access to education, work, and banking services, to access to information, culture, and entertainment, as well as basic communication in daily life.⁹

It is our hope this report serves as a warning: **ignore internet shutdowns at your peril.** They are never a sign of respect for human rights, a healthy democracy, or effective governance.

Number of internet shutdowns by country in 2021 ▾

India: 106
Myanmar: 15
Iran: 5
Sudan: 5
Cuba: 4
Jordan: 4
Ethiopia: 3
Uganda: 3

Bangladesh: 2 Chad: 2 Eswatini: 2 Indonesia: 2 Iraq: 2 Kazakhstan: 2 Nigeria: 2 Pakistan: 2 Syria: 2 Turkmenistan: 2 Yemen: 2

Afghanistan: 1 Algeria: 1 Burkina Faso: 1 China: 1 The Republic of the Congo: 1 Gabon: 1 Niger: 1 Oman: 1 Palestine: 1 Russia: 1 Senegal: 1 South Sudan: 1 Tajikistan: 1 Uzbekistan: 1 Zambia: 1

⁵ Freedom House (2021). *Freedom on the Net 2021 - Myanmar*. Retrieved April 17, 2022, from <https://freedomhouse.org/country/myanmar/freedom-net/2021>.

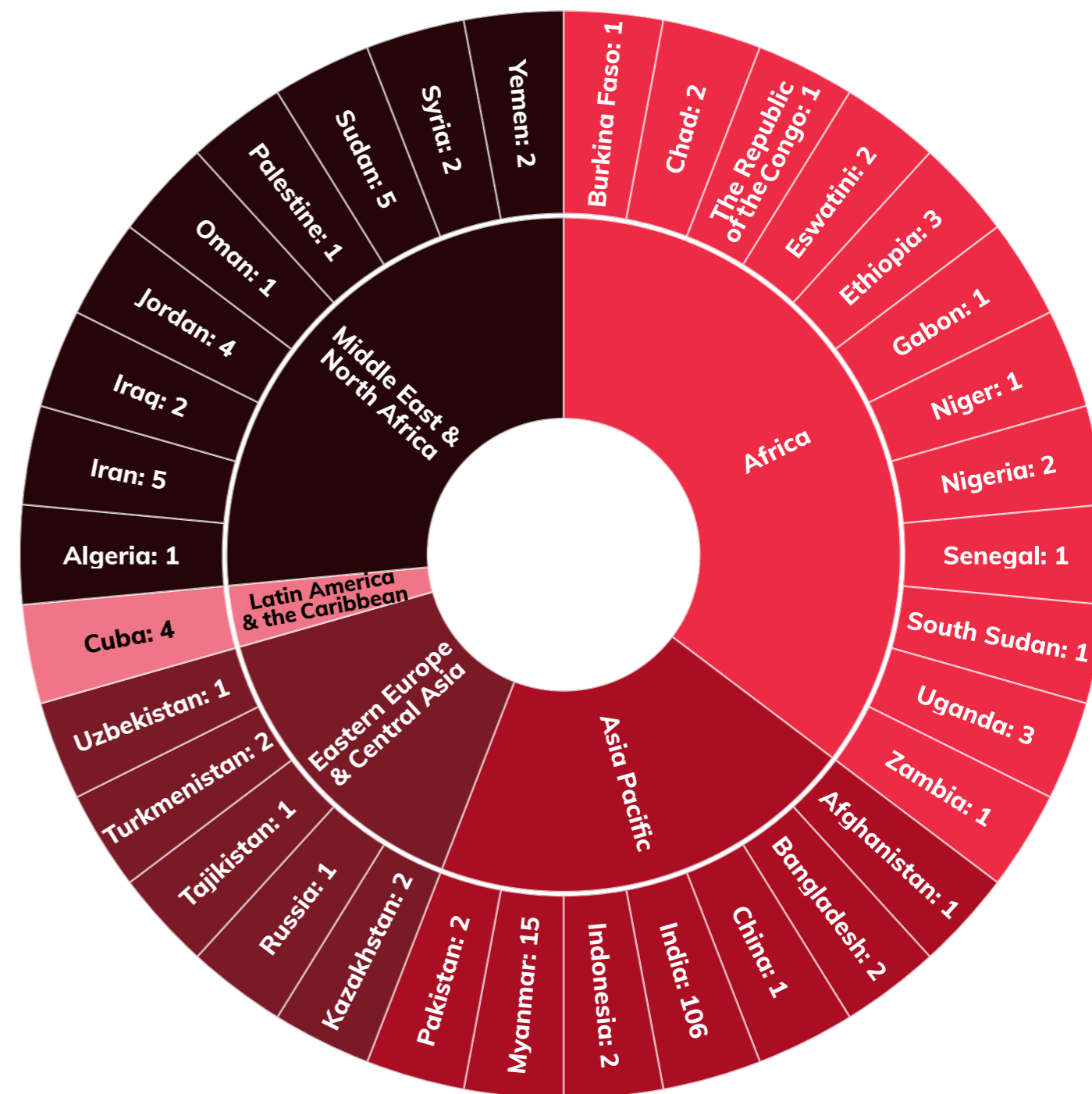
⁶ Reinventing Peace (2021). *Switch Tigray's Internet Back On*. retrieved March 25, 2022, from <https://sites.tufts.edu/reinventingpeace/2021/04/21/switch-tigrays-internet-back-on/>.

⁷ WITNESS (2021). *#Eyesonshutdowns: Documenting for human rights*. Retrieved March 25, 2022, from <https://www.witness.org/eyesonshutdowns-documenting-for-human-rights/>.

⁸ Myanmar Now (2022). *Myanmar junta cuts off internet access 'indefinitely' to resistance stronghold of Sagaing*. Retrieved March 25, 2022, from <https://www.myanmar-now.org/en/news/myanmar-junta-cuts-off-internet-access-indefinitely-to-resistance-stronghold-of-sagaing>; The Irrawaddy (2022). *Sagaing Region Internet Shut Down Amid Myanmar Junta Raids*. Retrieved March 25, 2022, from <https://www.irrawaddy.com/news/burma/sagaing-region-internet-shut-down-amid-myanmar-junta-raids.html>.

⁹ Access Now (2021). *Cutting internet access when people need it the most: stories from Uganda*. Retrieved March 25, 2022, from <https://www.accessnow.org/internet-shutdown-stories-from-uganda/>.

Internet shutdowns by region in 2021 ▾



- Africa: **19** shutdowns in **12** countries (2021) vs. **19** shutdowns in **nine** countries (2020)
- Asia Pacific: **129** shutdowns in **seven** countries (2021) vs. **114** shutdowns in **five** countries (2020)
- Eastern Europe and Central Asia: **seven** shutdowns in **five** countries (2021) vs. **four** shutdowns in **three** countries (2020)
- Latin America and the Caribbean (LatAm and the Caribbean): **four** shutdowns in **one** country (2021) vs. **four** shutdowns in **three** countries (2020)
- Middle East and North Africa (MENA): **23** shutdowns in **nine** countries (2021) vs. **18** shutdowns in **nine** countries (2020)

1.1 Regional and country-specific snapshots of shutdowns

Africa

In 2021, **12** countries cut internet access **19** times in Africa, **three** more countries than the previous year. What is behind the spread of network disruptions in Africa? The Republic of the Congo, Chad, Niger, Uganda, and Zambia held elections in 2021, and there were protests and significant civil unrest in Eswatini, Ethiopia, Gabon, Senegal, and South Sudan.¹⁰ Elections and protests are common spurs for shutdowns in Africa and around the world, as authorities use them to assert or

maintain control of populations, to the detriment of citizens' fundamental rights and democratic freedoms. Despotism and authoritarian regimes also learn from one another, replicating rights-harming tactics for control.

One instance of a shutdown in Africa that departs from this pattern of manipulation for political control is a shutdown Nigeria ordered to deal with what is known locally as banditry, referring to gangs of criminals that carry out kidnapping, cattle rustling, and other crimes. According to a news report, officials temporarily cut off mobile telecommunications services in parts of the states of Zamfara and Kaduna because the gangs were using them to warn one another about the location of government troops.¹¹

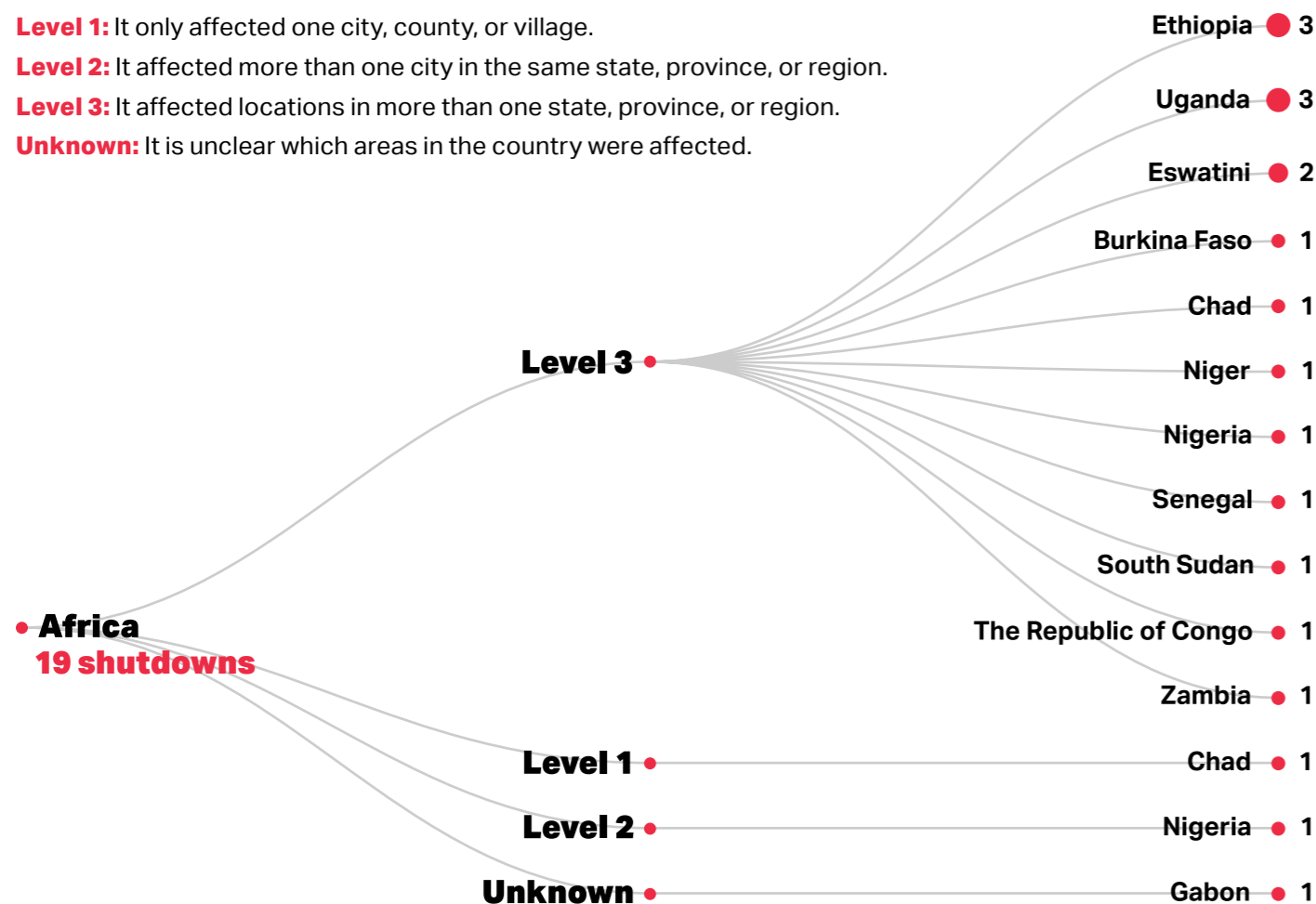
Geo-scopes of internet shutdowns in Africa in 2021 ▾

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.

Unknown: It is unclear which areas in the country were affected.



¹⁰ Access Now (2021). #KeepItOn: 2021 Elections Watch. Retrieved January 12, 2022, from <https://www.accessnow.org/keepiton-2021-elections-watch/>.

¹¹ Fin24 (2021). Nigeria cuts cellphone network in tense northern state. Retrieved February 28, 2022, from <https://www.news24.com/fin24/international/nigeria-cuts-cellphone-network-in-tense-northern-state-20210905>.

Asia Pacific

In 2021, we recorded a total of **129** internet shutdowns in **seven** countries in Asia Pacific, compared to **114** shutdowns across **five** countries in 2020.

India was responsible for at least **106** incidents, making it the country imposing the highest number of shutdowns globally for the fourth consecutive year. Of these, **85** were in Jammu and Kashmir, a region where authorities continue to impose intentional internet disruptions that last for long periods, disrupting and endangering people's lives for months on end.

Unfortunately, it's possible that we are also missing some network disruptions that took place due to the lack of government transparency. The Indian government has been reluctant to create

and maintain a centralized repository of data on the shutdowns authorities order across the country.¹² This represents a failure to meet the requirements of the 2017 Suspension Rules and the Supreme Court order backing them.¹³ The lack of a centralized repository continues to make it difficult for civil society and other actors to effectively monitor and document shutdowns, and some are likely to go unreported.

The shutdowns Indian authorities imposed in 2021 drew international attention and condemnation. The government cut internet access in a clear attempt to suppress the Farmers' Protests, a movement opposing the Parliament of India's passage of three farm acts the previous year.¹⁴ Authorities plainly sought to prevent protesters from communicating with one another, and to obstruct press reporting. Despite the disruptions, the government was not able to conceal its violent

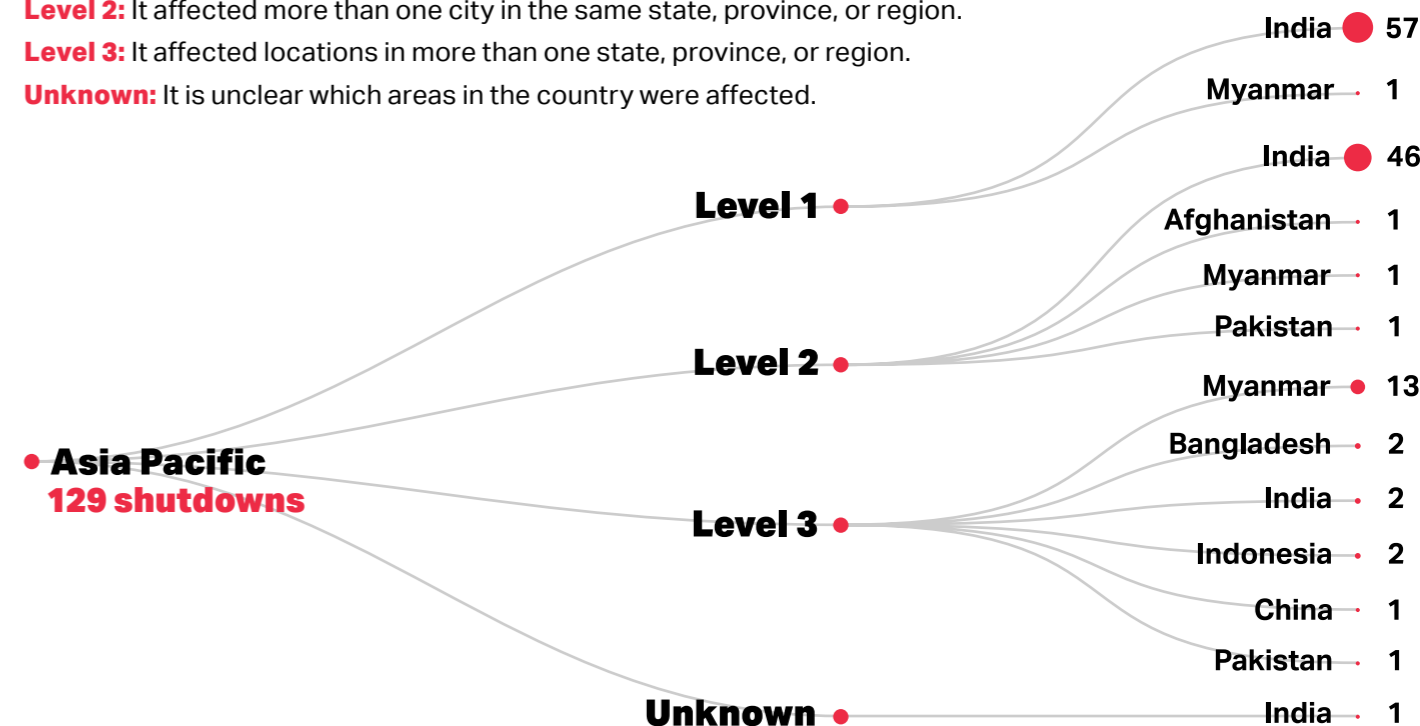
Geo-scopes of internet shutdowns in Asia Pacific in 2021 ▾

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.

