Internet Monitoring Action Project

iMAP Philippines 2023 Internet Censorship Report

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About iMAP

The Internet Monitoring Action Project (iMAP) aims to establish regional and in-country networks that monitor network interference and restrictions to the freedom of expression online in 10 countries: Myanmar, Cambodia, Hong Kong, India, Indonesia, Malaysia, Philippines, Thailand, Timor-Leste and Vietnam. Sinar Project is currently working with national digital rights partners in these 10 countries. The project is done via Open Observatory Network Interference (OONI) detection and reporting systems, and it involves the maintenance of test lists as well as the collection and analysis of measurements.

More information is available at: imap.sinarproject.org. Any enquiries and suggestions about this report can be directed to team@sinarproject.org.

About EngageMedia

EngageMedia is a not-for-profit organisation that promotes digital rights, open and secure technology, and social issue documentaries. Combining video, technology, knowledge, and networks, we support Asia-Pacific and global changemakers advocating for human rights, democracy, and the environment. In collaboration with diverse networks and communities, we defend and advance digital rights. Learn more about our work at engagemedia.org.

About Sinar Project

Sinar Project is a civic tech initiative that uses open technology, open data, and policy analysis to systematically make important information public and more accessible to the Malaysian people. It aims to improve governance and encourage greater citizen involvement in the public affairs of the nation by making the Parliament and the Malaysian Government more open, transparent, and accountable. More information is available at sinarproject.org.

How to Use This Report

Recommendations to audience:
- Supporting evidence of internet censorship
- Understanding what is the latest development of internet censorship in the country, in terms of methods of blockings and the websites affected by censorship
- Policy advocacy
- Call for action

This report is not meant to provide comparison of measurements across countries or measurements among different website categories.

<u>Abbreviations</u>

ALDR	Alcohol & Drugs
ANON	Anonymization and circumvention tools
ASN	Autonomous System Number
COMT	Communication Tools
CTRL	Control content
CULTR	Culture
DNS	Domain Name System
COMM	E-commerce
ECON	Economics
ENV	Environment
FILE	File-sharing
GMB	Gambling
GAME	Gaming
GOVT	Government
HACK	Hacking Tools
HATE	Hate Speech
HOST	Hosting and Blogging Platforms
HUMR	Human Rights Issues
HTTP	Hypertext Transfer Protocol
IGO	Intergovernmental Organizations
ICCPR	International Covenant on Civil and Political Rights
iMAP	Internet Monitoring Action Project
IP	Internet Protocol
ISP	Internet Service Provider
MMED	Media sharing
MISC	Miscellaneous content
NEWS	News Media
DATE	Online Dating
OONI	Open Observatory Network Interference
POLR	Political Criticism
PORN	Pornography
PROV	Provocative Attire

PUBH	Public Health
REL	Religion
SRCH	Search Engines
XED	Sex Education
GRP	Social Networking
MILX	Terrorism and Militants
TCP	Transmission Control Protocol
TLS	Transport Layer Security

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Key Findings

- Websites primarily related to news media, LGBTQ+, pornography, online gambling, and political criticism were found to be blocked in the Philippines.
- Blocking was mainly done through DNS tampering.
- In June 2022, outgoing National Security Adviser Hermogenes Esperon Jr. used the Anti-Terrorism Law as a legal basis to request the NTC to block access to 28 websites allegedly linked to "communist-terrorist" groups. These blockings were found to be consistent with OONI measurements.

Introduction

The socio-political landscape of the Philippines, shaped by leadership transitions and external relationships, has had significant implications for human rights within the country. The Duterte regime's controversial "war on drugs" drew international scrutiny for potential rights abuses, while the Marcos Jr. administration has showcased a mixed approach by improving relations with global powers but facing challenges in domestic inflation and unresolved issues from past administrations. While there are advancements in media freedom under Marcos Jr., concerns around political imprisonment and extrajudicial practices remain, underscoring the complex relationship between politics and human rights in the nation.

Background

Population	115.6 mil (2022)[1]
Internet penetration (% of the population using the internet)	53% (2021)[2]
Mobile subscriptions (per 100 inhabitants)	143 (2021)[3]
Freedom on the Net score	65/100 Partly free (2022)[4]
Religion (% of the population)	Roman Catholicism: 78.8%, Islam: 6.4%, Iglesia ni Cristo: 2.6%, Philippine Independent Church / Aglipayan Church:

[1] World Bank Group (n.d.). Population, total - Philippines. [online] Available at: https://data.worldbank.org/indicator/SP.POP.TOTL?locations=PH.

[2] World Bank Group (n.d.). Individuals using the Internet (% of population) - Philippines. [online] Available at: https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=PH.

[3] World Bank Group (n.d.). Mobile cellular subscriptions (per 100 people) - Philippines. [online] Available at: https://data.worldbank.org/indicator/IT.CEL.SETS.P2?locations=PH.

[4] Freedom House (2022). Philippines: Freedom on the Net 2022 Country Report. [online] Freedom House. Available at: https://freedomhouse.org/country/philippines/freedom-net/2022.

	1.4%, Other Christian Orientations: 1.9%, Other religions: 9% (2020)[5]
ICCPR ratification	Ratified on 23 October 1986[6]
ICESCR ratification	Ratified on 7 June 1974[7]

Social, Political, and Economic Landscape

The Philippines, a vibrant archipelago in Southeast Asia, is currently undergoing significant socio-political shifts. One cannot overlook the shadow of history when discussing the current political climate in the Philippines. With Ferdinand Marcos Jr., the son of the infamous dictator Ferdinand Marcos, ascending to the presidency, there's an undeniable return of one of the nation's most contentious familial legacies. The election of Marcos Jr., buoyed by a flood of online disinformation glorifying his father's rule as a golden age of prosperity, indicates that many in the country may view its past through rose-tinted glasses. However, any nuanced understanding of human rights in the Philippines must factor in the violations that occurred under his father's rule, setting a context against which the current administration's actions will inevitably be measured.

Under the leadership of Marcos Jr., the Philippines has witnessed a marked pivot in foreign relations. A focal point has been the South China Sea, which is a resource-rich territory claimed partly by the Philippines. While the country has historically been caught between the territorial ambitions of China and the strategic interests of the US, it is charting a new course under the current leadership. Marcos Jr.'s decision to summon the Chinese ambassador following an incident where a Chinese coastguard allegedly targeted a Filipino vessel with a "military-grade laser" exemplifies this newfound assertiveness.

Contrastingly, under Duterte, relations with traditional ally the US had soured. But under the new administration, there's a warmer embrace of the US, evident from the Philippines' decision to expand US access to its military bases. This move, coupled with strengthening ties with US allies like Japan and Australia, is part of a multi-pronged strategy aimed at counterbalancing China's dominance. While such alliances might seem primarily strategic, the implications for human rights, especially given the US's controversial history of interventions, warrant close scrutiny.

