

State of the Internet and Digital Rights in Turkmenistan (2019–2025)

This report is an in-depth examination of Turkmenistan's digital space, which, over the period from 2019 to 2025, has solidified its status as one of the most closed and technologically stagnant in the world. The situation with the Internet in the country is not a consequence of a lack of resources, but the result of a deliberate state policy aimed at total control over information. This control is manifested through a complete state monopoly on the communications market, extremely low access speeds that make most modern services inaccessible, and pervasive censorship that blocks access to independent media, social networks, and human-rights resources.

To maintain this regime, the authorities use both a legislative base with vague wording about "defamation", "protection of national security" and "extremism", and a powerful arsenal of technical means, including deep packet inspection (DPI) and the blocking of hundreds of thousands of domains and IP addresses. The result is an atmosphere of fear and self-censorship in which not only journalists and activists, but also ordinary citizens, are subjected to persecution, administrative arrests, and even criminal prosecution for critical comments, dissemination of "undesirable" information, or simply for using VPN services to bypass blocks.

Despite total control, the citizens of Turkmenistan are waging an unrelenting struggle for access to a free Internet, as evidenced by the chronically high demand for VPNs that places the country at the top of global search trends. This report offers a comprehensive, data-based analysis of this multi-layered control system. The reader will find not only a detailed description of the state of Internet infrastructure, but also an analysis of the authorities' legislative tricks, documented cases of persecution, and a reasoned forecast that, in the coming years, digital repression will only intensify.

Disclaimer

This document was partially generated using several large language models (LLM). The information presented in it is based on the analysis and generalization of data from the specified sources; however, the process of its structuring, generalization, and presentation was carried out using artificial intelligence technologies. It is recommended to use this text as a starting point for further research and to cross-check critically important data with primary sources.

State of the Internet and Digital Rights in Turkmenistan (2019–2025)	1
Disclaimer	2
1. General Information	3
1.1. Geographical Location	3
1.2. Population	3
1.3. Gross Domestic Product (GDP)	5
1.4. Main Economic Characteristics	7
1.5. General Political Situation	8
2. Internet	9
2.1. National Domain	9
2.2. Number of Users	10
2.2.1. Fixed-line Internet	12
2.2.2. Mobile Internet	12
2.3. Internet Access Speed and Quality of Services Provided	14
2.4. Development of Providers and Autonomous Systems	15
2.5. IPv6 Penetration	19
2.6. Connectivity Index	20
3. Internet Legislation	24
3.1. Principles of Internet Governance	24
3.1.1. Regulation	24
3.1.2. Regulatory Bodies and Responsible Persons	26
3.2. Market Monopolization	27
3.3. Internet Shutdowns on Government Orders	29
3.4. Legislation on "Words on the Internet"	30
3.5. Legislation on Internet Blocking	32
3.5.1. Legislation	32
3.5.2. Blocking Procedures	34
3.5.3. Registries of Blocked Internet Resources	34

3.5.4. Development of Blocking	36
4. Human Rights Violations on the Internet	37
4.1. Internet Shutdowns on Government Orders	37
4.2. Criminalization of Online Speech	38
4.3. Persecution of Media and NGOs	40
5. Civil Society in the Field of Internet Governance	42
5.1. Organizations	42
5.2. VPN and Censorship Circumvention Tools	44
5.2.1. Status of VPN Services	44
5.2.2. Number of VPN Users	45
5.2.3. Cases of Persecution for Using VPN	47
5.2.4. Monitoring of Blocks	48
6. Conclusion	48
Sources	52