Unknown: It is unclear which areas in the country were affected.



¹² Government of India (2022). Internet shutdowns. Retrieved March 18, 2022, from <http://164.100.24.220/loksabhaquestions/annex/178/AU1305.pdf>.

¹³ Home: Department of Telecommunications: Ministry of Communication: Government of India (2017). Retrieved February 27, 2022, from <https://dot.gov.in/circulars/temporary-suspension-telecom-services-public-emergency-or-public-safety-rules-2017>.

¹⁴ The New York Times (2021). What Prompted the Farm Protests in India? Retrieved on March 13, 2022, from <https://www.nytimes.com/2021/01/27/world/asia/india-farmer-protest.html>.

crackdown on dissent and lawful protest,¹⁵ and world governments¹⁶ and international celebrities Greta Thunberg and Rihanna spoke out against the violence and deliberate disruptions.¹⁷

The persistent use of internet shutdowns in India despite global outcry and regulations requiring more transparency means that there has not been much of an improvement of the situation on the ground. The government continued to impose shutdowns during protests, and continued to pursue prolonged shutdowns that leave people cut off from the internet just when they have the greatest need to connect.¹⁸

In December 2021, India's Parliamentary Standing Committee on Communications and Information Technology released a report¹⁹ highlighting the misuse of internet shutdowns, and the impact on rights and freedoms, and making recommendations to the government to reform the framework governing suspension of telecom/internet services. While the report makes several positive recommendations aimed at enhancing transparency and accountability, and strengthening safeguards, it does not altogether condemn the use of internet shutdowns, and fails to state one of the most important facts of internet shutdowns: they can never be justified.

¹⁵ Internet Freedom Foundation (2021). *Joint statement against internet shutdowns to suppress farmers' protests #KeptOn*. Retrieved March 18, 2022, from <https://internetfreedom.in/joint-statement-internet-shutdown-farmers-protests/>.

¹⁶ The Wire (2021). *Farm Laws: US Says Access to Internet, Peaceful Protests Are 'Hallmarks of a Thriving Democracy'*. Retrieved March 22, 2022, from <https://thewire.in/diplomacy/farm-laws-us-says-access-to-internet-peaceful-protests-are-hallmarks-of-a-thriving-democracy>; Scroll.in (2021). *Farmer protest shows need for consultations on laws with those concerned, says UN human rights chief*. Retrieved March 25, 2022, from <https://scroll.in/latest/988064/farmer-protest-shows-need-for-consultations-on-laws-with-those-concerned-says-un-human-rights-chief>.

¹⁷ The Logical Indian (2021). *Farmers' Protest Gets Global Attention, Rihanna, Greta Thunberg Tweet In Support Of Farmers*. Retrieved February 18, 2022, from <https://thelogicalindian.com/trending/farmers-protest-rihanna-greta-thunberg-26604>.

¹⁸ International Journal of Asian Business and Information Management (IJABIM) (2021). *How Internet Shutdowns Affects the Entrepreneurs in Jammu and Kashmir*. Retrieved January 31, 2022, from <https://www.igi-global.com/article/how-internet-shutdowns-affects-the-entrepreneurs-in-jammu-and-kashmir/279813>.

¹⁹ Ministry of Communications (2021). *Standing Committee on Communications and Information Technology*. Retrieved April 20, 2022, from http://164.100.47.193/lssccommittee/Communications%20and%20Information%20Technology/17_Communications_and_Information_Technology_26.pdf.

²⁰ Access Now (2021). *Update: internet access, censorship, and the Myanmar coup*. Retrieved January 28, 2022, from <https://www.accessnow.org/update-internet-access-censorship-myanmar/>.

²¹ Daily Beast (2021). *This Is Why the Taliban Keeps F*cking Up the Internet*. Retrieved April 21, 2022, from <https://www.thedailybeast.com/this-is-why-the-taliban-keeps-fcking-up-afghanistans-internet>.

²² Freedom House (2018). *The Rise of Digital Authoritarianism*. Retrieved April 5, 2022, from <https://freedomhouse.org/report/freedom-net/2018/rise-digital-authoritarianism>.

²³ Al Jazeera (2022). *Russian forces launch full-scale invasion of Ukraine*. Retrieved March 21, 2022, from <https://www.aljazeera.com/news/2022/2/24/putin-orders-military-operations-in-eastern-ukraine-as-un-meets>.

It was in 2021 that the military in Myanmar carried out its coup d'état,²⁰ and the country follows India on the shame list, imposing the second-highest number of disruptions globally, with at least 15 internet shutdowns. This figure is likely lower than the true number of shutdowns, given the military's seizure of control and ongoing conflict. In Afghanistan, also an active conflict zone in 2021, the Taliban shut down internet access along with phone connections and other forms of communication in the province of Panjshir, in order to curtail resistance from the area.²¹

Eastern Europe and Central Asia

Internet shutdowns can be a warning sign of authoritarianism, and an indication that a democracy is under attack.²² What we saw in 2021 in Eastern Europe and Central Asia appears in retrospect to signal increasingly aggressive attempts by state authorities to assert control over populations, with broad censorship and network disruptions laying the groundwork for future aggression.²³

On February 28, 2021, authorities in Kazakhstan imposed internet shutdowns in the cities of Almaty and Nur-Sultan to quell anti-government protests

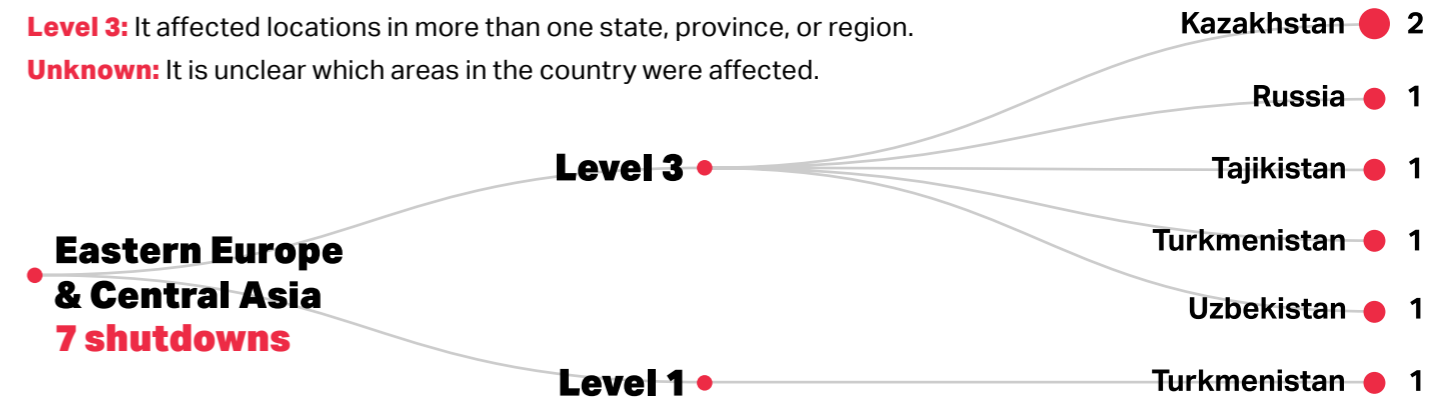
Geo-scopes of internet shutdowns in Eastern Europe & Central Asia in 2021 ▾

Level 1: It only affected one city, county, or village.

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Level 3: It affected locations in more than one state, province, or region.

Unknown: It is unclear which areas in the country were affected.



calling for the release of political prisoners.²⁴ There were reports of violence, and authorities detained at least 50 protesters.²⁵ In keeping with its efforts to control the country's digital space, the government also introduced legislation to force foreign tech companies to set up local offices, to be headed by a Kazakh national, and to delete any information authorities flag within 24 hours.²⁶

In Turkmenistan, authorities have denied people access to social media platforms, foreign media outlets, and websites that host information critical of the current regime for many years. In 2021, we saw authorities escalate online censorship when they blocked sites that offer circumvention tools like virtual private networks (VPNs). People signing up for a home internet connection were even forced to swear on the Quran not to use

circumvention tools,²⁷ while students were asked to make declarations pledging to use the internet only for "educational purposes."²⁸ Notably, as of April 2022, authorities in Turkmenistan are still denying people access to essential services online.²⁹

Unfortunately, authorities in Tajikistan followed a similar pattern of disproportionate online censorship in 2021. In the Tajik town of Khorog, the government blocked social media platforms in response to protests, forcing people to travel hundreds of kilometers to neighboring cities to get connected.³⁰

In Uzbekistan, meanwhile, the national communications regulator restricted access to most social media sites and instant messaging applications on November 3, 2021, citing non-

²⁴ Access Now (2021). *Civil society reports internet shutdowns in two cities in Kazakhstan during February 28 protests*. Retrieved March 31, 2022, from <https://www.accessnow.org/internet-shutdowns-kazakhstan-feb-28-protests/>.

²⁵ Rus.azattyq.org (2021). *February 28 in Kazakhstan: "kettling", "titushki" and preventive detentions*. Retrieved February 18, 2022, from <https://rus.azattyq.org/a/31126079.html>.

²⁶ Access Now (2021). *Kazakhstan's plan of tech platform "localization" opens door to censorship*. Retrieved March 31, 2022, from <https://www.accessnow.org/kazakhstans-tech-platform-localization-censorship/>.

²⁷ The Times (2021). *Swear on the Quran to get connected*. Retrieved February 18, 2022, from <https://www.thetimes.co.uk/article/swear-on-the-quran-to-get-connected-2ksvldnv0>.

²⁸ RadioFreeEurope/RadioLiberty (2021). *Turkmenistan Increases Crackdown On Internet Access As Living Standards Continue Downward Spiral*. Retrieved February 18, 2022, from <https://www.rferl.org/a/turkmenistan-increases-crackdown-on-internet-access-as-living-standards-continue-downward-spiral/30846977.html>.

²⁹ ACCA (2022). *Turkmenistan: The authorities almost completely blocked the Internet in the country*. Retrieved April 19, 2022, from <https://acca.media/en/turkmenistan-the-authorities-almost-completely-blocked-the-internet-in-the-country/>.

³⁰ Plus (2021). *Drive 600 km in search of the Internet. Why is communication not available in GBAO and how do people suffer because of this?* Retrieved March 25, 2022, from <https://www.asiaplustj.info/ru/news/tajikistan/security/20211207/proehat-600-km-v-poiskah-interneta-pochemu-ne-dayut-svyaz-v-gbao-i-kak-iz-za-etogo-stradayut-lyudi>.

compliance with data protection laws.³¹ A report from the Open Observatory of Network Interference (OONI) shows that access to Facebook, Signal, WhatsApp, Facebook Messenger, and Telegram has been restored, but as of March 2022 people still could not reach Twitter, V Kontakte, TikTok, or Skype without a VPN.³²

Finally, there is Russia, the only country to block access to communications platforms in Eastern Europe in 2021. The government's actions show a clear escalation of censorship tactics, from censorship of particular websites or organizations, to takedown orders for major online communications platforms, to the throttling (slowing) of these platforms, to full platform blocks.

In March 2021, Roskomnadzor, the Russian agency responsible for ensuring compliance with media and telecommunications laws, responded to Twitter's refusal to take down content it flagged by ordering telcos to throttle access to the widely used platform. The decision had unintended consequences,³³ slowing down access to over 40,000 domains containing t.co (Twitter's shortened domain name). That included the websites of key government institutions in Russia, as well as major platforms Google and Yandex.³⁴

Throttling is among many tactics the Russian government has pursued to force foreign tech companies to do its bidding. After Google and Meta refused to take down content the state deemed unlawful, Russian authorities filed lawsuits against them.³⁵ They also threatened staff at Google and Apple, succeeding in convincing these companies to take down opposition leader Alexey Navalny's Smart Voting app from their stores and platforms on election day.³⁶ Authorities also blocked VPNs to stop the Russian people from circumventing this censorship.³⁷

It appears the government's successful efforts to control Russia's digital spaces only emboldened authorities, encouraging them to go even further. After Russia invaded Ukraine in February 2022, we have seen an even more extensive crackdown on free expression as the government seeks to suppress dissent and gain control of the narrative about the conflict. Authorities have passed new laws restricting speech about the war,³⁸ and banned digital and media platforms, as well as circumvention tools such as VPNs. After Facebook decided to temporarily allow people in Ukraine to call for violence against the Russian heads of state and military invading their country, a Russian court declared parent company Meta "extremist," effectively banning use of the Facebook and Instagram platforms in Russia.³⁹

³¹ RadioFreeEurope/RadioLiberty (2021). *Uzbekistan Restricts Access To Most Social Media, Instant Messaging Sites*. Retrieved from March 25, 2022, from <https://www.rferl.org/a/uzbekistan-social-media-restrictions/31544451.html>.

³² OONI (2021). *Open Observation Network Interference*. Retrieved March 25, 2022, from <https://ooni.org/reports/>; Eurasianet (2022). *Uzbekistan unblocks, re-blocks popular social media amid Tik Tok talks*. Retrieved March 25, 2022, from <https://eurasianet.org/uzbekistan-unblocks-re-blocks-popular-social-media-amid-tiktok-talks>.

³³ Access Now (2021). *Russia throttled Twitter to censor content — Here's what happens next*. Retrieved February 18, 2022, from <https://www.accessnow.org/russia-throttled-twitter/>.