While foreign policy continues to draw attention, significant human rights concerns are brewing domestically. One of the most pressing issues is the country's economic instability. Marcos Jr.'s promise of reducing the cost of rice to 20 pesos per kilogram remains unfulfilled. Instead, the nation has seen the cost of onions skyrocket to over 700 pesos per kilogram, causing restaurants to omit the vegetable entirely. Such inflation, exacerbated by an inability

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[5] Philippine Statistics Authority (2023). Roman Catholics account for 78.8 percent of the household population. [online] psa.gov.ph. Available at: https://psa.gov.ph/content/religious-affiliation-philippines-2020-census-population-and-housing.
[6] United Nations Office of the High Commissioner for Human Rights (n.d.). Ratification Status for Philippines. [online] Available at: https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=80&Lang=en.
[7] Ibid.

to timely import essential goods, directly infringes upon the citizens' right to a decent standard of living.

Beyond economic woes, the education sector remains severely stretched. This could potentially lead to disparities in educational access and further impinge on human rights.

Yet, it's the enduring shadow of Duterte's notorious "war on drugs" that poses the gravest human rights concern. This campaign, responsible for an estimated 30,000 deaths, stands as a grim testament to unchecked abuses of power. Although there is a shift in rhetoric, Marcos Jr.'s approach hasn't significantly altered the ground realities. Over 300 drug-related deaths have been recorded since he assumed office, suggesting continuity of the previous regime's brutal methods.

When Duterte was in power, media freedom in the Philippines was under siege. High-profile journalists, such as Nobel laureate Maria Ressa, faced legal challenges, and the country's largest broadcaster, ABS-CBN, was forced off-air. Though Marcos Jr.'s administration has seen the Philippines' rank improve on the World Press Freedom Index, from 147th to 132nd, the challenges persist. The subtle shift in the administration's attitude is encouraging, but consistent ground-level actions are needed for genuine media freedom to thrive.

The socio-political terrain of the Philippines, steeped in historical legacies and undergoing significant diplomatic reconfigurations, profoundly impacts its human rights landscape. The interplay between past shadows, present challenges, and future aspirations creates a complex tapestry. As the nation charts its path forward, it is crucial to ensure a harmonious balance between sovereignty and the inalienable rights of its citizens. While some shifts under the new leadership are commendable, a more comprehensive, action-oriented approach is essential to genuinely safeguard and champion human rights.

Legal Environment

1987 Constitution

Article III of the 1987 Constitution of the Philippines guarantees a set of fundamental liberties, including the rights to privacy of communication and correspondence (section 3); to freedom of speech, of expression, or of the press (section 4); to information (section 7); and others.

Revised Penal Code

The guarantee for freedom of the press is provided for in the 1987 Constitution. In practice, however, journalists in the Philippines who are critical of politicians often face the threat of criminal defamation. Libel laws are frequently used to harass, intimidate, and bully journalists who expose misconduct by public officials. The Revised Penal Code (RPC) provides for a prescription period of one year for libel, which upon conviction may result in imprisonment of up to six years and a fine of up to 6,000 pesos.

Cybercrime Prevention Act 2012

The Cybercrime Prevention Act, passed in 2012, does not specify a prescription period for cyberlibel. Since this law imposes a higher penalty for similar convictions than that in the RPC, the Department of Justice has interpreted the prescription period for the offence as 12 years.[8] The case of Maria Ressa and Reynaldo Santos Jr from the Rappler news website has become one of the most notable cyberlibel cases in recent years.[9] The charge against Ressa, Santos Jr, and Rappler and their subsequent conviction in 2020 drew criticism from local and international human rights organisations.[10] Similarly, in June 2022, a public official filed cyberlibel complaints against journalists from seven media outlets that reported about his involvement in a graft complaint; these cyberlibel complaints have since been dropped.[11]

Data Privacy Act 2012

The Data Privacy Act 2012, which provides for the protection of personal data in the Philippines, came into effect in September 2016 after the establishment of the National Privacy Commission (NPC) and the promulgation of implementing rules and regulations of the Act.

The law covers the rights of individuals and the obligations of organisations with regard to the collection, storage, use, disclosure, retention, and disposal of personal data.[12] It also sets out penalties for violating the data protection law, including fines of 100,000 to 5 million pesos, imprisonment from 6 months to 7 years, and if applicable, disqualification from public office. The law has extraterritorial application when the data subject is a Philippine resident or the data processor is an entity with links to the Philippines.

Anti-Online Sexual Abuse and Exploitation of Children (OSAEC) 2022

The Anti-Online Sexual Abuse and Exploitation of Children (OSAEC) Act, which lapsed into law in July 2022, imposes a set of new duties and obligations on social media platforms, electronic service providers, internet providers, and financial intermediaries to prevent child pornography.[13] This is on top of the Anti-Child Pornography Act 2009, which defines the

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[8] Buan, L. (2019, February 14). DOJ: You can be sued for cyber libel within 12 years of publication. Rappler. https://www.rappler.com/nation/223517-doj-says-people-can-be-sued-cyber-libel-12-years-after-publication/

[9] Ratcliffe, R. (2020, June 15). Journalist Maria Ressa found guilty of "cyberlibel" in Philippines. The Guardian. https://www.theguardian.com/world/2020/jun/15/maria-ressa-rappler-editor-found-guilty-of-cyber-libel-charges-in-philippines

[10] Regencia, T. (2020, June 15). Maria Ressa found guilty in blow to Philippines' press freedom. Www.aljazeera.com. https://www.aljazeera.com/news/2020/6/15/maria-ressa-found-guilty-in-blow-to-philippines-press-freedom

[11] Cusi drops libel case vs. news orgs, journalists. (2022, June 24). CNN Philippines. https://www.cnnphilippines.com/news/2022/6/24/Cusi-drops-libel-case.html

[12] Data Privacy Act, (2012). https://www.privacy.gov.ph/data-privacy-act/

[13] Moaje, M. (2022, August 4). Internet now safer for kids with anti-online sexual abuse law. Philippine News Agency. https://www.pna.gov.ph/articles/1180657

offence, sets out the punishments for it, and provides for the powers of the internet regulator in handling child pornography.[14]

SIM Registration Act 2022

In September 2022, the Philippine Congress passed the SIM registration bill mandating the identity registration of all mobile subscribers with the aim of curbing "illegal and malicious use" of the mobile network.[15] Newly-elected President Marcos Jr. signed the SIM Registration Act into law in October 2022, and the law came into effect with the promulgation of its implementing rules and regulations in December 2022.