1. General Information

1.1. Geographical Location

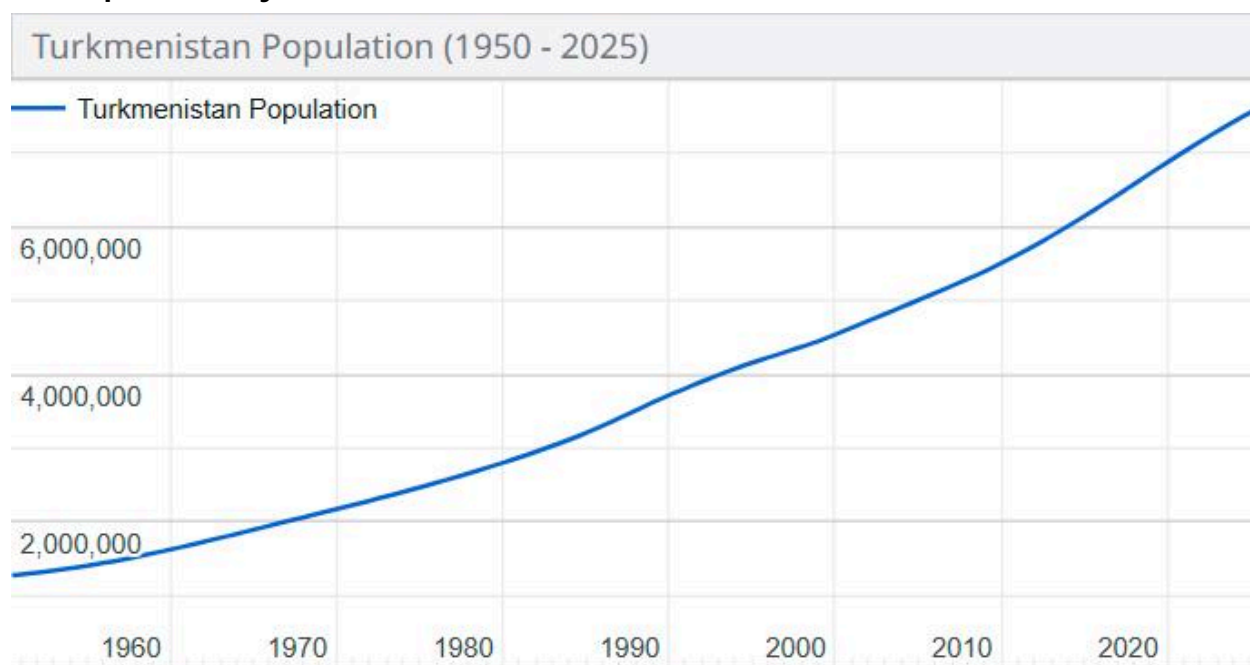
Turkmenistan is a country in Central Asia that has no access to the open sea except for the Caspian Sea coast. It borders Kazakhstan and Uzbekistan to the north and east, Afghanistan and Iran to the south. About 80% of Turkmenistan's territory is occupied by the Karakum Desert. The country's terrain is predominantly flat, with plateaus and lowlands; however, the Kopetdag and Greater Balkhan mountains, reaching heights of 3,139 metres, are located in the south and west. The capital is the city of Ashgabat. The vast desert territories and low population density outside major cities create significant difficulties for the development and maintenance of Internet infrastructure, leading to uneven coverage and high costs for laying cable networks. In addition, harsh climatic conditions, including extreme temperatures and sandstorms, pose a threat to physical Internet infrastructure, requiring the use of specialised equipment and additional protective measures.

1.2. Population

Data on the population of Turkmenistan for the period 2019–2025 vary depending on the source, highlighting certain difficulties with access to accurate and consistent demographic information. According to DataReportal, as of January 2025 the population of Turkmenistan was 7.56 million people.¹ An alternative estimate based on United Nations (UN) data and presented by Worldometer indicates 7,618,847 people in mid-2025. The same source provides the following figures for previous years: 7,494,498 people in 2024, 7,364,438 people in 2023, 7,230,193 people in 2022, 6,949,912 people in 2020, and 6,803,944 people in 2019.² Official Turkmenistan data published following the population census of 17 December 2022 recorded a population of 7,057,841 people.³ Meanwhile, Trading Economics forecasts for the end of 2025 were more conservative — 6.50 million people.⁵