³⁴ WIRED (2021). *Russia's Failure to Throttle Twitter Isn't a Sign of Weakness*. Retrieved March 21, 2022, from <https://www.wired.com/story/opinion-russias-failure-to-throttle-twitter-isnt-a-sign-of-weakness/>.

³⁵ The Moscow Times (2021). *Russia Fines Google for Failing To Remove Banned Content*. Retrieved March 21, 2022, from <https://www.themoscowtimes.com/2020/12/17/russia-fines-google-for-failing-to-remove-banned-content-a72400>.

³⁶ The New York Times (2021). *Google and Apple, Under Pressure From Russia, Remove Voting App*. Retrieved March 22, 2022, from <https://www.nytimes.com/2021/09/17/world/europe/russia-navalny-app-election.html>.

³⁷ Roskomnadzor (2021). *Federal Service for Supervision of Communications, Information Technology and Mass Communications*. Retrieved March 22, 2022, from <https://rkn.gov.ru/news/rsoc/news73836.htm>.

³⁸ POLITICO (2022). *Russia expands laws criminalizing 'fake news'*. Retrieved April 6, 2022, from <https://www.politico.eu/article/russia-expand-laws-criminalize-fake-news/>.

³⁹ Business Insider (2022). *A Russian court has declared Meta guilty of extremist activity but will still allow access to WhatsApp*. Retrieved March 31, 2022, from <https://africa.businessinsider.com/tech-insider/a-russian-court-has-declared-meta-guilty-of-extremist-activity-but-will-still-allow/gbzm3dv>; Access Now (@accessnow) Twitter post. 6:18 p.m. March 21, 2022. Retrieved from March 31, 2022 from <https://twitter.com/accessnow/status/1505972115509555207>.

It's notable that the Belarus government, which cut access to the internet⁴⁰ surrounding disputed elections in 2020 and is now helping Russia wage war in Ukraine,⁴¹ took steps in 2021 to institutionalize its power to hit the "kill switch" and block internet access at its discretion.⁴²

Latin America and the Caribbean

According to our documentation, Cuba was the only country in the region to cut internet access in 2021. Authorities responded to growing protests and demands for government reform by shutting down the internet and blocking platforms. In July, as Cubans flooded the streets to demand access to food, water, medicine, and COVID-19 vaccines, the government imposed a complete blanket shutdown. Even after restoring internet access, authorities blocked WhatsApp, Telegram, and Signal.⁴³ While VPNs were being used by citizens

to access blocked services, the state-owned telco ETECSA also blocked the words "VPN" and "libertad" ("freedom") from being sent across SMS.⁴⁴ VPN services have been working only intermittently in the island since October 2020.⁴⁵ In addition, the Cuban government has reportedly been revoking specific people's SIM cards.⁴⁶ This leaves those affected — mainly activists and journalists — completely disconnected, as as ETECSA is Cuba's only internet provider.

There may also have been shutdowns in Paraguay in 2021, although we do not have enough evidence to include the disruptions in our STOP database. According to research by technology and community organization TEDIC, these reported shutdowns may have been due to militarization of the area, and "in the days leading up to a Joint Task Force intervention, all users in one area [were] left without any service coverage."⁴⁷

Geo-scopes of internet shutdowns in Latin America & the Caribbean in 2021 ▾

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.

Unknown: It is unclear which areas in the country were affected.



⁴⁰ Access Now (2021). *Belarusian election tainted by internet shutdown and state-sponsored violence*. Retrieved February 18, 2022, from <https://www.accessnow.org/belarusian-election-tainted-by-internet-shutdown-and-state-sponsored-violence/>.

⁴¹ The Conversation (2022). *3 reasons Belarus is helping Russia wage war against Ukraine*. Retrieved March 14, 2022, from <https://theconversation.com/3-reasons-belarus-is-helping-russia-wage-war-against-ukraine-177984>.

⁴² Freedom House (2021). *Belarus: Freedom on the Net 2021 Country Report*. Retrieved February 18, 2022, from <https://freedomhouse.org/country/belarus/freedom-net/2021>.

⁴³ Access Now (2021). *"¡Patria y vida!": Cuba cuts internet access to gag protesters*. Retrieved February 22, 2022, from <https://www.accessnow.org/patria-y-vida-cuba/>.

⁴⁴ Yucabyte (2021). *"Libertad" y "VPN" bloqueadas para el servicio SMS en Cuba*. Retrieved April 2, 2022, from <https://www.yucabyte.org/2021/07/15/libertad-y-vpn-bloqueadas/>.

⁴⁵ ADNCuba (2020). *"La Isla queda a oscuras": cubanos denuncian bloqueo de servicios VPN*. Retrieved April 2, 2022, from <https://adncuba.com/noticias-de-cuba/actualidad/la-isla-queda-oscuras-cubanos-denuncian-bloqueo-de-servicios-vpn>.

⁴⁶ Radio y Televisión Martí (2021). *ETECSA blocks Internet access to Tania Bruguera, fails to prevent her participation in a UN event*. Retrieved February 22, 2022, from <https://www.radiotelevisionmarti.com/a/etecsa-bloquea-acceso-a-internet-a-tania-bruguera-no-logra-impedir-su-participaci%C3%B3n-en-evento-de-onu/289238.html>.

⁴⁷ TEDIC (2021). *Call for Inputs UN OHCHR report on shutdowns and connectivity initiatives*. Retrieved March 25, 2022, from https://www.tedic.org/wp-content/uploads/2022/03/TEDIC_ContributionOHCHR.pdf.

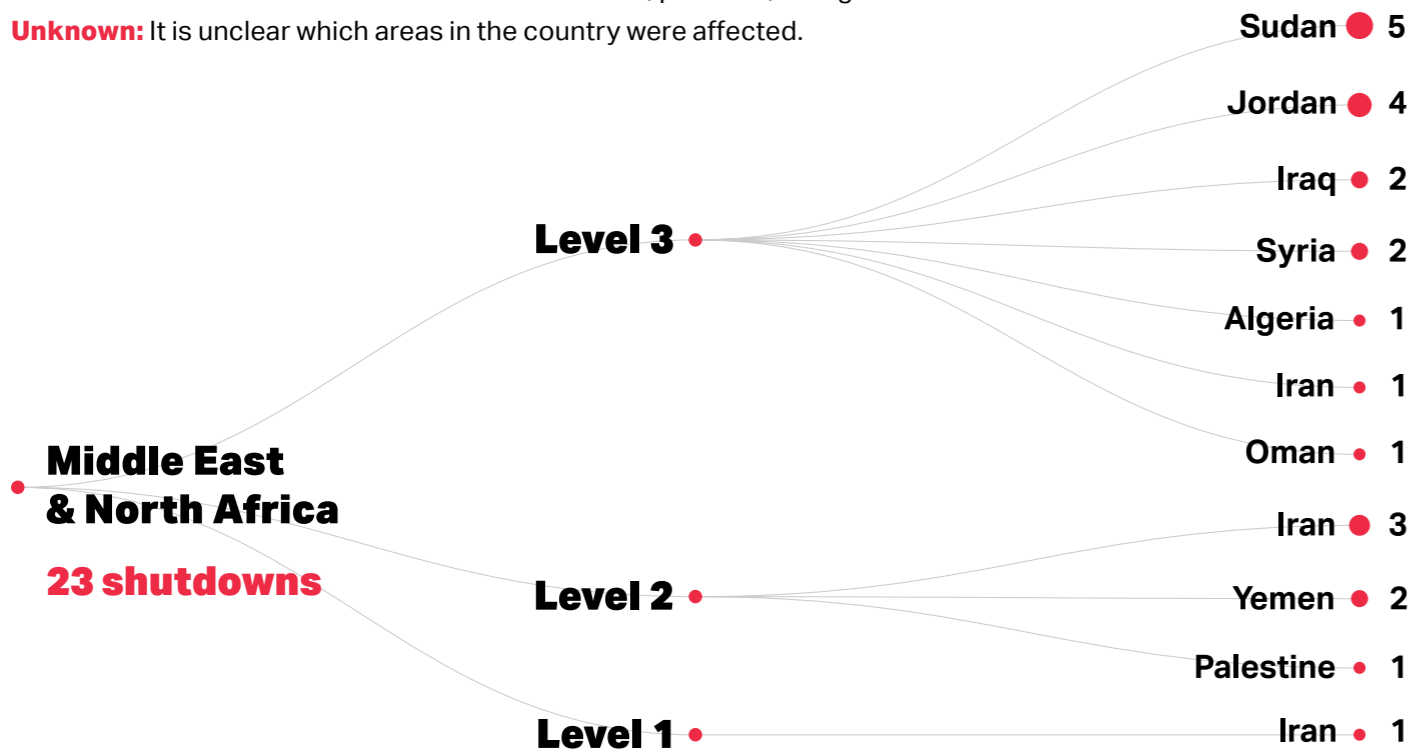
Middle East and North Africa

In 2021, we documented at least **23** shutdowns in **nine** countries in the Middle East and North Africa, **five** times more than 2020. Sudan and Iran each shut down the internet **five** times, the highest number of shutdowns in the region. The majority of disruptions in both countries were clearly aimed at silencing dissent.⁴⁸ Historically, authorities in both countries have imposed shutdowns to quell protests, and to shroud deadly crackdowns and other human rights abuses.⁴⁹ People in Palestine and Yemen were impacted by shutdowns resulting from

attacks on telecommunications infrastructure and disruptions coordinated with escalations in military activity, while the governments of Oman and Jordan took aim at emerging communications platforms that people were using to more freely express themselves. In some cases, authorities ordered deliberate network disruptions in an attempt to stop students from cheating on exams, a harmful and disproportionate practice that according to our records has only expanded across the Middle East and North Africa since 2016. Those maintaining this practice in 2021: Algeria, Iraq, Jordan, Sudan, and Syria.

Geo-scopes of internet shutdowns in Middle East & North Africa in 2021 ▾

- 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.
- Unknown:** It is unclear which areas in the country were affected.



⁴⁸ See, e.g., Access Now (2021). *Iran: Internet blackouts curb protests and conceal human rights violations in Sistan and Baluchistan*. Retrieved April 19, 2022, from <https://www.accessnow.org/iran-blackout-2021-internet-shutdowns-sistan-baluchistan/>.

⁴⁹ Access Now (2020). *#IAmTheSudanRevolution: There's a direct link between internet shutdowns and human rights violations in Sudan*. Retrieved April 17, 2022, from <https://www.accessnow.org/iamthesudanrevolution-theres-a-direct-link-between-internet-shutdowns-and-human-rights-violations-in-sudan/>; Access Now (2020). *Iran has built an internet for oppression. Here's why you should care*. Retrieved April 19, 2022, from <https://www.accessnow.org/iran-internet-shutdowns/>.

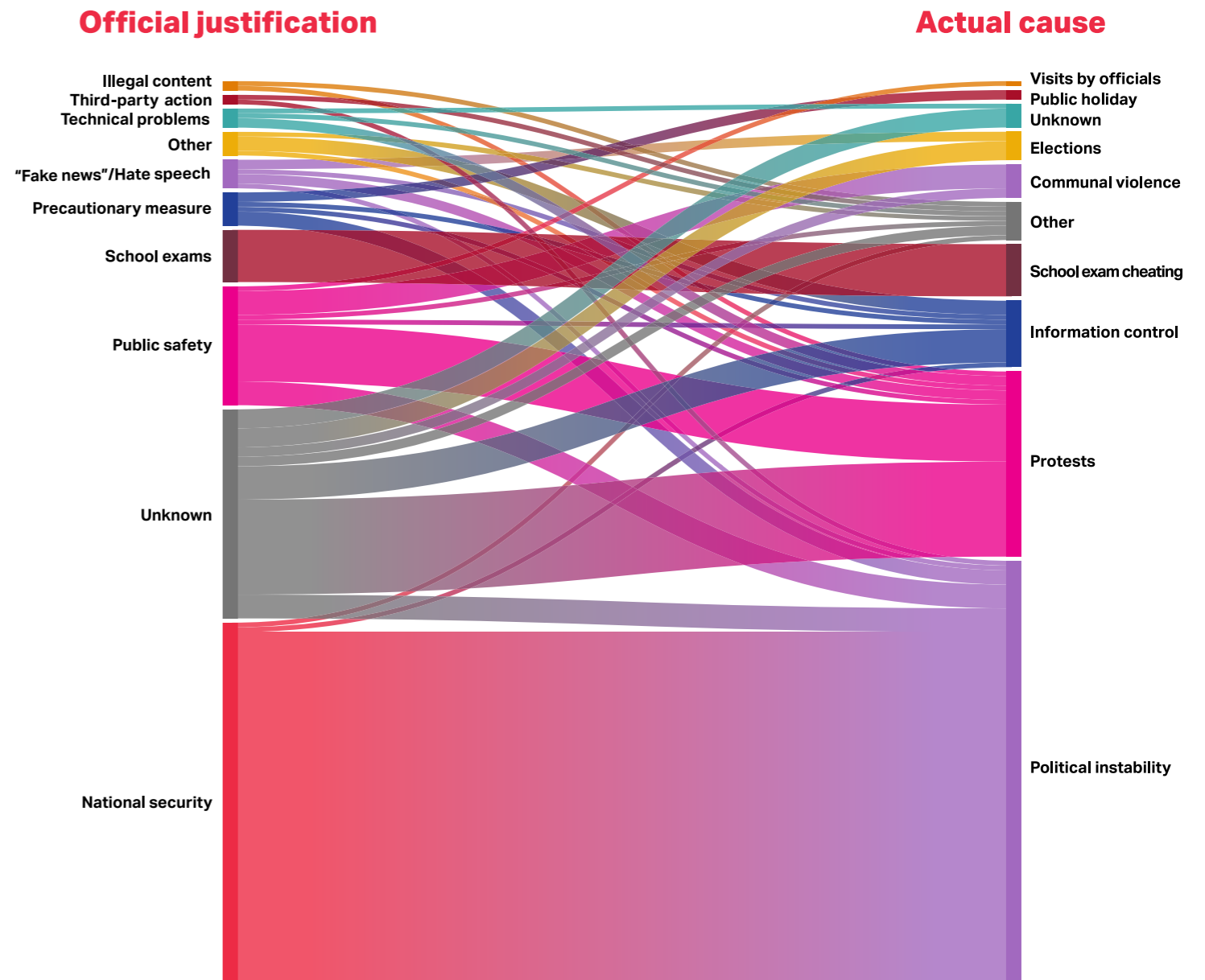
II. Triggers of internet shutdowns in 2021

As five years of data in our STOP database show, governments around the world turn to internet shutdowns in attempts to assert control over populations. We often see network disruptions during protests, social or political unrest, elections, and armed conflicts. The data from 2021 tell the

same story. Authorities cut or slowed internet access, blocked communications platforms, or otherwise interfered with online communications during periods of high tension, often as a means of asserting or maintaining power. That included imposing internet blackouts during military coups.

Official justifications vs. actual causes of internet shutdowns worldwide in 2021 ▾

The largest portion of claims of "national security" during observed "political instability" came from India's shutdowns.