Under this new law, mobile operators may only sell deactivated prepaid SIM cards. To activate a SIM card, end-users must register by submitting their government-issued photo identification with a selfie. Existing prepaid subscribers were given until the end of July 2023 to register their SIM card or risk termination of their subscription. The law imposes a range of penalties, including fines and imprisonment for failure to register SIM cards, breach of user confidentiality, and registration using false information. The previous version of the law vetoed by former President Duterte included provisions requiring the registration of social media accounts. Citing risks of privacy intrusion and personal data breach, civil society groups in the Philippines have strongly opposed the SIM registration law.

Reported Cases of Internet Censorship

In June 2022, outgoing National Security Adviser Hermogenes Esperon Jr. used the Anti-Terrorism Law as a legal basis to request the NTC to block access to 28 websites allegedly linked to "communist-terrorist" groups.[16] Among the sites that Esperon requested blocked were those of alternative and independent news organisations Bulatlat and Pinoy Weekly, and progressive groups Save Our Schools Network, Rural Missionaries of the Philippines, Pamalakaya Pilipinas, and BAYAN.

In July 2022, [Bulatlat filed a civil suit to compel NTC to unblock its website](). The court granted a preliminary prohibitory injunction in August 2022 restraining NTC from enforcing the memorandum on Bulatlat pending a later determination of the legality of the block. The Bulatlat website was only unblocked after it filed for contempt of court against the NTC for failing to comply with the injunction. In October 2022, [NTC filed an appeal in its attempt to lift the injunction but failed]().

Network Landscape

Most ISPs in the Philippines are publicly listed corporations. Singapore state-owned telco Singtel has minority ownership of Globe, while Japanese government-linked NTT owns a significant stake in PLDT. China's state-owned telco, China Telecom, owns 40% of the

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[14] Anti-Child Pornography Act, (2009). https://lawphil.net/statutes/repacts/ra2009/ra_9775_2009.html
[15] https://www.officialgazette.gov.ph/downloads/2022/10oct/20221010-RA-11934-FRM.pdf
[16] Buan, L. (2022, June 22). Esperon uses anti-terror law to block websites including news site. Rappler. https://www.rappler.com/nation/esperon-uses-anti-terror-law-block-access-progressive-websites-including-news-organization/

newcomer, Dito Telecommunity. In March 2022, the government lifted the 40% foreign ownership restriction, thus allowing foreign investors to acquire controlling stakes in Philippine telecommunications and transport companies.[17] The government has also eased right-of-way rules to allow mobile operators to expand 5G infrastructure in the Philippines. The introduction of DITO to break the duopoly in the Philippine telecommunications industry has led to a generally positive response from consumers.[18]

Findings on Internet Censorship in the Philippines

All of the findings are based on data collected through OONI from 1 July 2022 to 30 June 2023.

Blocking of Websites

Throughout the one-year period, approximately 2.2 million measurements from 2,273 websites were tested on the OONI Probe. For the purpose of this study, these measurements are grouped into the following classifications:

- **Measured or Measurement Counts:** Refers to the total number of measurements collected through the OONI Probe.
- **Blocked**: Refers to "Confirmed Blocked" in OONI measurements, which are measurements from websites that are automatically confirmed to be blocked (e.g., a block page was served).
- **Likely Blocked**: Refers to "Anomaly" and "Failure" in OONI measurements. Anomalies are measurements that show signs of potential blocking; however, false positives can occur, Failures refer to Failed experiments in OONI testing, although they can sometimes be symptomatic of censorship.

	Jul-Sep 2022	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023	Total
Measured	321,711	541,266	689,530	612,820	2,165,346
Blocked	0	0	158	346	499
Block rate	0.00%	0.00%	0.02%	0.06%	0.00%
Input	2,117	2,027	2,004	2,037	2,273
ASNs	19	20	19	18	33

Table 1: Summary of OONI web connectivity measurements for the Philippines from 1 July 2022 to 30 June 2023

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[17] Venzon, C. (2022, March 22). Philippines allows foreigners to own telcos, airlines and railways. Nikkei Asia. https://asia.nikkei.com/Economy/Philippines-allows-foreigners-to-own-telcos-airlines-and-railways
[18] https://www.ookla.com/articles/philippines-mobile-performance-q1-2022

These measurements were analysed using the heuristics stated in Annexe IV. It was found that there were 30 confirmed blocked websites, of which 14 were confirmed by OONI and 16 were confirmed by heuristics. Additionally, 20 websites were confirmed to be blocked based on news reports during the reporting period together with OONI data. The full list of these confirmed blocked websites is found in Annexe I.

Category	Category description	Measured	Blocked & Likely Blocked	Rate of Blocked & Likely Blocked
ALDR	Alcohol & Drugs	31,432	636	2.00%
ANON	Anonymization and circumvention tools	155,793	9,746	6.30%
COMM	E-commerce	13,149	172	1.30%
COMT	Communication Tools	146,304	3,052	2.10%
CTRL	Control content	28,827	168	0.60%
CULTR	Culture	62,124	675	1.10%
DATE	Online Dating	27,341	1,694	6.20%
ECON	Economics	20,526	1,142	5.60%
ENV	Environment	57,632	1,626	2.80%
FILE	File-sharing	43,634	2,781	6.40%
GAME	Gaming	15,095	84	0.60%
GMB	Gambling	34,311	2,486	7.20%
GOVT	Government	24,363	3,381	13.90%
GRP	Social Networking	217,912	4,535	2.10%
HACK	Hacking Tools	24,042	1,533	6.40%
HATE	Hate Speech	8,163	69	0.80%
HOST	Hosting and Blogging Platforms	118,305	4,526	3.80%
HUMR	Human Rights Issues	242,908	11,681	4.80%
IGO	Intergovernmental Organisations	4,801	25	0.50%
LGBT	LGBTQ+	134,949	2,765	2.00%
MILX	Terrorism and Militants	15,666	5,302	33.80%
MISC	Miscellaneous content	1,512	5	0.30%
MMED	Media sharing	92,606	2,196	2.40%
NEWS	News Media	299,969	7,834	2.60%
POLR	Political Criticism	78,389	12,226	15.60%
PORN	Pornography	59,396	12,213	20.60%
PROV	Provocative Attire	9,822	101	1.00%
PUBH	Public Health	56,836	3,099	5.50%

Category	Category description	Measured	Blocked & Likely Blocked	Rate of Blocked & Likely Blocked
REL	Religion	69,430	3,414	4.90%
SRCH	Search Engines	38,223	1,701	4.50%
XED	Sex Education	27,486	1,111	4.00%

Table 2: Summary of OONI web connectivity measurements for the Philippines from 1 July 2022 to 30 June 2023 by category

Note: Blocked and likely blocked measurements include Confirmed Blocked, Anomaly and Failures on OONI measurements

The sections below discuss the blocking of websites based on certain categories and events relevant to the Philippines.