The regional distribution of the population according to the 2022 census is as follows: Mary velayat – 22.9%, Dashoguz velayat – 22%, Lebap velayat – 20.5%, Ashgabat city – 14.6%, Akhal velayat – 12.5%, and Balkan velayat – 7.5%.³ The share of urban population in 2025 was estimated at 46.5% (3,540,511 people)², while according to the 2022 census rural population was 52.9% and urban 47.1%.³ The median age of the population in 2025 was 26.9 years.²

Chart 1: Population dynamics of Turkmenistan (1950–2025)



Source: *worldometers.info*

Discrepancies in population estimates, sometimes reaching almost one million people, can significantly affect the calculation of key indicators such as Internet penetration rate and coverage by other digital services. If official data are overstated, the actual percentage of Internet coverage may be higher than calculated on the basis of those data, and vice versa. For example, if the real population is closer to the Trading Economics estimate (6.50 million at the end of 2025), then 2.64 million Internet users⁶ would represent approximately 40.6% penetration rather than 34.9% as calculated using DataReportal's figure of 7.56 million. This uncertainty highlights the problem of transparency and reliability of official statistics, which is typical for closed states and makes objective assessment of the situation difficult.

The relatively young age of Turkmenistan's population (median age 26.9 years²) should theoretically contribute to faster adoption of digital technologies. Young people are generally more receptive to innovation and more active Internet users. However, as will be shown below (see section 2.2), the low level of Internet penetration in the country indicates the presence of serious barriers — infrastructural, economic and political — that negate this demographic potential. This suggests that other factors, such as state information policy, cost and availability of services, and overall quality of Internet connection, play a much more significant restraining role than demographic characteristics.

1.3. Gross Domestic Product (GDP)

Estimates of Turkmenistan's GDP also show discrepancies between different sources, complicating an accurate analysis of the country's economic condition.

In US dollars, Turkmenistan's GDP was:

- **2019:** \$45.23 bn⁷, \$48.3 bn⁸ or \$40.7 bn (nominal).⁸
- **2020:** \$45.82 bn.⁷
- **2021:** \$50.01 bn.⁷
- **2022:** \$56.54 bn⁷, \$67.0 bn (nominal)⁹ or \$82.6 bn (nominal).⁴
- **2023:** \$59.89 bn⁷, \$60.63 bn¹⁰ or \$81.822 bn (nominal).¹¹

Forecasts for subsequent years also vary:

- **2024 (estimate/forecast):** \$90.904 bn (nominal)¹², \$133 bn (PPP)¹³, \$62 bn (current prices).¹⁴
- **2025 (forecast):** The International Monetary Fund (IMF) forecasts real GDP growth of 2.3%.¹⁶ In absolute terms, forecasts are \$89.05 bn (current prices, IMF)¹⁹, \$64.69 bn

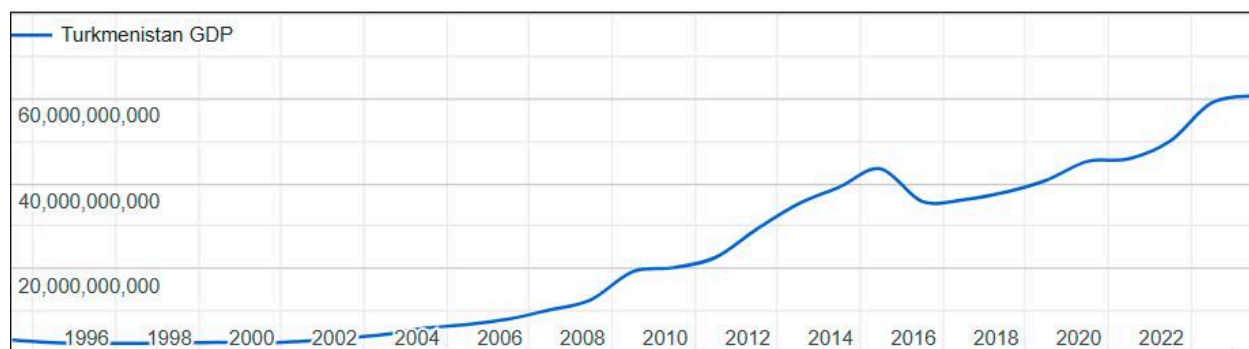
(Trading Economics, based on World Bank models)²⁰, \$63.5 bn (current prices, World Economics).¹⁵