On the first day of the year, Indian authorities cut internet access in the district of Jammu and Kashmir, the place that would see more shutdowns than anywhere else on Earth in 2021. Later in the month, India would impose additional shutdowns to quell protests surrounding India's Republic Day.⁵⁰ But on January 1, there were already ongoing shutdowns taking place, not just in India but also in Ethiopia and Myanmar — each of which would see more shutdowns in the following months, in a context of fear, violence, and conflict.

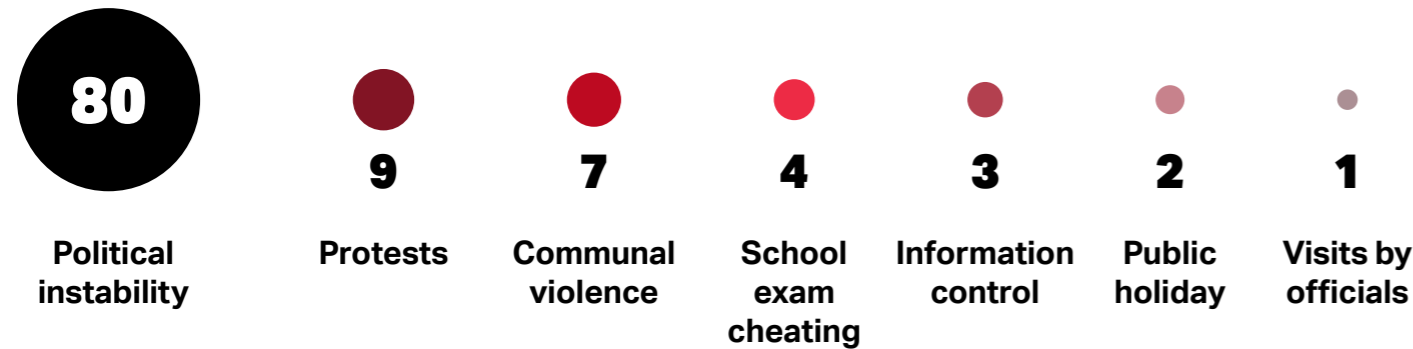
When government authorities plunge citizens into the dark during a crisis, lives are at stake. There is a direct link between internet shutdowns and

human rights violations across the globe.⁵¹ Internet shutdowns nurture a culture of impunity for crimes committed against people and keep the rest of the world in the dark with regard to the scale and intensity of the situation. They make it difficult for journalists and human rights defenders to gain access to the affected areas in order to report on happenings and hold governments accountable for atrocities.⁵²

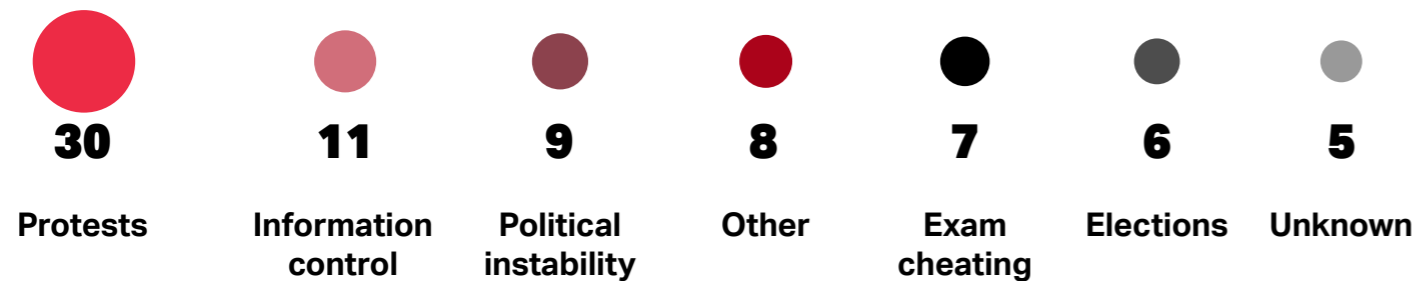
As we highlight below, shutdowns are always dangerous and counterproductive, but they are especially so during protests, political turmoil, communal violence, and war. In addition, they can facilitate further aggression.

The 2021 ranking of the actual causes of internet shutdowns ▾

India



The rest of the world



⁵⁰ Access Now (2021). *Government orders internet shutdowns on India's Republic Day*. Retrieved March 23, 2022, from <https://www.accessnow.org/internet-shutdown-in-delhi-on-indias-republic-day/>.

⁵¹ OHCHR (2021). *UN Human Rights Office Press briefing: Online*. Retrieved March 24, 2022, from https://www.ohchr.org/sites/default/files/Documents/Press/Press%20briefing_140721.pdf.

⁵² Committee to Protect Journalists (2021). *Journalists struggle to work amid extended internet shutdowns in Myanmar, Ethiopia, Kashmir*. Retrieved March 24, 2022, from <https://cpj.org/2021/05/journalists-shutdowns-myanmar-ethiopia-kashmir>.

2.1 Internet shutdowns during protests, political turmoil, and coups

Authorities in Bangladesh, Burkina Faso, Chad, Cuba, Eswatini, India, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Myanmar, Pakistan, Senegal, South Sudan, Sudan, Turkmenistan, and Uganda disrupted or entirely cut connectivity during protests in 2021. As we have noted in previous reports,⁵³ governments use network disruptions as a tool not only to thwart and disarticulate the protest itself, but also to hide the human rights violations that are commonly linked to security forces' crackdown on protesters, particularly in countries that have authoritarian regimes or weak democracies.

The Myanmar coup

On February 1, 2021, as the military seized control of the government, there were multiple reports of internet shutdowns across Myanmar.⁵⁴ The shutdowns affected both internet and voice connectivity across several states, and evolved into a curfew-style disruption, with authorities cutting internet access on a daily basis between February 15 and

⁵³ Access Now (2019). *Targeted, cut off, and left in the dark: The #KeepItOn report on internet shutdowns in 2019*. Retrieved March 24, 2022, from <https://www.accessnow.org/cms/assets/uploads/2020/02/KeepItOn-2019-report-1.pdf>.

⁵⁴ BBC News (2021). *Myanmar coup: Aung San Suu Kyi detained as military seizes control*. Retrieved February 23, 2022, from <https://www.bbc.com/news/world-asia-55882489>.

⁵⁵ KrASIA (2021). *Myanmar's mobile internet unblocks online banking, possible national intranet prompts concerns*. Retrieved February 18, 2022, from <https://kr-asia.com/myanmars-mobile-internet-unblocks-online-banking-possible-national-intranet-prompts-concerns>.

⁵⁶ Al Jazeera (2021). *Myanmar police used machine guns against protesters, says Amnesty*. Retrieved March 24, 2022, from <https://www.aljazeera.com/news/2021/2/11/myanmar-police-deployed-machine-guns-against-protesters>.

⁵⁷ Nikkei Asia (2021). *Myanmar coup, from Feb. 20 to March 18: UN team urges whistleblowers to report illegal orders*. Retrieved March 22, 2022, from <https://asia.nikkei.com/Spotlight/Myanmar-Crisis/Myanmar-coup-from-Feb.-20-to-March-18-UN-team-urges-whistleblowers-to-report-illegal-orders>.

⁵⁸ Access Now (2021). *Authorities in Sudan must stop imposing telecommunication blackouts to control information flow during military coup*. Retrieved March 24, 2022, from <https://www.accessnow.org/sudan-internet-shutdown-military-coup/>.

April 28 when internet access was partially restored.⁵⁵ Under the cover of the shutdowns, the military escalated violence against people protesting the coup — including using live ammunition, rubber bullets, and tear gas against the protesters.⁵⁶ On March 3, during a nationwide blackout, at least 38 protesters were killed in what the U.N. envoy to Myanmar denounced as **"the bloodiest day since the coup."**⁵⁷

The Sudan coup

Sudanese authorities shut down the internet on five different occasions in 2021. On October 25, the military imposed internet shutdowns as they seized power from a transitional government in a military coup.⁵⁸ They arbitrarily detained several government officials, including the prime minister. When the people of Sudan took to the streets to

denounce the military's actions, they were met with additional network disruptions and violence by military forces, which resulted in the killing of seven people and injury of about 140 others.⁵⁹ Authorities also cut internet access during school examinations.

Like Myanmar, Sudan has a dark history of perpetrating shutdowns that enable human rights violations. After the ousting of Omar Al-Bashir's administration in April 2019, the military junta committed atrocities against the Sudanese people, including the killing of 100 civilians and injury of many others,⁶⁰ and the rape of 70 women,⁶¹ in the shadow of a complete internet shutdown in June 2019.

Iran's deadly crackdown on protests

In Iran, authorities responded to protests by cutting mobile internet access from February 24-28 in Sistan and Baluchistan, where over 95.7% of people rely on mobile networks to stay connected.⁶² They reportedly shut down internet access to hide gross human rights violations and possible international crimes, such as extrajudicial killings. According to media reports, the Islamic Revolutionary Guard Corps, a branch of Iran's armed forces, opened fire at unarmed civilian fuel vendors, killing 10 individuals, including a child.⁶³

These are not new tactics for Iranian authorities. In 2019, Amnesty International verified the deaths of

304 people killed by the Iranian security services during a week-long internet shutdown aimed at discouraging protests. More than 220 of these deaths took place within 48 hours of the internet shutting down.⁶⁴

Other countries on the watch

Several other countries that responded to protests by imposing internet shutdowns in 2021 include:

Jordan: In March 2021, protests erupted after seven COVID-19 patients died due to lack of oxygen supply at the Al-Salt hospital. So authorities in Jordan throttled Facebook's live streaming services to stop people from sharing videos, including those documenting police cracking down on protesters⁶⁵ — a censorship tactic the government has periodically employed since 2018.

Pakistan: On April 16, after weeks of violent anti-France protests over cartoons published by the French satirical magazine *Charlie Hebdo*, the Interior Ministry ordered the Pakistan Telecommunication Authority to block Twitter, Facebook, WhatsApp, YouTube, and Telegram.⁶⁶ In order for the government to further tighten its grip on the country's digital space, Pakistan's Information Technology and Telecommunication Ministry introduced a set of draconian regulations⁶⁷ in October 2021. These regulations enable authorities to control and censor content

⁵⁹ Reuters (2021). *Seven killed, 140 hurt in protests against Sudan military coup*. Retrieved March 24, 2022, from <https://www.reuters.com/world/africa/military-forces-arrest-senior-civilian-figures-sudan-al-hadath-tv-2021-10-25/>.

⁶⁰ The New York Times (2019). *100 Killed in Sudan and Dozens of Bodies Are Pulled From Nile, Opposition Says*. Retrieved March 23, 2022, from <https://www.nytimes.com/2019/06/04/world/africa/sudan-war-facts-history.html>.

⁶¹ The Guardian (2019). *Sudanese doctors say dozens of people raped during sit-in attack*. Retrieved February 14, 2020, from <https://www.theguardian.com/world/2019/jun/11/sudan-troops-protesters-attack-sit-in-rape-khartoum-doctors-report>.

⁶² Communication Regulatory Authority (2021). *ICT Development in Sistan and Baluchistan Province - Volume: Azar 99*. Retrieved March 25, 2022, from <https://mis.ito.gov.ir/ictindex/viewprovinceindex/15>.

⁶³ See *supra* note 48.

⁶⁴ Amnesty International (2021). *Iran: A Web of Impunity: The Killings Iran's Internet Shutdown Hid*. Retrieved February 18, 2022, <https://www.amnesty.org/en/documents/mde13/3308/2020/en/>.

⁶⁵ Access Now (2021). *Jordan's internet throttling to censor protesters must end*. Retrieved March 24, 2022, from <https://www.accessnow.org/jordan-protest-throttling/>.

⁶⁶ France 24 (2021). *Pakistan orders temporary social media shutdown after violent protests*. Retrieved March 24, 2022, from <https://www.france24.com/en/live-news/20210416-pakistan-orders-temporary-social-media-shutdown-after-violent-protests>.

⁶⁷ Scribd.com (2021). *Revised Rules, 2021 (12.10.2021 after Approval of the Cabinet)*. Retrieved March 23, 2022, from <https://www.scribd.com/document/532380328/Revised-Rules-2021-12-10-2021after-Approval-of-the-Cabinet>.

published on social media platforms as they deem fit, a dangerous precedent restricting people's enjoyment of fundamental rights.⁶⁸

Eswatini: Authorities responded to pro-democracy protests by cutting internet access for the first time in 2021, on June 29 and October 15. They cited the need to control "unrest and anarchy."⁶⁹

Cuba: As we note above, Cuban authorities responded to protests and widespread calls for government reform in July 2021 by blocking internet access and communications platforms.⁷⁰ This included rendering mobile networks nearly unworkable.

Burkina Faso: On November 20, 2021, authorities in Burkina Faso shut down mobile internet for at least nine days in response to protests, citing vague "public safety" and "national defense" reasons.⁷¹ This was the first time it had cut internet access, according to our STOP database, but by January 23, 2022, the Kaboré government had shut down the internet on three separate occasions.

2.2 Internet shutdowns during elections

Internet shutdowns during an election is a disaster for democracy. Yet over the past five years, government authorities have continued to impose them, before, during, or immediately after an election. In 2021, the #KeepItOn coalition documented **seven** election-related internet shutdowns in **six** countries: Chad, the Republic of the Congo, Iran, Niger, Uganda, and Zambia.⁷² This is lower than our 2020 record with **10** election-

⁶⁸ RSF (2021). *Another attempt by Pakistan's government to censor social media*. Retrieved March 23, 2022, from <https://rsf.org/en/news/another-attempt-pakistans-government-censor-social-media>.

⁶⁹ Access Now (2021). *#KeepItOn: Eswatini authorities shut down internet to quell protests, ask people to email grievances*. Retrieved March 21, 2022, from <https://www.accessnow.org/keepiton-eswatini-protests/>.

⁷⁰ See *supra* note 43.

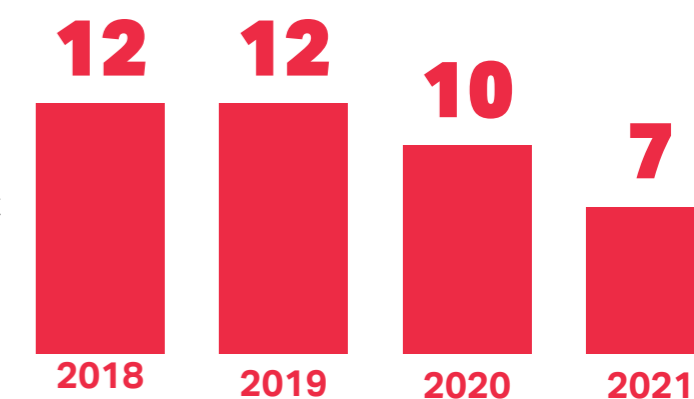
⁷¹ Access Now (@accessnow). Twitter post. 12:38 pm. November 23, 2021. Retrieved March 25, 2022, from <https://twitter.com/accessnow/status/1463124812084260868>.

⁷² See *supra* note 10.