News Media

OONI Probe measurements did not identify the blocking of any news sites in the Philippines. However, heuristic analysis of the 7,834 measurements found that two news websites were blocked by the same ISP during the reporting period.

Domain	Input	Blocking ISP	
edgedavao.net	https://edgedavao.net/	AS56099	OONI Explorer
www.philstar.com	http://www.philstar.com/	AS56099	OONI Explorer

Additionally, the reported blocking of three news media sites was confirmed by news reports together with OONI measurements. News reports mentioned that these websites were blocked, and the OONI probe showed either anomalies or failures for these sites throughout the reporting period.

These independent news websites were targeted in a June 2022 memo where the National Security Council (NSC) directed the National Telecommunications Commission (NTC) to order ISPs to block 26 websites purported to be linked to "communist terrorist groups".[19]

Domain	Input	
bulatlat.com	https://bulatlat.com/	OONI Explorer
	https://www.bulatlat.com/	OONI Explorer
pinoyweekly.org	https://pinoyweekly.org/	OONI Explorer
www.counterpunch.org	https://www.counterpunch.org/	OONI Explorer

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[19] Raymond Carl Dela Cruz (2022, June 22). *NTC orders ISPs to block terror group-related sites.* https://www.pna.gov.ph/articles/1177276

LGBTQ+

None of the 134,949 measurements of websites related to LGBTQ+ could be confirmed to be blocked using the OONI Probe. However, based on heuristic analysis of these measurements, eight websites were found to be blocked by the same ISP during the reporting period. These websites contain entertainment news, advocacy materials, self-help guides, and other resources targeted at the LGBTQ+ community.

Domain	Input	Blocking ISP	
www.ifge.org	http://www.ifge.org/	AS56099	OONI Explorer
www.newnownext.com	http://www.newnownext.com/	AS56099	OONI Explorer
	http://www.newnownext.com/franchise/the-backlot/	AS56099	OONI Explorer
www.planetromeo.com	https://www.planetromeo.com/	AS56099	OONI Explorer
www.queernet.org	http://www.queernet.org/	AS56099	OONI Explorer
www.queerty.com	https://www.queerty.com/	AS56099	OONI Explorer
www.samesexmarriage.ca	http://www.samesexmarriage.ca/	AS56099	OONI Explorer
www.shoe.org	https://www.shoe.org/	AS56099	OONI Explorer
www.thegailygrind.com	http://www.thegailygrind.com/	AS56099	OONI Explorer

Pornography

Out of 59,396 measurements of websites related to pornography, the OONI Probe confirmed seven to be blocked via DNS tampering by two ISPs during the reporting period.

Domain	Input	Blocking ISP	
deviantclip.com	http://deviantclip.com/	AS10139, AS9299	OONI Explorer
jizzhut.com	http://jizzhut.com/	AS9299	OONI Explorer
motherless.com	http://motherless.com/	AS9299	OONI Explorer
porn.com	http://porn.com/	AS9299	OONI Explorer
xhamster.com	https://xhamster.com/	AS9299	OONI Explorer
xnxx.com	https://xnxx.com/	AS9299	OONI Explorer
youjizz.com	http://youjizz.com	AS9299	OONI Explorer

Through heuristic analysis of the measurements, one website was found to be blocked during the same period.

Domain	Input	Blocking ISP	
nuuporn.com	http://nuuporn.com/	AS56099	OONI Explorer

Gambling

Out of 34,311 measurements of websites related to gambling, the OONI Probe confirmed four websites and five inputs to be blocked via DNS tampering by the same ISPs during the reporting period.

Domain	Input	Blocking ISP	
www.888casino.com	http://www.888casino.com/	AS9299	OONI Explorer
	https://www.888casino.com/	AS9299	OONI Explorer
www.goldenpalace.com	https://www.goldenpalace.com/	AS9299	OONI Explorer
www.partypoker.com	http://www.partypoker.com/	AS9299	OONI Explorer
www.pokerstars.com	http://www.pokerstars.com/	AS9299	OONI Explorer

Through heuristic analysis of the same set of measurements, one website was found to be blocked by the same ISP during the same period.

Domain	Input	Blocking ISP	
www.betfair.com	http://www.betfair.com/	AS9299	OONI Explorer

Political Criticism

Out of 78,389 measurements of websites related to political criticism, the OONI Probe confirmed one to be blocked by four ISPs during the reporting period. Until September 2018, the website aggregated live-streaming feeds of the Occupy protest movement from around the world. It has since been used for domain parking, content farms, and other content unrelated to the Occupy movement.

Domain	Input	Blocking ISP	
occupystreams.org	https://occupystreams.org/	AS17639, AS132199, AS9299, AS56099	OONI Explorer

Additionally, the reported blocking of six political criticism sites was confirmed by news reports as well as OONI measurements. News reports mentioned that these websites were blocked, and the OONI probe showed either anomalies or failures for these sites throughout the reporting period.

These websites, which belong to various anti-government groups, were targeted in a June 2022 memo where the National Security Council (NSC) directed the National Telecommunications Commission (NTC) to order ISPs to block 26 websites purported to be linked to "communist terrorist groups".[20]

Domain	Input	
partisan-news.blogspot.com	http://partisan-news.blogspot.com/	OONI Explorer
angpamalakaya.org	https://angpamalakaya.org/	OONI Explorer
hiyaw.net	https://hiyaw.net/	OONI Explorer
ilps.info	https://ilps.info/	OONI Explorer
pamalakayaweb.wordpress.com	https://pamalakayaweb.wordpress.com/	OONI Explorer
umapilipinas.wordpress.com	https://umapilipinas.wordpress.com/	OONI Explorer

Blocking of Instant Messaging Apps

The OONI Probe measurements examined the reachability of instant messaging services and did not find any significant evidence of network tampering for Facebook Messenger, Telegram, Signal, and WhatsApp throughout the testing period.

	Facebook Messenger	Signal	Telegram	WhatsApp
Total Measurements	19,746	11,820	21,830	21,853
Percentage of blocked and likely blocked	0.3%	0.8%	0.5%	0.4%

Note: Failed measurements are discarded from this table.

As the updates on these instant messaging apps are beyond OONI's control, the OONI Probe may experience issues in testing due to app changes that happen from time to time. Hence, failed measurements or anomalies that were identified as false positives were discarded from the table. In particular, these include measurements from the following tests and periods:
- Signal: 4-30 May 2023
- Facebook Messenger: 2 June 2023 onwards

Blocking of Circumvention Tools

The OONI Probe measurements examining the reachability of circumvention tools did not find any significant evidence of network tempering of Tor, Tor Snowflake, and Vanilla Tor throughout the testing period. However, the Psiphon test found a significant level of

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[20] Raymond Carl Dela Cruz (2022, June 2022). *NTC orders isps to block terror group-related sites.* https://www.pna.gov.ph/articles/1177276

anomalies (over 99%) during the testing period, which should be investigated further to rule out any blocking in the Philippines.