The official exchange rate of the Turkmen manat (TMT) to the US dollar has remained fixed at 3.50 TMT per USD for many years, including the entire reporting period.⁹ In national currency GDP was:

- **2020:** 160 bn TMT.⁹
- **2021:** 175 bn TMT.⁹
- **2022:** 198 bn TMT.⁹
- **2023:** 210 bn TMT.⁹

Chart 2: Dynamics of nominal GDP of Turkmenistan (1993–2023)

Turkmenistan GDP (Nominal, \$USD) 1993-2023



Source: *worldometers.info*

GDP data are important for assessing the overall economic health of the country, which directly affects opportunities for investment in infrastructure, including the Internet, as well as the population's purchasing power to pay for Internet services. The fixed official exchange rate, which does not reflect the real market value of the manat (there is a significant "black market" for currency), makes it difficult to objectively assess real GDP and living standards.

Despite the declared growth of nominal GDP in recent years, especially according to some sources⁷, the quality of life of the population and the availability of basic services, including quality and affordable Internet, remain at a low level.⁸ This discrepancy may indicate that GDP growth is largely driven by the situation on global energy markets (Turkmenistan's main export commodity) rather than by structural improvements in a diversified economy or an increase in real incomes and welfare of the broad masses of the population. This situation explains why,

despite formal GDP growth, investments in the development of affordable and high-quality Internet infrastructure for the population may be insufficient or ineffective.

IMF forecasts of GDP growth for 2024–2025 (2.3%¹⁶) look significantly more modest compared to official data on growth rates in previous years (for example, official statistics indicated 6.3% growth in 2023⁹). This may reflect a more realistic assessment by international institutions, taking into account the deep structural problems of the Turkmen economy that continue to restrain its development and, consequently, the development of the ICT sector.

1.4. Main Economic Characteristics

Turkmenistan's economy is characterised by a strong dependence on hydrocarbon exports: they account for 89% of total exports, with natural gas accounting for 66% of that figure.²⁴ The country has the world's fourth-largest proven natural-gas reserves, yet ranks only 13th in production, indicating inefficiency in the extraction and export sectors.²⁴ The key industries besides oil and gas are the textile industry and agriculture, particularly cotton growing.⁸

The economy suffers from a number of serious structural problems. These include limited growth of the private sector, significant problems with public administration, lack of economic transparency, an overvalued national currency, an underdeveloped banking sector and general infrastructure, and inefficient management in the public sector.²⁴ The economy is dominated by state monopolies.²⁵ In the 2025 Economic Freedom Index, Turkmenistan ranked 162nd; its economy was rated "repressed".²⁵

Since 2019, according to independent sources, Turkmenistan's economy has been in a prolonged and deep crisis. There are huge queues for food in state shops, a significant part of the population cannot afford to buy food at commercial prices and is forced to search for food in landfills or beg.⁸ High unemployment is noted.⁸

Inflation indicators are also unstable: 11.2% in 2022⁹, -1.6% in 2023 (which may indicate deflationary processes or problems with statistics)²⁵, and an IMF forecast of 4.8% for 2025.¹⁶

The economic structure and existing problems directly affect the development of the Internet sector. Dependence on hydrocarbons makes the economy vulnerable to fluctuations in global energy prices, which can limit state investment in ICT infrastructure. The dominance of state enterprises and the absence of real competition hinder the emergence of private Internet providers, the introduction of innovations and improvement of service quality. The ongoing

economic crisis reduces the population's purchasing power, making Internet services even less affordable to the broad masses.