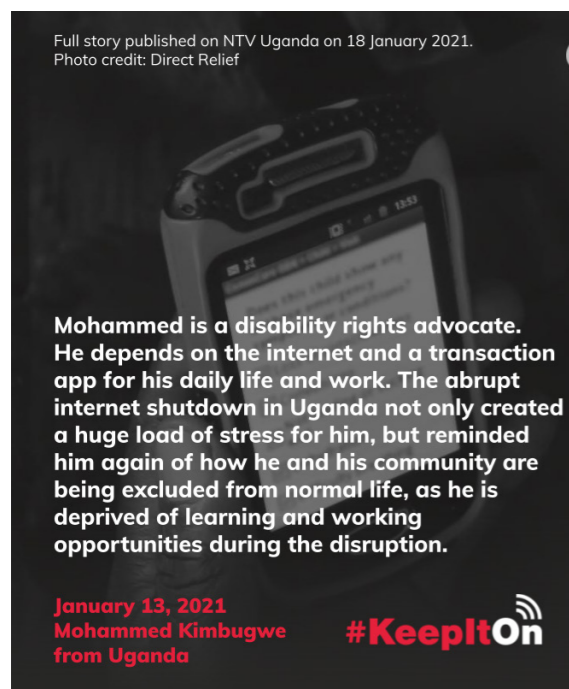
⁷³ Quartz (2021). *Uganda has shut down all social media two days ahead of a tense election*. Retrieved March 21, 2022, from <https://qz.com/africa/1956188/uganda-shuts-social-media-ahead-of-election-army-out-in-streets/>; Access Now (2021). *"No matter what they do, the world is watching": Some Ugandans are back online after internet shutdown during presidential election*. Retrieved March 16, 2022, from <https://www.accessnow.org/the-world-is-watching-uganda-elections/>.

related shutdowns in **seven** countries, our 2019 record with **12** shutdowns in **seven** countries, and our 2018 record with **12** shutdowns in **seven** countries. Four of these shutdowns took place in African countries, where election shutdowns remain common despite increasing resistance and legal pushback. Following are details on the disruptions, in chronological order.

Number of election-related internet shutdowns ▼



Uganda, a repeat perpetrator of internet shutdowns surrounding elections, blocked access to digital communications platforms and tools and then shut down the internet entirely prior to its January 2021 elections. Authorities began by throttling and blocking applications including Facebook, Twitter, WhatsApp, and Instagram, as well as the iOS App Store and Google Play Store. They also blocked access to VPNs. The Uganda Communications Commission then ordered internet service providers to cut access across the entire country.⁷³ The shutdown kept Ugandans in the dark for five long days, making it extremely difficult for citizens to go about their daily lives, get information about the election results, or participate freely in



“Uganda's approximately 12.4% persons living with disabilities are already struggling with the prohibitively high prices of digital devices and assistive technology, and internet shutdowns are an insult to that already painful injury. With internet shutdowns, PWDs are locked out of the digital space as much as they are locked out of the built environment. Just when we thought the internet was opening up opportunities that we've for so long been denied in the built environment, internet shutdowns remind us that we are far from being fully included!”

democratic discourse.⁷⁴ Since then, the Ugandan authorities have refused to unblock Facebook⁷⁵ in evident retaliation for the company's removal of accounts belonging to government officials accused of seeking to manipulate public debate ahead of the January 2021 elections. The disruption was even more extensive and comprehensive than previous shutdowns in 2016, when Ugandan authorities blocked mobile money and social media platforms on two occasions — during the election period⁷⁶ and the swearing-in ceremony of President Yoweri Museveni,⁷⁷ who has clung to power since 1986.

In **Niger**, the government responded to protests that erupted in the aftermath of the February 21 election by shutting down mobile internet

⁷⁴ See *supra* note 9.

⁷⁵ Paradigm Initiative (2021). *Continued Facebook Shut-down Inconveniencing Ugandans*. Retrieved March 25, 2022, from <https://paradigmhq.org/continued-facebook-shut-down-inconveniencing-ugandans/>.

⁷⁶ Committee to Protect Journalists (2016). *Uganda blocks social media and mobile phone services during voting*. Retrieved April 7, 2022, from <https://cpj.org/2016/02/uganda-blocks-social-media-and-mobile-phone-servic/>.

⁷⁷ Global Voices Advox (2016). *Social media blocked in Uganda ahead of President Museveni's inauguration*. Retrieved April 7, 2022, from <https://advox.globalvoices.org/2016/05/11/social-media-blocked-in-uganda-ahead-of-president-museveni-inauguration/>.

⁷⁸ Business Insider (2021). *#WhatsHappeningInNiger: The internet shutdown in Niamey threatens Niger's democracy and its people's right to free speech*. Retrieved March 24, 2022, from <https://africa.businessinsider.com/local/leaders/whathappeninginniger-the-internet-shutdown-in-niamey-threatens-nigers-democracy-and/p714nhk>.

⁷⁹ AfricaNews (2021). *Congo Election: Low voter turn out, internet shutdown, mark polls*. Retrieved March 23, 2022, from <https://www.africanews.com/2021/03/21/congo-election-low-voter-turn-out-internet-shutdown-mark-polls/>.

⁸⁰ Al Jazeera (2016). *Congo holds presidential elections under media blackout*. Retrieved March 23, 2022, from <https://www.aljazeera.com/news/2016/3/20/congo-in-media-blackout-for-presidential-elections>.

⁸¹ Filterwatch (2021). *Internet Shutdown Trends in Iran: November 2019 to July 2021*. Retrieved April 6, 2022, from <https://filter.watch/en/2021/09/03/internet-shutdown-trends-in-iran-from-november-2019-to-july-2021/>.

access all across the nation, starting on February 24.⁷⁸ Authorities did not restore full access for 10 days, and government officials provided no explanation for the egregious disruption.

The Republic of the Congo followed suit on March 21, as the government implemented a complete internet blackout a few

hours before voting commenced. The shutdown cut broadband and mobile internet connections, as well as blocking SMS messaging, and lasted until March 23.⁷⁹ Old habits die hard. In 2016, Interior Minister Raymond Mboulou had ordered telecommunication companies to shut off telephone, internet, and SMS services for 48 hours during presidential elections for “reasons of security and national safety.”⁸⁰

On June 20, authorities in **Iran** responded to clashes between two local tribes following local city council elections by cutting off mobile connections for the entire day in Yasuj, the provincial capital of Kohgiluyeh and Boyer-Ahmad Province.⁸¹ Fortunately, there were no shutdowns

during the general elections, which took place a few days earlier, on June 18.

Access Now, our regional partners, and other members of the international #KeepItOn coalition braced for a shutdown in **Zambia** during the August 12 elections, calling on the government to maintain an open and accessible internet.⁸² Despite Zambian authorities issuing a public statement vehemently denying⁸³ rumors it was planning to hit the kill switch on election day, it did exactly that.

Authorities blocked access to social media platforms including WhatsApp, Facebook, Twitter, and Instagram.⁸⁴ Chapter One Foundation (Ltd) swiftly filed a lawsuit challenging the disruption,⁸⁵ and two days later, the High Court of Zambia ordered the government to restore internet access immediately.⁸⁶ While the shutdown should not have been ordered to begin with, as all such shutdowns taint elections, the ruling is an important victory against this kind of rights-harming attack on democracy. In fact, as we cover in section 4.2 below, civil society in a number of African countries fought internet shutdowns in courts of law in 2021, an enormously valuable contribution to the battle against shutdowns globally.

Finally, as we previously noted, the **Russian government** made a strenuous effort to deny voters access to opposition leader Alexey Navalny's Smart Voting app, which let voters closely monitor and receive updates on the

September election. On September 2, the Russian authorities ordered Apple and Google to remove the app from their app stores and platforms.⁸⁷ It was later revealed that Russian government agents personally threatened local staff at these companies.⁸⁸ Both ultimately bowed to the pressure and removed the app from their stores. Meanwhile, the government's own efforts to prevent access to the app led to the temporary blocking of Google and Cloudflare DNS services, VPNs, Google Docs, and YouTube videos used by the Smart Voting project, and the disabling of the Smart Voting chatbot on Telegram.

How the #KeepItOn coalition is responding

It's dispiriting to see any government disconnect its people during an election, attacking human rights and undermining election integrity. However, over recent years, as the #KeepItOn coalition has increased and strengthened its advocacy around election-related shutdowns, we have recorded a steady decline in their implementation. In particular, there were several countries that previously cut access during elections that did not flip the kill switch in 2021, including Benin⁸⁹, Iraq, and The Gambia. Throughout the year, as Access

⁸² Access Now (2021). *As a contentious election nears, rights groups urge Zambia to #KeepItOn*. Retrieved March 25, 2022, from <https://www.accessnow.org/as-contentious-election-nears-rights-groups-urge-zambia-to-keepiton/>.

⁸³ LusakaTimes.com (2021). *There will be No Internet Shutdown in Zambia, Blackout Information is False and Calculated to Cause Alarm*. Retrieved March 25, 2022, from <https://www.lusakatimes.com/2021/08/07/there-will-be-no-internet-shutdown-in-zambia-information-is-false-and-calculated-to-cause-alarm/>.

⁸⁴ CNN (2021). *Social media and messaging apps appear to be shutdown in Zambia on election day, Facebook says*. Retrieved March 25, 2022, from <https://edition.cnn.com/2021/08/12/africa/zambia-election-social-media-blackout-intl/index.html>.

⁸⁵ Daily Nation (2021). *ZICTA sued over internet shutdown*. Retrieved March 24, 2022, from <https://dailynationzambia.com/2021/08/zicta-sued-over-internet-shutdown/>.

⁸⁶ NewZimbabwe.com (2021). *Zambia's High Court Orders Restoration Of Internet Services*. Retrieved March 25, 2022, from <https://www.newzimbabwe.com/zambias-high-court-orders-restoration-of-internet-services/>.

⁸⁷ Access now (2021). *Not good enough: Apple, Google bow to government pressure, censor content during Russian elections*. Retrieved March 24, 2022, from <https://www.accessnow.org/apple-google-censor-russian-elections/>.

⁸⁸ The Washington Post (2021). *Analysis | The Kremlin forced U.S. tech firms to shut down an app some Russian voters hoped to use. Now what?* Retrieved March 24, 2022, from <https://www.washingtonpost.com/politics/2021/09/30/kremlin-forced-us-tech-firms-shut-down-an-app-its-opponents-were-using-now-what/>.

⁸⁹ Internet Society (2021). *Keeping the Internet on during Benin's Presidential Elections*. Retrieved March 24, 2022, from <https://www.internetsociety.org/blog/2021/06/keeping-the-internet-on-during-benins-presidential-elections/>.

Now continued to build out our Election Watch initiative, we worked with #KeepItOn coalition members around the world to engage governments, companies, and other stakeholders in the battle to stop shutdowns during elections.⁹⁰ This meant that in countries where governments imposed shutdowns, the coalition was often able to use capacity-building workshops⁹¹ and other approaches⁹² to equip civil society groups as well as individuals with the resources to prepare for and circumvent blocking, as well as to document shutdowns in preparation for legal pushback⁹³ and advocacy in national and international fora.

damage to the internet and telecommunications systems and infrastructure can leave the affected population cut off from the world for months, and keep people struggling with repairs vulnerable to future shutdowns.

In 2021, we saw a continuation of the shutdown in Ethiopia's Tigray region, which began in November 2020 and continues to this day, in a context of ongoing civil war, crimes against humanity, and ethnic cleansing.⁹⁴ The shutdown impacted the neighboring Amhara and Afar regions following a spillover of the conflict to those areas. We also documented internet shutdowns in active conflict zones in the Gaza Strip, as the Israeli military engaged in bombing attacks in the ongoing conflict with Palestinians over the occupation of Palestine, and Myanmar, where the military seized and fought to maintain control. In Afghanistan, as the Taliban advanced toward solidifying control over the country following the U.S. military withdrawal, they imposed a communications blackout in Panjshir province, where resistance leaders were based and where people were experiencing dire shortages of food, water, medicine, and other basic supplies.⁹⁵ Data collected through our STOP project on shutdowns in Azerbaijan, Syria, and Yemen⁹⁶ over the past five years reveal a pattern: **internet infrastructure is becoming a military target during active conflicts.**

Ethiopia: internet blackout in Tigray deepens the impact of a brutal civil war

After conflict broke out between the Ethiopian Defense Forces and regional forces in Tigray,

2.3 Internet shutdowns in active conflict zones

Across the globe, warring parties have intensified attacks on essential civilian services during conflict and war, including attacks specifically targeting telecommunications infrastructure. Internet shutdowns during conflict put lives in danger and deprive people of access to life-saving information, both within and outside conflict zones. External parties are unable to understand what is happening on the ground, hampering international humanitarian efforts and preventing the documentation of war crimes and atrocities perpetrated against civilians. Worse, internet shutdowns carried out through deliberate

⁹⁰ See *supra* note 10.

⁹¹ YouTube video (2021). [WEBINAR] #KeepItOn during a shutdown: how to measure, document, and circumvent internet shutdowns. Retrieved February 18, 2022, from <https://www.youtube.com/watch?v=aFIBrRXKm2E>.

⁹² Access Now (2021). *Internet shutdowns and elections handbook*. Retrieved February 18, 2022, from <https://www.accessnow.org/internet-shutdowns-and-elections-handbook/>.

⁹³ Paradigm Initiative (2021). *5 NGOs, 4 Journalists Sue Federal Government at ECOWAS Court Over Twitter Ban*. Retrieved March 24, 2022, from <https://paradigmhq.org/5-ngos-4-journalists-sue-federal-government-at-ecowas-court-over-twitter-ban/>.

⁹⁴ Amnesty International (2021). *Crimes Against Humanity in Ethiopia's Western Tigray Zone*. Retrieved March 24, 2022, from <https://www.amnesty.org/en/latest/news/2022/04/ethiopia-crimes-against-humanity-in-western-tigray-zone/>.

⁹⁵ See *supra* note 21.

⁹⁶ Access Now (2020). *#KeepItOn: As Yemen's war goes online, internet shutdowns and censorship are hurting Yemenis*. Retrieved March 23, 2022, from <https://www.accessnow.org/keepiton-as-yemens-war-goes-online-internet-shutdowns-and-censorship-are-hurting-yemenis/>.

we saw a series of internet blackouts impacting people in the region, extending from November 2020 through 2021 to the present day. Internet access has been restored in the neighboring Afar and Amhara regions, which were impacted by the conflict and saw shutdowns in 2021.⁹⁷

It is hard to overstate the devastating impact of the prolonged conflict and ongoing communications blackout on Ethiopians in Tigray, where warring parties have leveraged the blackout to perpetrate heinous crimes against humanity.⁹⁸ Humanitarian and aid workers don't have access to conflict areas and can't communicate among themselves to provide essential services such as food, water, clothing, and medication, leaving people vulnerable to sickness and famine.⁹⁹ The U.N. estimated that about 350,000 people were on the verge of famine between May and June 2021.¹⁰⁰ Human rights defenders, journalists, and the international community struggle to report on the ongoing conflict and humanitarian crisis. The information vacuum the internet shutdown created has also allowed disinformation to thrive, putting people in even greater danger.¹⁰¹



The internet interruption [is] creat[ing] several negative influences on the people of Tigray by limiting the information [about] what is happening around them. Not only this, it also increases the economic crisis that is happening in Tigray.