	Psiphon	Tor	Tor Snowflake	Vanilla Tor
Total Measurements	21,819	21,699	11,541	11,452
Percentage of blocked and likely blocked	99.8%	3.3%	10.6%	0.0%

Note: Failed measurements are discarded from this table.

Acknowledgement of Limitations

- **Period of study**
  This study's findings are limited to network measurements collected from 1 July 2022 to 30 June 2023 in order to examine the most recent censorship trends and events.

- **Vantage points**
  Although the network measurements were collected from 33 vantage points in the Philippines, testing using the OONI software was not done consistently across all networks.

- **Use of input/URL as unit of measurement of websites**
  In general, URL (or in OONI's terms – input) and domain are interchangeable terms used to refer to a website. In the OONI test list, full URLs are input in the probe to be tested for censorship, similar to an URL starting with "https" or "http" in a browser. The censorship can involve tampering of DNS, HTTP, or other types of censorship. Depending on the method, the blocking can either be at the URL or domain level. However when analysing results on OONI, the reader needs to note that there are differences in the numbers with respect to the specific input or domain.

  In the 2022 report, domain was used as a unit of measurement of a website so as to reduce duplicates when measuring the number of websites blocked. For this 2023 report, however, input is used instead as it may give more context as to why the web page is blocked. The findings would also be categorised more accurately according to the CitizenLab test lists, which are in URL format. To better understand the findings on the state of censorship, we used percentage of blocked or likely blocked instead of actual counts based on OONI test results.

- **Differences in numbers with OONI data**
  The findings in this report have been further processed from OONI's data whereby more confirmed blockings were obtained and false ones eliminated through additional heuristics and manual verification by iMAP researchers based on country

or local context. While these heuristics will eventually be added to OONI's fingerprints, OONI will only process them for future testing.

Additionally, iMAP researchers have categorised blocked websites that were not part of the CitizenLab test lists but were tested on OONI via custom test lists.

Hence the figures in this report may differ to results on the OONI Explorer.

- **Testing of instant messaging apps and circumvention tools**
  The instant messaging apps and circumvention tools used in this report are limited to those tested on OONI. Therefore, they may not reflect the state of censorship of apps more commonly used in the Philippines.

Conclusion

The three categories with the highest rate of blocked or likely blocked websites are Pornography, Political Criticism, and Military and Terrorism.

For these websites, the ISPs mostly use DNS tampering, whereby they redirect the DNS query to a government block page or an NXDOMAIN error.

In June 2022, outgoing National Security Adviser Hermogenes Esperon Jr. used the Anti-Terrorism Law as a legal basis to request the NTC to block access to 28 websites allegedly linked to "communist-terrorist" groups. Among the sites that Esperon requested blocked were those of alternative and independent news organisations Bulatlat and Pinoy Weekly, and progressive groups Save Our Schools Network, Rural Missionaries of the Philippines, Pamalakaya Pilipinas, and BAYAN. These blockings were found to be consistent with OONI measurements, although they did not show the same government block page as the other blocked websites.

Contribute to the study

There are various ways one may contribute to the OONI measurements:

- Testing: You may test on various platforms, both on Mobile (iOS and Android) and Desktop, including on the CLI on Linux platforms. The domains you test can be either randomly selected from the Citizenlab Test Lists or custom test lists specific to your needs.
- Contribute to the test lists: You can contribute to the test lists on GitHub or on OONI.
- Translation: Translate the OONI Probe to your local language here.
- Join the community: Participate in community discussions on the OONI Slack channel.

Acknowledgements

We extend our gratitude to local partners, activists, academicians, researchers, and anonymous users in the Philippines for their assistance in running the OONI Probe.

Annexe I: List of confirmed blockings

	Domain	Input	Category	Confirmed By	Blocking ISP	
1	100webspace.com	https://www.100webspace.com/	HOST	Heuristics	AS56099	OONI Explorer
2	888casino.com	https://www.888casino.com/	GMB	Heuristics	AS9299	OONI Explorer
		http://www.888casino.com/	GMB	OONI Probe & Heuristics	AS9299	OONI Explorer
3	amihanwomen.org	https://amihanwomen.org/	HUMR	News Report		OONI Explorer
4	angpamalakaya.org	https://angpamalakaya.org/	POLR	News Report		OONI Explorer
5	asstr.org	https://www.asstr.org/	CULTR	Heuristics	AS9299	OONI Explorer
6	betfair.com	http://www.betfair.com/	GMB	Heuristics	AS9299	OONI Explorer
7	bulatlat.com	https://bulatlat.com/	NEWS	News Report		OONI Explorer
		https://www.bulatlat.com/	NEWS	News Report		OONI Explorer
8	compatriotsndf.wordpress.com	https://compatriotsndf.wordpress.com/	MILX	News Report		OONI Explorer
9	counterpunch.org	https://www.counterpunch.org/	NEWS	News Report		OONI Explorer
10	cpp.ph	https://cpp.ph/	MILX	News Report		OONI Explorer
11	deviantclip.com	http://deviantclip.com/	PORN	OONI Probe & Heuristics	AS10139, AS9299	OONI Explorer
12	edgedavao.net	https://edgedavao.net/	NEWS	Heuristics	AS56099	OONI Explorer
13	epa.gov	https://www.epa.gov/	GOVT	OONI Probe	17639	OONI Explorer
14	goldenpalace.com	https://www.goldenpalace.com/	GMB	OONI Probe & Heuristics	AS9299	OONI Explorer
15	hiyaw.net	https://hiyaw.net/	POLR	News Report		OONI Explorer
16	ifge.org	http://www.ifge.org/	LGBT	Heuristics	AS56099	OONI

	Domain	Input	Category	Confirmed By	Blocking ISP	
						Explorer
17	ilps.info	https://ilps.info/	POLR	News Report		OONI Explorer
18	ipfs.io	https://ipfs.io/	FILE	Heuristics	AS56099	OONI Explorer
19	jizzhut.com	http://jizzhut.com/	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer
20	josemariasison.org	https://josemariasison.org/	MILX	News Report		OONI Explorer
21	liberation.ndfp.org	https://liberation.ndfp.org/	MILX	News Report		OONI Explorer
22	motherless.com	http://motherless.com/	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer
23	ndfp.org	https://ndfp.org/	MILX	News Report		OONI Explorer
24	newnownext.com	http://www.newnownext.com/	LGBT	Heuristics	AS56099	OONI Explorer
		http://www.newnownext.com/franchise/the-backlot/	LGBT	Heuristics	AS56099	OONI Explorer
25	nuuporn.com	http://nuuporn.com/	PORN	Heuristics	AS56099	OONI Explorer
26	occupystreams.org	https://occupystreams.org/	POLR	OONI Probe	17639, 132199, 9299, 56099	OONI Explorer
27	pamalakayaweb.wordpress.com	https://pamalakayaweb.wordpress.com/	POLR	News Report		OONI Explorer
28	partisan-news.blogspot.com	http://partisan-news.blogspot.com/	POLR	News Report		OONI Explorer
29	partypoker.com	http://www.partypoker.com/	GMB	OONI Probe & Heuristics	AS9299	OONI Explorer
30	philstar.com	http://www.philstar.com/	NEWS	Heuristics	AS56099	OONI Explorer
31	pinoyweekly.org	https://pinoyweekly.org/	NEWS	News Report		OONI Explorer
32	planetromeo.com	https://www.planetromeo.com/	LGBT	Heuristics	AS56099	OONI Explorer
33	pokerstars.com	http://www.pokerstars.com/	GMB	OONI Probe & Heuristics	AS9299	OONI Explorer
34	porn.com	http://porn.com/	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer

	Domain	Input	Category	Confirmed By	Blocking ISP	
35	prwcinfo.wordpress.com	https://prwcinfo.wordpress.com/	MILX	News Report		OONI Explorer
36	queernet.org	http://www.queernet.org/	LGBT	Heuristics	AS56099	OONI Explorer
37	queerty.com	https://www.queerty.com/	LGBT	Heuristics	AS56099	OONI Explorer
38	rctundfp.wordpress.com	https://rctundfp.wordpress.com/	MILX	News Report		OONI Explorer
39	religioustolerance.org	http://www.religioustolerance.org/	HUMR	Heuristics	AS56099	OONI Explorer
40	rmp-national.weebly.com	https://rmp-national.weebly.com/	HUMR	News Report		OONI Explorer
41	ruralmissionaries.wordpress.com	https://ruralmissionaries.wordpress.com/	REL	News Report		OONI Explorer
42	samesexmarriage.ca	http://www.samesexmarriage.ca/	LGBT	Heuristics	AS56099	OONI Explorer
43	saveourschoolsnetwork.wordpress.com	https://saveourschoolsnetwork.wordpress.com/	HUMR	News Report		OONI Explorer
44	shoe.org	https://www.shoe.org/	LGBT	Heuristics	AS56099	OONI Explorer
45	thegailygrind.com	http://www.thegailygrind.com/	LGBT	Heuristics	AS56099	OONI Explorer
46	trendsmap.com	https://trendsmap.com	GRP	Heuristics	AS9299	OONI Explorer
		https://www.trendsmap.com/	GRP	OONI Probe & Heuristics	AS10139, AS9299	OONI Explorer
47	umapilipinas.wordpress.com	https://umapilipinas.wordpress.com/	POLR	News Report		OONI Explorer
48	xhamster.com	https://xhamster.com/	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer
49	xnxx.com	https://xnxx.com/	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer
50	youjizz.com	http://youjizz.com	PORN	OONI Probe & Heuristics	AS9299	OONI Explorer

Annexe II: List of ISPs

	ASN	ASN Name	Ownership/ Description	Registration Country	Measurement Count
1	AS3842	RAMNODE	InMotion Hosting, Inc.	US	1
2	AS4775	GLOBE-TELECOM-AS	Globe Telecoms	PH	24278
3	AS9009	M247	M247 Europe SRL	RO	5937
4	AS9299	IPG-AS-AP	Philippine Long Distance Telephone Company	PH	480483
5	AS9658	ETPI-IDS-AS-AP	Eastern Telecoms Phils., Inc.	PH	1829
6	AS9927	PHILCOMNET-PH	A Multihomed ISP Company	PH	622
7	AS10139	SMARTBRO-PH-AP	Smart Broadband, Inc.	PH	20376
8	AS17639	CONVERGE-AS	Converge ICT Solutions Inc.	PH	361595
9	AS21859	ZEN-ECN,	Zenlayer Inc	US	299
10	AS23930	IPVG-AS-AP	IP-Converge Data Center, Inc.	PH	178
11	AS23944	SKYBB-AS-AP	SKYBroadband SKYCable Corporation	PH	263705
12	AS36384	GOOGLE-IT	Google LLC	US	3767
13	AS36666	GTCOMM	GloboTech Communications	CA	1410
14	AS38553	DCTECHDVO-AS-AP	Dctech Micro Services	PH	9470
15	AS45754	CLEARPATH-AS-AP	Clear Path Networks Inc	PH	900
16	AS55821	RADIUSTELECOMS-AS-AP	RADIUS TELECOMS, INC.	PH	1831
17	AS56099	AVCHI-CLICK-AS-AP	Asian Vision Cable	PH	713812
18	AS56262	USATV-DAGUPAN-AS-AP	Dagupan Urban Satellite Vision Inc.	PH	6472
19	AS63848	DLS-CSB-PH	De La Salle-College of Saint Benilde	PH	140
20	AS132199	GLOBE-MOBILE-5TH-GEN-AS	Globe Telecom Inc.	PH	183838
21	AS132400	CCVC-AS-AP	COMMUNITY CABLE VISION CORPORATION	PH	148

	ASN	ASN Name	Ownership/ Description	Registration Country	Measurement Count
22	AS133623	PLANETCABLETV-AS-AP	Planet Cable Inc.	PH	24
23	AS134687	TWIDC-AS-AP	TWIDC Limited, HK	HK	55499
24	AS134707	RCC-AS-AP	RoyalCable Flash	PH	711
25	AS135345	NEWMOUNTAIN VIEW-PH	NewMountainView Satellite Corporation	PH	19
26	AS135582	GCC-AS-AP	Galaxy Cable Corp.	PH	300
27	AS136515	DCSI-AS-AP	Dasca Cable Services, Inc.	PH	23450
28	AS137184	SUNIWAYTELECOM-AS-AP	Suniway Group of Companies Inc.	PH	100
29	AS137409	GSLNETWORKS-AS-AP	GSL Networks Pty LTD, AU	AU	20
30	AS138965	SSTI-AS-AP	Streamtech Systems Technologies Inc.	PH	1
31	AS139831	DTC-AS-AP	DITO TELECOMMUNITY CORP.	PH	184
32	AS142002	SCLOUDPTELTD-AS	Scloud Pte Ltd, SG	SG	25
33	AS142424	UCNI-AS-AP	Unique Cable Network, Inc.	PH	3922

Annexe III: Glossary

DNS	DNS stands for "Domain Name System" and it maps domain names to IP addresses.
	A domain is a name that is commonly attributed to websites when they're created. It allows websites to be more easily accessed and remembered. For example, twitter.com is the domain of the Twitter website.
	However, computers can't connect to internet services through domain names. They do so through IP addresses: the digital address of each service on the internet. Similarly, in the physical world, you would need the address of a house (rather than the name of the house itself) in order to visit it.