April 20, 2021
Tigray, Ethiopia

#KeepItOn

Photo credit: Peter Machacek

Yosef, who works in customer service in Shire, unpacks how the shutdowns' economic impact has been significant, exacerbating the crisis in the region, financially battering both individuals and their families, and making remote work impossible.

How the shutdown blocks aid

In 2021, Adele Khodr, UNICEF's representative in Ethiopia, stressed the urgent need for aid supplies to reach parts of Tigray that had not been accessible for months.

"We know that we have 33,000 children at high risk of morbidity and mortality, of being very severely sick and eventually dying. We need to reach those children as fast as possible," she said. "A lack of phone or internet, however, would hamper any aid effort."

"If we do not have telecommunication equipment, we cannot send people into the field and ensure their safety. It's very simple," she said.¹⁰²

⁹⁷ Belay Manaye (@Belay_Ma) Twitter Post. 5:03 am. January 2, 2022. Retrieved March 25, 2022, from https://twitter.com/Belay_Ma/status/1477505695117455361.

⁹⁸ Global Voices (2021). *Vicious mass rape of women has become a weapon against the Tigray in Ethiopian war*. Retrieved March 22, 2022, from <https://globalvoices.org/2021/07/05/vicious-mass-rape-of-women-has-become-a-weapon-against-the-tigray-in-ethiopian-war/>; BBC News (2021). *Evidence suggests Ethiopian military carried out massacre in Tigray*. Retrieved March 22, 2022, from <https://www.bbc.com/news/world-africa-56603022>.

⁹⁹ The Guardian (2021). *Tigray ceasefire: aid workers demand telecoms be restored*. Retrieved March 22, 2022, from <https://www.theguardian.com/global-development/2021/jul/02/tigray-ceasefire-aid-workers-demand-telecoms-be-restored>.

¹⁰⁰ IPC Portal (2021). *Ethiopia: Famine Review Committee confirms very high levels of acute food insecurity and Risk of Famine in Tigray*. Retrieved March 22, 2022, from <https://www.ipcinfo.org/ipcinfo-website/alerts-archive/issue-42/en/>.

¹⁰¹ Addis Zeybe (2021). *Does Social media intensify the conflict in Northern Ethiopia?* Retrieved March 25, 2022, from <https://addiszeybe.com/featured/politics/currentaffairs/analysis/does-social-media-intensify-the-conflict-in-northern-ethiopia>.

¹⁰² See *supra* note 99.

The weaponization of Facebook

As people in Tigray remained in the dark in late 2021, the conflict intensified, including online, where social media platforms were leveraged to incite ethnic violence and hatred against groups involved in the conflict. Ethiopia's Prime Minister, Abiy Ahmed, used hate speech on Facebook in an effort to incite violence against the Tigray rebels.¹⁰³ Ahmed's message gained traction among government officials, who replicated his language when referring to attacks against Tigrayans.¹⁰⁴ These escalations came alongside a troubled history of hate speech online by both high-level figures within the Ethiopian government, armed rebel groups inside the country, and their supporters across the diaspora.¹⁰⁵

These dangerous and powerful calls for violence on Facebook spurred a public outcry and calls from activists for Facebook parent company Meta to improve its approach to content moderation in contexts of tension and conflict in Ethiopia. Meta's failure to tamp down on or respond effectively¹⁰⁶ to speech described as genocidal looks even more damning after whistleblower Frances Haugen's leak of documents showing that

Meta knew its platform was being used to incite violence but did very little to stop it.¹⁰⁷ In 2021, Meta took belated action to delete some of the violence-inciting content.¹⁰⁸ However, it's clear Meta and other online platforms have yet to deal effectively with the challenge of preventing weaponization of their services.

Israel's attack on the Gaza Strip

In May 2021, Israeli military forces bombed and destroyed or damaged telecommunications infrastructure, causing full and partial shutdowns in the Gaza Strip. The bombing also led to electricity outages that further compromised connectivity. The bombings struck Al-Jawahra tower on May 12, impacting telecommunications infrastructure housed in the building. On May 15, the strikes toppled the Al-Jalaa tower,¹⁰⁹ which houses the offices of some telecommunications providers and media organizations including the Associated Press and Al Jazeera. Fusion, a local telecommunications company, reported disruption of its services due to bombings on May 12, 14, and 18.¹¹⁰ This destruction silenced Palestinian voices. When Palestinians were able to connect, major platforms like Facebook and Instagram removed their posts and suspended their accounts under biased policies and algorithms that effectively, if not intentionally, censored them.¹¹¹

¹⁰³ Abiy Ahmed Ali. Facebook post. July 18, 2021. Retrieved March 24, 2022, from <https://web.facebook.com/112704996810839/posts/573861097361891/>.

¹⁰⁴ Rest of World (2021). *Why Facebook keeps failing in Ethiopia*. Retrieved March 23, 2022, from <https://restofworld.org/2021/why-facebook-keeps-failing-in-ethiopia/>.

¹⁰⁵ *Ibid.*

¹⁰⁶ *Ibid.*

¹⁰⁷ CNN (2021). *Facebook knew it was being used to incite violence in Ethiopia. It did little to stop the spread, documents show*. Retrieved March 25, 2022, from <https://edition.cnn.com/2021/10/25/business/ethiopia-violence-facebook-papers-cmd-intl/index.html>.

¹⁰⁸ BBC News (2021). *Facebook deletes Ethiopia PM's post that urged citizens to 'bury' rebels*. Retrieved March 24, 2022, from <https://www.bbc.com/news/world-africa-59154984>.

¹⁰⁹ SMEX (2021). *Israeli Airstrikes Destroyed Internet Infrastructure In Gaza* [Report]. Retrieved February 28, 2022, from <https://smex.org/israeli-airstrikes-destroyed-internet-infrastructure-in-gaza-report/>; Internet Outage Alerts (@gatech_joda). Twitter post. 3:59 pm. May 16, 2021. Retrieved February 28, 2022, from https://twitter.com/caida_joda/status/1393959216595959810.

¹¹⁰ Fusion Internet and Communications Services (@FusionGaza). Facebook post. May 12, 2021. Retrieved February 23, 2022, from <https://web.facebook.com/FusionGaza/posts/4399068443459303>.

¹¹¹ The Washington Post (2021). *Facebook's AI treats Palestinian activists like it treats American Black activists. It blocks them*. Retrieved February 23, 2022, from <https://www.washingtonpost.com/technology/2021/05/28/facebook-palestinian-censorship/>.

The Myanmar military's ongoing digital coup

On February 1, 2021, as the military launched a coup in Myanmar, the junta shut down multiple communications channels for a half day across the nation, in an apparent attempt to control spread of news about the coup and facilitate arrests of key members of the political opposition and civil society.¹¹² This included cutting internet access, mobile phone networks, radio channels, and television channels — except for the military-owned Myawaddy television channel.¹¹³ On February 3, the military restored 4G mobile access in some townships of Rakhine state, where the internet had long been suspended to conceal human rights abuses — presumably to distract attention from the coup. The blackouts resumed on February 6 and 7, when the junta cut access to the internet nationwide for the second time, for about 30 hours, blocking citizens' attempts to get accurate information about the unfolding events. Military authorities imposed yet another nationwide shutdown on February 15, impacting fiber internet, wireless, and mobile networks. After that, the junta imposed nightly curfew-style shutdowns between 01:00 and 09:00 local time. These nightly disruptions lasted until April 28. In addition, on March 15, the junta shut down mobile internet services, an action that had a deep impact because the majority of internet users in Myanmar rely on their mobile phones for that access. By April 1, the Ministry of Transport and Communications had ordered internet service providers to suspend

wireless broadband services¹¹⁴ as well, increasing the military's control of the internet. It would be two and a half months before the junta restored fiber optic and fixed cable connectivity, and even then, it did so by "allow-listing" organizations, corporations, and individuals for whom internet connectivity would remain specifically uninterrupted.¹¹⁵ Allow-listing effectively flips the concept of a free and open internet on its head, making blocking the norm and access the exception, in a discriminatory manner that exacerbates inequality, especially in the context of a coup and humanitarian crisis.

While the military gradually restored internet access across the country in 2021, it is still imposing regional internet shutdowns to this day, particularly in places where the military is meeting resistance.¹¹⁶ These shutdowns are blatant attempts to shroud serious human rights violations, including those potentially amounting to international crimes.¹¹⁷ In addition, the junta has proceeded to ban websites, including widely used social media and messaging platforms, forcing people in Myanmar to use VPNs to gain access. If the junta pushes through a recently resurrected cybersecurity bill, use of VPNs will be criminalized.¹¹⁸

2.4 Internet shutdowns during examinations

Over the past five years we have seen countries around the world shut down the internet to prevent cheating during school examinations, including

¹¹² See *supra* note 20.

¹¹³ Radio Free Asia (2021). *News Stations Still Closed in Myanmar, Some Other Channels Reopen*. Retrieved February 18, 2022, from <https://www.rfa.org/english/news/myanmar/stations-02022021181731.html>.

¹¹⁴ Reuters (2021). *Myanmar orders wireless internet shutdown until further notice: telecoms sources*. Retrieved April 26, 2022, from <https://www.reuters.com/article/us-myanmar-politics-internet/myanmar-orders-wireless-internet-shutdown-until-further-notice-telecoms-sources-idUSKBN2B05H2>.

¹¹⁵ Access Now (2021). *#KeepItOn: Immediately reinstate internet access for all in Myanmar*. Retrieved February 23, 2022, from https://www.accessnow.org/cms/assets/uploads/2021/05/KeepItOn_-_Immediately-reinstate-internet-access-for-all-in-Myanmar_31-May-2021.pdf.

¹¹⁶ VOA (2021). *In Post-Coup Myanmar, Citizens Fight to Get Online*. Retrieved February 22, 2022, from <https://www.voanews.com/a/myanmar-citizens-fight-to-get-online/6250855.html>.

¹¹⁷ BBC News (2022). *Myanmar Rohingya violence is genocide, US says*. Retrieved March 28, 2022, from <https://www.bbc.com/news/world-asia-60820215>.

¹¹⁸ Access Now (2022). *Analysis: the Myanmar junta's Cybersecurity Law would be a disaster for human rights*. Retrieved January 27, 2022, from <https://www.accessnow.org/analysis-myanmar-cybersecurity-law/>.

Algeria, Bangladesh, Ethiopia,¹¹⁹ India, Iran, Iraq, Jordan, Mauritania,¹²⁰ Sudan, and Syria. Despite the well-documented negative impact of internet shutdowns, a number of countries in the Middle East and North Africa region have persisted in implementing these disruptions year over year, including in 2021.

Algeria has been a lead perpetrator of exam-related shutdowns since 2016, and 2021 was no exception to the rule. In June, Algerian authorities shut down the internet between 8:00 and 12:00 local time as 731,000 students were sitting their first national exam. These disruptions continued throughout the day,¹²¹ alternating between complete blackouts during exam sessions, and heavy throttling — slowing down — of services in between sessions, during lunch breaks, and overnight. Millions of people in Algeria have suffered as a result, especially those whose work and livelihoods rely on social media and the internet.¹²² In 2020 alone, Algeria lost around 388 million USD due to exam-related internet shutdowns,¹²³ and Algerian experts estimate economic losses at 500 million Algerian

Dinars for every hour of internet shutdown in the country.¹²⁴ The shutdowns continue despite Algerian President Abdelmadjid Tebboune's public statement on TV that he will "no longer tolerate" this practice.¹²⁵

Syria continued its tradition of shutting down the internet during national exams in 2021, a practice that has been as regular as clockwork since 2016.¹²⁶

In 2020, **Sudan** disrupted internet services for three hours while scheduled national exams were taking place.¹²⁷ In 2021, Sudan's public prosecutor once again ordered internet service providers to shut down mobile internet connections for these exams.¹²⁸

Governments that impose these disruptions have justified their use as a preemptive measure to prevent students from cheating or leaking exam questions. However, even if the practice did stop cheating, shutdowns are not a proportionate measure to meet that aim. Preventing cheating should not require undermining human rights.

¹¹⁹ The Guardian (2017). *Ethiopia turns off internet nationwide as students sit exams*. Retrieved April 21, 2022, from <https://www.theguardian.com/technology/2017/may/31/ethiopia-turns-off-internet-students-sit-exams>.

¹²⁰ Ifex (2019). *Mauritanian government authorises disruption of internet services and blocks social media platforms*. Retrieved April 21, 2022, from <https://ifex.org/mauritanian-government-authorises-disruption-of-internet-services-and-blocks-social-media-platforms/>.

¹²¹ Ali Sibai (@alisibai). Twitter post. 4:47 pm. June 21, 2021. Retrieved February 22, 2022, from <https://twitter.com/alisibai/status/1407017281922682901>.

¹²² Echoroukonline.com (2021). *Millions of Algerians are out of work because of the baccalaureate*. Retrieved February 22, 2022, from <https://www.echoroukonline.com/%D9%85%D9%84%D8%A7%D9%8A%D9%8A%D9%86-%D8%A7%D9%84%D8%AC%D8%B2%D8%A7%D8%A6%D8%B1%D9%8A%D9%8A%D9%86-%D8%A8%D9%84%D8%A7-%D8%B9%D9%85%D9%84-%D8%A8%D8%B3%D8%A8%D8%A8-%D8%A7%D9%84%D8%A8%D9%83%D8%A7%D9%84>.

¹²³ Digital Watch Observatory (2020). *Internet restriction during exam in Algeria cost nearly US\$388 million*. Retrieved February 22, 2022, from <https://dig.watch/updates/internet-restriction-during-exam-algeria-cost-nearly-us388-million>.

¹²⁴ Access Now (2021). *Internet shutdowns during exams: when MENA governments fail the test*. Retrieved February 23, 2022, from <https://www.accessnow.org/mena-internet-shutdowns-during-exams/>.

¹²⁵ YouTube Video (2020). Retrieved February 23, 2022, from <https://www.youtube.com/watch?v=a7Oxp6aKiQw>.

¹²⁶ Dyn Research (2016). Retrieved February 22, 2022, from <https://web.archive.org/web/20160815064635/http://research.dyn.com/2016/08/syria-goes-to-extremes-to-foil-cheaters/>.

¹²⁷ Access Now (2020). *Internet shutdowns in Algeria and Sudan: damaging practices during exceptional circumstances*. Retrieved February 23, 2022, from <https://www.accessnow.org/internet-shutdowns-in-algeria-and-sudan-damaging-practices-during-exceptional-circumstances/>.

¹²⁸ Sudanesehome.net (2021). *Directive from the Attorney General to stop internet service starting tomorrow*. Retrieved February 23, 2022, from <https://sudanesehome.net/>.

III. Notable trends and developments in 2021

3.1 Prolonged shutdowns

Four longest internet shutdowns recorded in 2021 ▾

2026 days 6/12/2016 - 12/28/2021
Former Federally Administered Tribal Area (FATA) of Pakistan

593 days 6/22/2019 - 2/3/2021
Rakhine State of Myanmar

551 days 8/5/2019 - 2/5/2021
Jammu and Kashmir of India

539 days 11/4/2020 - Ongoing
Tigray of Ethiopia

At the halfway mark in 2021, we had already documented the continuation of a deeply damaging trend: some governments are prolonging their interference, further exacerbating the devastating harm they have on people's lives.¹²⁹ In Pakistan's Federally Administered Tribal Areas (FATA), the Pakistan Telecommunication Authority restricted full mobile networks following the conflict

¹²⁹ Access Now (2021). *#KeepItOn update: who is shutting down the internet in 2021?*. Retrieved February 23, 2022, from <https://www.accessnow.org/who-is-shutting-down-the-internet-in-2021/>.