	The Domain Name System (DNS) is responsible for transforming a human-readable domain name (such as ooni.org) into its numerical IP address counterpart (in this case:104.198.14.52), thus allowing your computer to access the intended website.
HTTP	The Hypertext Transfer Protocol (HTTP) is the underlying protocol used by the World Wide Web to transfer or exchange data across the internet. The HTTP protocol allows communication between a client and a server. It does so by handling a client's request to connect to a server and the server's response to the client's request. All websites include an HTTP or HTTPS prefix (such as http://example.com/) so that your computer (the client) can request and receive the content of a website (hosted on a server). The transmission of data over the HTTP protocol is unencrypted.
Heuristics	Heuristics obtain further confirmed blockings other than those which are detected based on OONI blocking fingerprints. More detailed explanation is found here.
ISP	An Internet Service Provider (ISP) is an organisation that provides services for accessing and using the internet. ISPs can be state-owned, commercial, community-owned, non-profit, or otherwise privately owned. Vodafone, AT&T, Airtel, and MTN are examples of ISPs.
Middle boxes	A middlebox is a computer networking device that transforms, inspects, filters, or otherwise manipulates traffic for purposes other than packet forwarding. Many Internet Service Providers (ISPs) around the world use middleboxes to improve network performance, provide users with faster access to websites, and for a number of other networking purposes. Middleboxes are sometimes also used to implement internet censorship and/or surveillance. The OONI Probe app includes two tests designed to measure networks with the aim of identifying the presence of middleboxes.
TCP	The Transmission Control Protocol (TCP) is one of the main protocols on the internet. To connect to a website, your computer needs to establish a TCP connection to the address of that website. TCP works on top of the Internet Protocol (IP), which defines how to address computers on the internet.

	When speaking to a machine over the TCP protocol you use an IP and port pair, which looks something like this: 10.20.1.1:8080. The main difference between TCP and (another very popular protocol called) UDP is that TCP has the notion of a "connection", making it a "reliable" transport protocol.
TLS	Transport Layer Security (TLS) – also referred to as SSL – is a cryptographic protocol that allows you to maintain a secure, encrypted connection between your computer and an internet service. When you connect to a website through TLS, the address of the website will begin with HTTPS (such as https://www.facebook.com/), instead of HTTP.

A comprehensive glossary related to OONI can be accessed here: https://ooni.org/support/glossary/.

Annexe IV: Methodology

Data

Data computed based on the heuristics for this report can be downloaded here: https://github.com/Sinar/imap-data, whereas aggregated data can be downloaded from OONI Explorer.

Coverage

The iMAP State of Internet Censorship Country Report covers the findings of network measurements collected through the Open Observatory of Network Interference (OONI) OONI Probe App that measures the blocking of websites, instant messaging apps, circumvention tools, and network tampering. The findings highlight the websites, instant messaging apps, and circumvention tools confirmed to be blocked, as well as ASNs with censorship detected and the methods of network interference applied. The report also provides background context on the network landscape combined with the latest legal, social, and political issues and events, which might have affected the implementation of internet censorship in the country.

In terms of timeline, this iMAP report covers measurements obtained in the one-year period from 1 July 2022 to 30 June 2023. The countries covered in this round are Cambodia, Hong Kong, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam, Timor Leste, and India.

How are the network measurements gathered?

Network measurements are gathered through the use of the OONI Probe app, a free software tool developed by the Open Observatory of Network Interference (OONI). To learn more about how the OONI Probe test works, please visit https://ooni.org/nettest/.

iMAP Country Researchers and anonymous volunteers run the OONI Probe app to examine the accessibility of websites included in the Citizen Lab test lists. iMAP Country Researchers actively review the country-specific test lists to ensure up-to-date websites are included and context-relevant websites are properly categorised, in consultation with local communities and digital rights network partners. We adopt the approach taken by Netalitica in reviewing country-specific test lists.

It is important to note that the findings are only applicable to the websites that were examined and do not fully reflect all instances of censorship that might have occurred during the testing period.

How are the network measurements analysed?

OONI processes the following types of data through its data pipeline:

Country code

By default, OONI collects the code corresponding to the country from which the user is running OONI Probe tests from. It does so by automatically searching for it based on the user's IP address through their ASN database and the MaxMind GeoIP database.

Autonomous System Number (ASN)

By default, OONI collects the Autonomous System Number (ASN) of the network used to run the OONI Probe app, thereby revealing the network provider of a user.

Date and time of measurements

By default, OONI collects the time and date of when tests were run in order to determine when network interferences occur and to allow for comparison across time. The time and date data uses UTC as the standard time zone. In addition, the charts generated on OONI MAT exclude measurements on the last day by default.

Categories

The 32 website categories are based on the Citizenlab test lists: https://github.com/citizenlab/test-lists. As not all websites tested on OONI are on these test lists, some websites would have unclassified categories.

No.	Category Description	Code	Description
1	Alcohol & Drugs	ALDR	Sites devoted to the use, paraphernalia, and sale of drugs and alcohol irrespective of the local legality.
2	Religion	REL	Sites devoted to discussion of religious issues, both supportive and critical, as well as discussion of minority religious groups.
3	Pornography	PORN	Hard-core and soft-core pornography.
4	Provocative Attire	PROV	Websites which show provocative attire and portray women in a sexual manner, wearing minimal clothing.
5	Political Criticism	POLR	Content that offers critical political viewpoints. Includes critical authors and bloggers, as well as oppositional political organisations. Includes pro-democracy content, anti-corruption content as well as content calling for changes in leadership, governance issues, legal reform. Etc.

No.	Category Description	Code	Description
6	Human Rights Issues	HUMR	Sites dedicated to discussing human rights issues in various forms. Includes women's rights and rights of minority ethnic groups.
7	Environment	ENV	Pollution, international environmental treaties, deforestation, environmental justice, disasters, etc.
8	Terrorism and Militants	MILX	Sites promoting terrorism, violent militant or separatist movements.
9	Hate Speech	HATE	Content that disparages particular groups or persons based on race, sex, sexuality or other characteristics
10	News Media	NEWS	This category includes major news outlets (BBC, CNN, etc.) as well as regional news outlets and independent media.
11	Sex Education	XED	Includes contraception, abstinence, STDs, healthy sexuality, teen pregnancy, rape prevention, abortion, sexual rights, and sexual health services.
12	Public Health	PUBH	HIV, SARS, bird flu, centres for disease control, World Health Organization, etc.
13	Gambling	GMB	Online gambling sites. Includes casino games, sports betting, etc.
14	Anonymization and circumvention tools	ANON	Sites that provide tools used for anonymization, circumvention, proxy-services and encryption.
15	Online Dating	DATE	Online dating services which can be used to meet people, post profiles, chat, etc
16	Social Networking	GRP	Social networking tools and platforms.
17	LGBT	LGBT	A range of gay-lesbian-bisexual-transgender queer issues. (Excluding pornography)
18	File-sharing	FILE	Sites and tools used to share files, including cloud-based file storage, torrents and P2P file-sharing tools.
19	Hacking Tools	HACK	Sites dedicated to computer security, including news and tools. Includes malicious and non-malicious content.

No.	Category Description	Code	Description
20	Communication Tools	COMT	Sites and tools for individual and group communications. Includes webmail, VoIP, instant messaging, chat and mobile messaging applications.
21	Media sharing	MMED	Video, audio or photo sharing platforms.
22	Hosting and Blogging Platforms	HOST	Web hosting services, blogging and other online publishing platforms.
23	Search Engines	SRCH	Search engines and portals.
24	Gaming	GAME	Online games and gaming platforms, excluding gambling sites.
25	Culture	CULTR	Content relating to entertainment, history, literature, music, film, books, satire and humour
26	Economics	ECON	General economic development and poverty related topics, agencies and funding opportunities
27	Government	GOVT	Government-run websites, including military sites.
28	E-commerce	COMM	Websites of commercial services and products.
29	Control content	CTRL	Benign or innocuous content used as a control.
30	Intergovernmental Organisations	IGO	Websites of intergovernmental organisations such as the United Nations.
31	Miscellaneous content	MISC	Sites that don't fit in any category (XXX Things in here should be categorised)

IP addresses and other information

OONI does not collect or store users' IP addresses deliberately. To protect its users from potential risks, OONI takes measures to remove IP addresses from the collected measurements. However, there may be instances where users' IP addresses and other potentially personally-identifiable information are unintentionally collected, if such information is included in the HTTP headers or other metadata of measurements. For example, this can occur if the tested websites include tracking technologies or custom content based on a user's network location.

Network measurements

The types of network measurements that OONI collects depend on the types of tests that are run. Specifications about each OONI test can be viewed through its [git repository](#), and details about what collected network measurements entail can be viewed through [OONI Explorer](#) or through [OONI's measurement API](#).

In order to derive meaning from the measurements collected, OONI processes the data types mentioned above to answer the following questions:
- Which types of OONI tests were run?
- In which countries were those tests run?
- On which networks were those tests run?
- When were the tests run?
- What types of network interference occurred?
- In which countries did network interference occur?
- In which networks did network interference occur?
- When did network interference occur?
- How did network interference occur?

To answer such questions, OONI's pipeline is designed to answer such questions by processing network measurements data to enable the following:
- Attributing measurements to a specific country.
- Attributing measurements to a specific network within a country.
- Distinguishing measurements based on the specific tests that were run for their collection.
- Distinguishing between "normal" and "anomalous" measurements (the latter indicating that a form of network tampering is likely present).
- Identifying the type of network interference based on a set of heuristics for DNS tampering, TCP/IP blocking, and HTTP blocking.
- Identifying block pages based on a set of heuristics for HTTP blocking.
- Identifying the presence of "middle boxes" within tested networks.

According to OONI, false positives may occur within the processed data due to a number of reasons. DNS resolvers (operated by Google or a local ISP) often provide users with IP addresses that are closest to them geographically. While this may appear to be a case of DNS tampering, it is actually done with the intention of providing users with faster access to websites. Similarly, false positives may emerge when tested websites serve different content depending on the country that the user is connecting from or when websites return failures even though they are not tampered with.

Furthermore, measurements indicating HTTP or TCP/IP blocking might actually be due to temporary HTTP or TCP/IP failures; they may not conclusively be a sign of network interference. It is therefore important to test the same sets of websites across time and to cross-correlate data before reaching a conclusion on whether websites are in fact being blocked.

Since block pages differ from country to country and sometimes even from network to network, it is quite challenging to accurately identify them. OONI uses a series of heuristics to try to guess if the page in question differs from the expected control, but these heuristics can often result in false positives. For this reason, OONI only confirms an instance of blocking when a block page is detected.

Upon the collection of more network measurements, OONI continues to develop its data analysis heuristics, based on which it attempts to accurately identify censorship events.

The full list of country-specific test lists containing confirmed blocked websites in Myanmar, Cambodia, Hong Kong, Indonesia, Malaysia, Philippines, Thailand, and Vietnam can be viewed here: https://github.com/citizenlab/test-lists.

Verifying OONI measurements

Confirmed blocked OONI measurements were based on fingerprints recorded here https://github.com/ooni/blocking-fingerprints. These fingerprints are based on either DNS or HTTP blocking. The fingerprints recorded as confirmed blockings are either those implemented nationally or by ISPs.

Hence, heuristics as below were run on raw measurements on all countries under iMAP to further confirm blockings.

Firstly, IP addresses with more than 10 domains were identified. Then, each IP address was checked for the following:

Does the IP in question point to a government blockpage?			
Yes	No, page timed out or shows Content Delivery Network (CDN) page.		
⬇	⬇		
Confirmed blocking	What information can we get about the IP by doing a whois lookup?		
	Government or Local ISP*	CDN / Private IP	
	⬇	⬇	
	Confirmed blocking	Do we get a valid TLS certificate for one of the domains in question when doing a TLS handshake and specifying the SNI?	
		Yes	No, there were blocking	No, timed out

			fingerprints found.	
		⬇	⬇	⬇
		False positive	**Confirmed blocking**	Sampled measurement is analysed on OONI Explorer.

*Note: In the case of India, there was evidence of popular websites hosting their site on the ISPs network for quicker loading times as the ISPs sometimes offer such edge networking services, hence websites redirected to local websites are only marked as 'Potentially Blocked'.

When blocking is determined, any domain redirected to these IP addresses will be marked as "dns.confirmed".

Secondly, HTTP titles and bodies were analysed to determine blockpages. This example shows that the HTTP returns the text "The URL has been blocked as per the instructions of the DoT in compliance to the orders of Court of Law". Any domain redirected to these HTTP titles and bodies would be marked as "http.confirmed". As a result, false positives are eliminated and more confirmed blockings are obtained.

In the 2022 report, only confirmed blockings based on OONI or new fingerprints were reported. For this round of reporting in 2023, we further identified confirmed blockings by verifying blockings shown in news reports with OONI measurements. This is because there were blockings that could not be identified using the DNS or HTTP fingerprints. Typically, these websites were redirected to an unknown or bogon IP address, or they had other unknown errors that were ambiguous as to whether they were true or false positives of censorship. Hence, based on the news reports where the blocked websites were cited, confirmed blockings were further found by comparing the available measurements on OONI. For this study in particular, we marked them as confirmed blockings if there were more than 30 measurements and an anomaly rate of more than 1% throughout the one-year period of study. In addition, we manually checked the OONI measurements by cross-checking across networks, countries, and time periods.