¹³⁰ Digital Rights Monitor (2021). *Mobile Internet Restored in Former FATA's Kurram Agency*. Retrieved April 20, 2022, from <https://www.digitalrightsmonitor.pk/mobile-internet-restored-in-former-fatas-kurram-agency/>.

¹³¹ Access Now (2020). *Shattered dreams and lost opportunities: A year in the fight to #KeepItOn*. Retrieved April 20, 2022, from <https://www.accessnow.org/keepiton-2020-report>.

¹³² The Irrawaddy (2021). *Mobile Internet Connectivity Restored to Western Myanmar*. Retrieved March 25, 2022, from <https://www.irrawaddy.com/news/burma/mobile-internet-connectivity-restored-western-myanmar.html>.

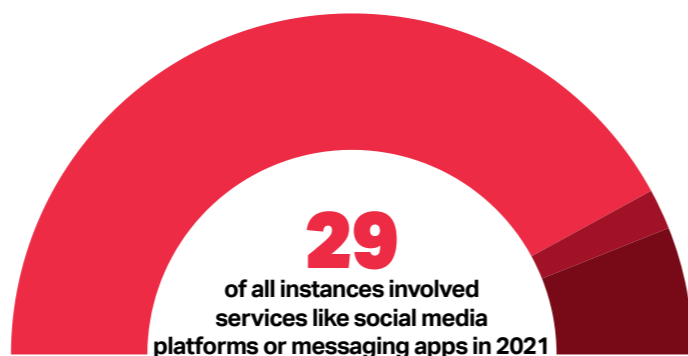
at its border with Afghanistan in June 2016. The internet didn't get fully restored until December 2021, setting the economic and educational development decades back for the people living in the already isolated area.¹³⁰ In India's Jammu and Kashmir region, people have suffered through the longest shutdown on record, according to our documentation. But authorities did not stop there. They continued to impose shutdowns intermittently, with **85** documented disruptions in total in 2021 — leaving the population in a near-constant state of compromised connectivity. Likewise, in Ethiopia, the Tigray region has been cut off since November 2020: that's **18** months and counting. In Myanmar, people in townships across Rakhine state — largely populated by marginalized ethnic groups — have experienced years-long shutdowns since 2019, as we reported in our 2020 report.¹³¹ Just as the internet was restored for local people, the whole country went offline due to the military coup.¹³²

3.2 Increased use of mobile shutdowns during protests

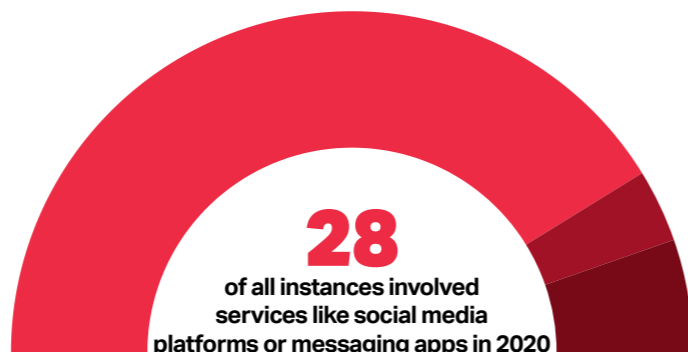
In 2021, **18** governments, including Bangladesh, Burkina Faso, Chad, Cuba, Eswatini, India, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Myanmar, Pakistan, Senegal, South Sudan, Sudan, Turkmenistan, and Uganda, imposed mobile internet shutdowns during protests. Cutting mobile access to crack down on protests is an increasing trend globally, and at least **37** shutdowns in 2021 affected mobile internet services during protests, compared to **15** instances in the previous year. With more and more people turning to their mobile phones to access the internet and digital communication

platforms globally, and particularly in developing and emerging countries,¹³³ state actors have identified mobile internet shutdowns as an effective way to silence people without necessarily having to take the entire country off the grid. This tactic is especially discriminatory and harmful. While people who can afford or access more expensive options to get on the internet, such as fixed cable services, can remain connected, people and communities without such privilege are excluded and disconnected. It widens the digital divide between the privileged, such as government officials, banking companies, and elites, and everyone else. Authorities may also target mobile services in an attempt to silence their critics, who might otherwise find and share information privately, and connect with one another to organize, using certain mobile platforms or applications, such as social media apps, secure messaging apps, or VPNs.

Network shutdowns vs. Services restrictions



- Full network: 153
- Full network, Service-based: 7
- Service-based: 22



- Full network: 131
- Full network, Service-based: 11
- Service-based: 17

“domain poisoning,” meaning that it impacted unrelated sites and services as far away as Western India.¹³⁵

Russia throttled Twitter as part of its ever-ratcheting restrictions of free expression, after the platform failed to remove content authorities flagged as illegal. As we note above, this throttling ended up slowing down access to more than 40,000 domains containing t.co (Twitter’s shortened domain name). That included the

3.3 Targeted blocking of communications platforms

Authorities are increasingly responding to public criticism and dissent by blocking specific communications platforms. Some governments went even further, cutting access to VPNs that enable people to bypass the censorship.¹³⁴ Our data indicates that service-based disruptions happened in 22 countries throughout 2021. This includes Bangladesh, China, Cuba, Eswatini, Ethiopia, India, Iran, Jordan, Kazakhstan, Myanmar, Nigeria, Oman, Pakistan, Russia, Senegal, South Sudan, Sudan, Tajikistan, Turkmenistan, Uganda, Uzbekistan, and Zambia.

In **Myanmar**, for example, the military pushed internet providers to block Twitter as part of its ongoing digital coup. The block was executed in such a manner that it resulted in what’s called

¹³³ Pew Research Center’s Global Attitudes Project (2020). *Communications Technology in Emerging and Developing Nations*. Retrieved March 21, 2022, from <https://www.pewresearch.org/global/2015/03/19/1-communications-technology-in-emerging-and-developing-nations/>.

¹³⁴ See, e.g. Radio Free Europe Radio Liberty (2021). *VPNs Are Not A-OK: Turkmen Internet Users Forced To Swear On Koran They Won’t Use Them*. Retrieved April 20, 2022, from <https://www.rferl.org/a/turkmenistan-vpn-koran-ban/31402718.html>.

¹³⁵ Doug Madory (@DougMadory). Twitter post. 7:40 pm. February 5, 2021. Retrieved April 19, 2022, from <https://twitter.com/DougMadory/status/1357776166820728840>.

websites of government agencies in Russia, and platforms like Google and Yandex.¹³⁶

In **Pakistan**, authorities cut access to several major social media platforms, including Facebook, Twitter, and TikTok, ahead of planned anti-government protests.¹³⁷

When people in **Iran** migrated from WhatsApp to the secure messaging app Signal for better privacy and freedom from surveillance, authorities blocked it. Authorities also ordered its removal from Cafe Bazaar, Iran’s version of Google Play, and Myket, another local app store.¹³⁸ Signal is only one of the most recent platforms Iran has blocked. The government already blocks Facebook, Twitter, YouTube, and Telegram, and had previously blocked Signal intermittently in 2016 and 2017.

Similarly, in **China**, Signal became part of the long list of digital platforms blocked indefinitely by authorities in March 2021 after seeing an increase in the number of app downloads.¹³⁹

Another target for blocking was Clubhouse, a social media audio chat application people use for online debates. In March 2021, authorities in **Jordan** blocked the app,¹⁴⁰ and journalists, activists, and others fled to alternative platforms to condemn the blocking as a flagrant abuse of freedom of expression and access to information rights. Jordanian journalist Basil Alrafaih spoke out on Facebook, arguing, “An authority that is afraid to speak, and oppresses its people on the ground and in space, cannot confront a pandemic.”¹⁴¹ In **Oman**, the Internal Security Service ordered the Telecommunications Regulatory Authority to block

Communications platform blocking in 2021

Facebook 21 times in 17 countries	Twitter 13 times in 11 countries	Telegram 8 times in 8 countries	Google Services 5 times in 5 countries
WhatsApp 16 times in 14 countries	Instagram 12 times in 11 countries	VoIP 3 times in 1 country	VPNs 2 times in 2 countries
		Signal 3 times in 3 countries	Clubhouse 2 times in 2 countries

¹³⁶ TechCrunch (2021). *Russia is trying to throttle Twitter*. Retrieved March 23, 2022, from <https://techcrunch.com/2021/03/10/russia-is-trying-to-throttle-twitter/>.

¹³⁷ TechCrunch (2021). *Pakistan temporarily blocks social media*. Retrieved February 23, 2022, from <https://techcrunch.com/2021/04/16/pakistan-temporarily-blocks-social-media/>.

¹³⁸ Al Jazeera (2021). *Iran blocks Signal messaging app after WhatsApp exodus*. Retrieved February 23, 2022, from <https://www.aljazeera.com/news/2021/1/26/iran-blocks-signal-messaging-app-after-whatsapp-exodus>.

¹³⁹ Reuters (2021). *Encrypted messaging app Signal stops working in China*. Retrieved April 19, 2022, from <https://www.reuters.com/article/us-china-tech-signal/encrypted-messaging-app-signal-stops-working-in-china-idUSKBN2B8094>.

¹⁴⁰ Jordan Open Source Association (2021). *Blocking Clubhouse in Jordan: A Quick Analysis of Internet Censorship Methods in Use*. Retrieved March 24, 2022, from <https://jordanopensource.org/blog/78/blocking-clubhouse-in-jordan-a-quick-analysis-of-internet-censorship-methods-in-use>.

¹⁴¹ RoyaNews (2021). *Jordan blocks Clubhouse application*. Retrieved March 24, 2022, from <https://en.royanews.tv/news/26508/2021-03-25>.

Clubhouse, citing a lack of license to operate in the country.¹⁴² That sparked a protest on Twitter using the hashtag #Oman_bans_club_house.

But perhaps the most eye-opening example of the trend in 2021 was **Nigeria's** blocking of Twitter. After Twitter deleted a tweet by Nigerian President Muhammadu Buhari threatening genocide on Nigerian citizens in the south, the government blocked the platform for a full seven months.¹⁴³ This act drew widespread condemnation in Nigeria and around the world, resulting in many people in the country and abroad using the #KeepItOn hashtag on Twitter to highlight the blocking. Authorities tried to stop Nigerians from circumventing the block by threatening to prosecute them. This mobilized civil society groups to challenge the blocking before the ECOWAS (Economic Community of West African States) Court of Justice, a case that is still pending judgment.¹⁴⁴

3.4 Advancing technologies: combining throttling, blocking, and network shutdowns

In 2021, we detected **10** instances of throttling, **five** of which took place simultaneously or overlapping with another type of shutdown. Throttling is the act of artificially restricting, but not stopping, the flow of data through a communications network. Throttling makes it appear as though internet access or a platform or service is available, but the level of interference is enough to render the service or resource effectively useless. Some governments that ordered shutdowns, such as Jordan, Russia, and Uganda, used throttling in

concert with other service restrictions, with the effect of further lengthening the shutdown period. Such combinations of technologies to disrupt communications make it impossible for people to access information or share videos or images of human rights violations. The other governments that throttled access in 2021 are: Algeria, India, Iran, Iraq, and Myanmar.

Note: In many parts of the world, due to poor network infrastructure, it can be difficult to distinguish between deliberate throttling and slow internet connections. So throttling can be a way to "hide" an internet shutdown in plain sight. This may be one reason many governments turn to throttling: it can be excused as a technical difficulty or infrastructural failure, even if the real reason is to crush a protest or interfere with elections.

3.5 Shutdowns targeted to specific locations and populations

Over the past five years, we have seen governments target shutdowns to specific regions, locations, and more recently, even attempts to deny internet access to specific individuals.¹⁴⁵ In 2021, **118** out of the total **182** shutdowns governments imposed impacted only one location or only locations within the same state or province. While a more targeted shutdown sounds like it would be less damaging, they are often a sign that a government is trying to silence a specific population, further marginalizing already vulnerable communities.¹⁴⁶ These targeted shutdowns also tend to last longer and have a devastating impact on the human rights of those living in the shadows, disconnected from one another and the rest of the world.

¹⁴² Access Now (2021). *Omani authorities block Clubhouse app*. Retrieved March 24, 2022, from <https://www.accessnow.org/clubhouse/>.

¹⁴³ Access Now (2021). *Blocking access to Twitter in Nigeria is a flagrant violation of fundamental rights*. Retrieved February 23, 2022, from <https://www.accessnow.org/nigeria-blocks-twitter-keepiton/>.

¹⁴⁴ Media Rights Agenda (2021). *ECOWAS Court Dismisses Nigerian Government's Motion to Strike out Suits over Twitter Ban, Sets May 10 for Judgment*. Retrieved February 23, 2022, from <https://mediarightsagenda.org/ecowas-court-dismisses-nigerian-governments-motion-to-strike-out-suits-over-twitter-ban-sets-may-10-for-judgment/>.

¹⁴⁵ See *supra* note 46.

¹⁴⁶ Media Matters for Democracy (2021). *Feminist Case Studies on the - Digital Rights Monitor*. Retrieved April 20, 2022, from <https://www.digitalrightsmonitor.pk/wp-content/uploads/2021/01/Women-Disconnected-Gender-Digital-Divide-in-Pakistan.pdf>; PRIF BLOG (2022). *Internet Shutdowns in Ethiopia: The Weapon of Choice*. Retrieved April 20, 2022, from <https://blog.prif.org/2022/03/11/internet-shutdowns-in-ethiopia-the-weapon-of-choice/>.

IV. Fighting back in 2021: challenges and opportunities

Internet shutdowns happen because governments want to control the flow of information online, regardless of the consequences for their own people, economies, and reputation around the world. That desire for control has translated to increased use of network disruptions, even as we see momentum grow in the global fight to stop shutdowns. Following is an overview of some of the progress we saw in 2021 despite the increase and spread of disruptions.

4.1 Progress at the international level

G7 declarations condemn internet shutdowns:

In May 2021, participants at the G7 Foreign and Development Ministers' Meeting issued a communiqué to condemn "actions by states to intentionally disrupt their own populations' access to, or dissemination of, information, knowledge, and data online."¹⁴⁷ Heads of state echoed this sentiment in their own Carbis Bay G7 Summit Communique,¹⁴⁸ stating, "We also affirm our opposition to measures which may undermine these democratic values, such as government-imposed internet shutdowns and network restrictions." Notably, this communiqué adopted the definition of an internet shutdown Access Now and many members of the #KeepItOn coalition use, reflecting familiarity with our campaign and goals, and our presence in events leading to the 2021 G7 Summit.

¹⁴⁷ Access Now (2021). *G7 leaders decry internet shutdowns, but leave personal data up for grabs*. Retrieved March 25, 2022, from <https://www.accessnow.org/g7-internet-shutdowns-personal-data/>.

¹⁴⁸ G7UK.org (2021). *Carbis Bay G7 Summit Communiqué*. Retrieved March 25, 2022, from <https://www.g7uk.org/wp-content/uploads/2021/06/Carbis-Bay-G7-Summit-Communique-PDF-430KB-25-pages-5.pdf>.

¹⁴⁹ United Nations (2021). *Ending Internet shutdowns: a path forward*. Geneva, Human Rights Council. Retrieved March 25, 2022, from <https://undocs.org/A/HRC/47/24/Add.2>

¹⁵⁰ See *supra* note 131.

¹⁵¹ For more information, see Access Now (2021). *U.N. propels internet shutdowns into the spotlight, calls on key stakeholders to act*. Retrieved March 25, 2022, from <https://www.accessnow.org/un-internet-shutdowns/>.

¹⁵² United Nations (2021). *The promotion, protection and enjoyment of human rights on the Internet: resolution*. Retrieved March 25, 2022, from <https://digitallibrary.un.org/record/3937534>.

¹⁵³ Access Now maintains a tracker of such reports, "Relevant-to-KIO," which is updated and publicly viewable at <https://accessnow.org/relevant-to-keepiton>.

U.N. expert on the rights to peaceful assembly and association outlines pathway for ending internet shutdowns:

Special Rapporteur Clément Voule submitted *Ending Internet shutdowns: a path forward to the 47th Session of the Human Rights Council* in June 2021, as a follow up to a 2019 report on the rights to freedom of peaceful assembly and of association in the digital age.¹⁴⁹ The Special Rapporteur cites Access Now and the #KeepItOn coalition's work,¹⁵⁰ unpacking the "magnitude and severity of internet shutdowns as a means to suppress the right to peaceful assembly." He also offers a series of recommendations for state actors, companies, investors, and international organizations to reverse this deadly trend.¹⁵¹

A U.N. resolution condemns internet shutdowns and calls for a report on disruptions:

When the U.N. Human Rights Council adopted a new version of the resolution on "the promotion, protection and enjoyment of human rights on the Internet" (A/HRC/47/16) in July 2021,¹⁵² it specifically called out shutdowns and mandated a report on "the trend in internet shutdowns, analyzing their causes, their legal implications and their impact on a range of human rights, including economic, social and cultural rights." Access Now and our partners lobbied for this resolution and contributed evidence and analysis for the report.¹⁵³

A global multistakeholder forum sets up a global internet shutdown taskforce:

In December 2021,

at the Freedom Online Coalition (FOC) conference, Access Now, the U.S. State Department, and the Global Network Initiative launched the new FOC Task Force on Internet Shutdowns.¹⁵⁴ At the launch, the groups underscored the FOC's responsibility to advance internet freedom and emphasized the importance of "sharing and developing resources, issuing targeted statements, and creating and leveraging trusted channels of communication among all stakeholders to facilitate collaboration."¹⁵⁵

4.2 Progress in challenging internet shutdowns in court

With the challenge of growing shutdowns in Africa in 2021 came the opportunity to fight the disruptions in court, establish legal precedents, and build the case law against them — a gift to civil society activists, human right defenders, and other stakeholders around the world.

We saw important legal challenges in Nigeria, Sudan, and Zambia.

Nigeria: After Twitter took down a tweet by Nigerian President Muhammadu Buhari, the government blocked the platform.¹⁵⁶ Civil society

¹⁵⁴ Freedom Online Coalition (2021). *Task Force on Internet Shutdowns (TFIS)*. Retrieved March 25, 2022, from https://freedomonlinecoalition.com/task_forces_and_wg/task-force-on-internet-shutdowns/.

¹⁵⁵ Freedom Online Coalition (2021). *Openness, Accessibility and Inclusion - Human Rights ...* Retrieved March 25, 2022, from https://freedomonlinecoalition.com/wp-content/uploads/2021/12/Freedom_Online_Conference_2021_Chairs_Summary.pdf.

¹⁵⁶ The New York Times (2021). *Nigeria Bans Twitter After President's Tweet Is Deleted*. Retrieved February 22, 2022, from <https://www.nytimes.com/2021/06/05/world/africa/nigeria-twitter-president.html>.

¹⁵⁷ Vanguard News (2021). *SERAP drags Buhari before ECOWAS Court over Twitter ban in Nigeria*. Retrieved February 22, 2022, from <https://www.vanguardngr.com/2021/06/serap-drags-buhari-before-ecowas-court-over-twitter-ban-in-nigeria/>.

¹⁵⁸ Access Now (2021). *Access Now to ECOWAS Court: overturn Nigeria's Twitter ban*. Retrieved February 22, 2022, from <https://www.accessnow.org/nigeria-twitter-ban-ecowas-court/>.

¹⁵⁹ Media Defence (2020). *Landmark Judgment: ECOWAS Court Finds Togo Violated FoE with Internet Shutdown*. Retrieved February 22, 2022, from <https://www.mediadefence.org/news/landmark-judgment-ecowas-court-finds-togo-violated-foe-with-internet-shutdown/>.

¹⁶⁰ Reuters (2021). *Sudan court orders restoral of internet, but no sign of services returning*. Retrieved March 25, 2022, from <https://www.reuters.com/world/africa/court-orders-restoration-sudan-internet-access-2021-11-09/>.

¹⁶¹ SMEX (@SMEX). Twitter post. 9:13 am. November 12, 2021. Retrieved March 25, 2022, from <https://twitter.com/SMEX/status/1459086911931363329>.

¹⁶² SMEX (@SMEX). Twitter post. 2:08 pm. November 11, 2021. Retrieved March 25, 2022, from <https://twitter.com/SMEX/status/1458798801079226371>.

¹⁶³ شبكة مدونون سودانيون (@Sudaneseblogs). Twitter post. 9:48 am. November 18, 2021. Retrieved March 25, 2022, from <https://twitter.com/Sudaneseblogs/status/1461270116809781248>.

¹⁶⁴ Khattab - خَطَّابٌ (@ga800l). Twitter post. 2:32 pm. November 18, 2021. Retrieved March 25, 2022, from <https://twitter.com/ga800l/status/1461341451745304577>.

organizations including SERAP (Socio-Economic Rights and Accountability Project) filed lawsuits before the ECOWAS Court of Justice. International organizations Access Now, the Electronic Frontier Foundation, and Open Net Association supported the SERAP suit¹⁵⁷ through a joint amicus brief.¹⁵⁸ The government tried and failed to have the case dismissed, and the plaintiffs are still awaiting judgment. Notably, the ECOWAS Court of Justice previously issued a ruling against a shutdown in Togo in 2020,¹⁵⁹ affirming the fundamental rights of the people impacted.

Sudan: When Sudanese authorities cut internet access in October 2021, the Sudanese Consumer Protection Organization sued the Telecommunication and Post Regulatory Authority (TPRA).¹⁶⁰ After a judge ordered access restored on November 11, 2021,¹⁶¹ the TPRA argued against restoration on the grounds of "national security" and a "state of emergency,"¹⁶² arguments the court dismissed. When telecommunications companies in Sudan still failed to restore access, the judge took the unprecedented step of issuing an arrest warrant for the chief executive officers.¹⁶³ That is when access was finally restored.¹⁶⁴ It is notable and highly commendable that Sudanese civil society has responded to the uptick in the

use of internet shutdowns since 2019 by holding regulators, the government, and internet providers accountable. As a result, we have seen four court decisions against shutdowns in Sudan.¹⁶⁵

Zambia: After Chapter One Foundation filed a lawsuit challenging the election-day blocking of social media platforms, the Zambia High Court issued a landmark decision ordering authorities to restore full access immediately.¹⁶⁶ In a court settlement and consent judgment on March 21, 2022, the Zambia Information and Communication Authority (ZICTA) agreed not to act outside of its legal authority and/or control to interrupt the flow or access to the internet going forward. ZICTA also agreed to provide notice to the public within 36 hours of any internet shutdowns.¹⁶⁷

These court cases are effective: the Zambia and Sudan lawsuits brought an end to the shutdowns in those countries when authorities would not stop despite public outcry. We and our partners eagerly await a judgment in the Nigeria case.

4.3 Progress on equipping civil society to circumvent and resist shutdowns

Access Now and other members of the #KeepItOn coalition created a number of important resources in 2021, all designed to help people anticipate, navigate, and document the internet shutdowns that undermine our democracies and damage human rights.

¹⁶⁵ CIPESA (2022). *Litigating Internet Disruptions in Africa: Lessons from Sudan*. Retrieved March 25, 2022, from <https://cipesa.org/2022/03/litigating-internet-disruptions-in-africa-lessons-from-sudan/>.

¹⁶⁶ AllAfrica.com (2021). *Zambia: High Court Orders Restoration of Internet Services*. Retrieved March 25, 2022, from <https://allafrica.com/stories/202108150063.html>.

¹⁶⁷ Business and Human Rights Resource Centre (2022). *Zambia: Telecom regulator agrees to inform public of reason for any interruption in access to internet within 36 hours of any such event in future*. Retrieved March 25, 2022, from <https://www.business-humanrights.org/en/latest-news/zambia-telecom-regulator-enters-into-a-consent-judgement-on-internet-shutdowns-agrees-to-inform-the-public-of-the-reason-for-any-interruption-in-access-to-internet-within-36-hours-of-any-such-event-in-future/>.

¹⁶⁸ See *supra* note 10.

¹⁶⁹ See *supra* note 92.

¹⁷⁰ WITNESS Media Lab (2021). *Eyes on Shutdowns: Documenting for Human Rights*. Retrieved March 25, 2022, from <https://lab.witness.org/projects/internet-shutdowns/>.

¹⁷¹ Internews (2021). *Prepare, Prevent, Resist - Information Saves Lives*. Retrieved March 25, 2022, from <https://internews.org/resource/optimashutdownworkflow/>.

The 2021 Election Watch: At Access Now, we launched an initiative to flag upcoming elections potentially ripe for shutdowns, provide real-time updates on disruptions, and encourage action to help #KeepItOn.¹⁶⁸ Preventing election shutdowns is a global imperative, as they stop people from staying informed, auditing their own elections, and ensuring the integrity of democratic processes. People must have the power to document irregularities and share the evidence with the rest of the world.

#KeepItOn Internet Shutdowns and Elections Handbook: In addition, we launched a handbook aimed at election observers, embassies, activists, and journalists.¹⁶⁹ It explains why internet shutdowns are a barrier to democratic elections, and offers recommendations for navigating a shutdown, including information on how to recognize the early warning signs, how to prepare for and circumvent a disruption, and how to monitor and document any shutdown that takes place.

Eyes on Internet Shutdowns: Documenting for Human Rights: This global campaign by WITNESS helps activists, human rights defenders, citizen eye witnesses, journalists, and documentarians prepare in advance to document human rights violations during internet shutdowns.¹⁷⁰

Prepare, Prevent, Resist: Shutdowns Advocacy Workflow: Created by Internews in collaboration with the #KeepItOn community and researchers across the globe, this microsite is an extraordinary repository of resources on how to effectively advocate against internet shutdowns.¹⁷¹

These are just a few of the resources developed in 2021 that demonstrate the growing sophistication and strength of civil society resistance to shutdowns around the world.

4.4 Progress on collaborative monitoring and analysis of shutdowns

Fighting internet shutdowns requires collective efforts from diverse actors globally. Monitoring and documenting shutdowns remains crucial for alerting the public and holding perpetrators accountable. With governments becoming more sophisticated in imposing shutdowns, making it more difficult to detect certain outages, we are excited about the growth of the #KeepItOn measurement community in 2021. Companies and organizations like Cloudflare,¹⁷² Censored Planet,¹⁷³ Mozilla,¹⁷⁴ and RIPE Atlas¹⁷⁵ have committed to providing us with technical insight and data on shutdowns as they occur. Google's Jigsaw is closely monitoring shutdowns and has published a comprehensive analysis highlighting the impact of these disruptions on fundamental rights worldwide.¹⁷⁶

These initiatives are in addition to the important ongoing work of the Open Observatory of Network Interference (OONI),¹⁷⁷ Internet Outage Detection Analysis (IODA),¹⁷⁸ Measurement Lab (M-Lab),¹⁷⁹ and Internet Society Pulse,¹⁸⁰ among others. The diversity of the monitoring community makes tracking more robust, preventing perpetrators from hiding their tracks.

¹⁷² Cloudflare Radar (2021). *Working with those who protect human rights around the world*. Retrieved March 25, 2022, from <https://blog.cloudflare.com/working-with-those-who-protect-human-rights-around-the-world/>.

¹⁷³ Censored Planet (2021). *An Internet-wide, Longitudinal Censorship Observatory*. Retrieved March 2022, from <https://censoredplanet.org/>.

¹⁷⁴ Data@Mozilla (2022). *Documenting outages to seek transparency and accountability*. Retrieved March 25, 2022, from <https://blog.mozilla.org/data/2022/03/09/mozilla-opens-access-to-dataset-on-network-outages/>.

¹⁷⁵ RIPE Labs (2022). *The Kazakhstan Outage - As Seen from RIPE Atlas*. Retrieved March 25, 2022, from <https://labs.ripe.net/author/emileaben/the-kazakhstan-outage-as-seen-from-ripe-atlas/>.

¹⁷⁶ Jigsaw (2021). *The Current: The Internet Shutdowns Issue*. Retrieved March 25, 2022, from <https://jigsaw.google.com/the-current/shutdown/>.

¹⁷⁷ OONI Explorer (2021). *Open Data on Internet Censorship Worldwide*. Retrieved March 25, 2022, from <https://explorer.ooni.org/>.

¹⁷⁸ IODA (2021). *Internet Outage Detection and Analysis*. Retrieved March 25, 2022, from <https://ioda.caida.org/>.

¹⁷⁹ MLab (2021). *Measurement Lab*. Retrieved March 25, 2022, from <https://www.measurementlab.net/>.

¹⁸⁰ Internet Society Pulse (2021). *Internet shutdowns*. Retrieved April 17, 2022, from <https://pulse.internetsociety.org/shutdowns>.

¹⁸¹ Access Now (2021). *#KeepItOn: Fighting internet shutdowns around the world*. Retrieved March 22, 2022, from <https://www.accessnow.org/keepiton/>.

V. Conclusion: our movement needs to keep growing

As we consider 2021 in the context of data from the past five years, we see a year that reflects the continued challenge of preventing government authorities, those engaged in armed conflict, and military juntas from leveraging internet shutdowns as tools for control. As societies around the world struggle to stay safe and healthy during the COVID-19 pandemic, it's clear the consequences of disruptions are dire — regardless of the context or rationale. Looking forward, we draw inspiration from the progress the global #KeepItOn coalition has been making despite the global increase in disruptions, from the promising dip in election shutdowns globally, to the court challenges in Africa, to the growth in resources and capacity to monitor, circumvent, and document disruptions. We hope to make more progress in the years ahead, building pressure to prevent the network disruptions that are causing so much harm. We urge you to join the fight.¹⁸¹

CONTACT

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THE RETURN OF DIGITAL AUTHORITARIANISM

Internet shutdowns in 2021

#KeepItOn 