Government-declared programmes for the development of the digital economy, such as the "Concept for the Development of the Digital Economy in Turkmenistan for 2019–2025"²⁶ and reports on the large-scale activities of the Türkmenaragatnaşyk agency in the development of the digital economy and ICT investment²⁷, may largely be declarative in nature or ineffective against the background of systemic economic problems. Deep-rooted corruption (Turkmenistan ranked 170th out of 180 in the 2023 Corruption Perceptions Index^{28, 25}) and opacity of public finances can lead to misuse of funds allocated for the development of Internet infrastructure. This, in turn, may be one of the reasons for the low quality, high cost and limited availability of Internet services, despite the state's significant revenues from hydrocarbon exports.²⁴

1.5. General Political Situation

Turkmenistan is a presidential republic with a unitary state structure.⁴ In practice, however, the country has an authoritarian regime that is not inclined to carry out market reforms and does not tolerate any political opposition.²⁹ Power is concentrated in the hands of the president, to whom both the parliament (Mejlis) and the judicial system are subordinate.³⁰ Democratic reforms are absent, opposition parties are banned, and unsanctioned political gatherings are not allowed.²⁴

The key figures in Turkmenistan's political system during the reporting period are President Serdar Berdimuhamedov (took office on 19 March 2022), Chairman of the Halk Maslahaty (People's Council) Gurbanguly Berdimuhamedov (father of the incumbent president and his predecessor as head of state, who retained significant influence and bears the title "Arkadağ" – Protector³¹) and Mejlis Chairman Dunyagozel Gulmanova.⁴

Administratively, the country is divided into five velayats (regions) — Akhal (administrative centre Arkadag), Balkan (Balkanabat), Dashoguz (Dashoguz), Lebap (Turkmenabat), Mary (Mary) — and the city of Ashgabat, which has the status of a velayat and is the capital of the state.⁴

The political system determines the degree of state control over all spheres of society, including the Internet space. In an authoritarian environment, the Internet is viewed by the authorities primarily as a potential threat to the existing order, which inevitably leads to strict regulation,

widespread censorship and suppression of citizens' digital freedoms. The absence of an independent judiciary and legal opposition means the de facto absence of mechanisms to protect citizens' rights in the digital sphere from arbitrary actions by the authorities.

A system characterised by traits of “family rule” and a cult of personality²⁴ contributes to extreme opacity of decision-making processes, including in the sphere of Internet regulation. Control over information flows is concentrated in the hands of a narrow circle of people close to the authorities. Such a political structure creates conditions in which decisions on blocking websites, introducing censorship and prosecuting citizens for their online activity can be taken behind closed doors, without any public discussion or accountability, based solely on the interests of preserving power for the ruling elite.

Although the administrative division into velayats formally exists, the highly centralised nature of power implies a single state policy in all regions. Nevertheless, implementation of decisions at the local level may have its own peculiarities. For example, availability and quality of Internet services may be somewhat better in the capital and major velayat administrative centres compared to rural areas, which is indirectly confirmed by data on uneven school access to the Internet.³³ Local authorities may also interpret or implement central directives on Internet control and persecution of dissenters with varying degrees of zeal.

2. Internet

2.1. National Domain

The national country-code top-level domain (ccTLD) for Turkmenistan is .tm.⁴ It was put into operation on 30 May 1997.³⁴ The administration of the .tm domain registry is carried out by NIC.TM, which is operated by Community DNS Ltd, with TM Domain Registry (a subdivision of CSC Digital Brand Services) acting as the sponsor.³⁴

Since 2020, exclusive rights to provide domain-name registration services in Turkmenistan have been transferred to the Economic Society “Türkmen Domen”.³⁴ This organisation was established in 2014 under the original name “Coordination Centre of the National Domain of Turkmenistan” and operated under the auspices of the Türkmenaragatnaşyk agency.³⁴ The founders of the Economic Society “Türkmen Domen” are the key state telecommunications companies: Türkmen Telekom, the mobile operator Altyn Asyr and the Ashgabat City Telephone Network (AGTS).³⁴ The official website of “Türkmen Domen” is tmdomain.com.tm.³⁴

The number of registered domain names in the .tm zone remains relatively low. According to data published on the Türkmen Domen website and cited in other sources, as of November 2023 there were 1,034 of them.³⁴ At the same time, the Internet Society's estimate for 2025 is 9,800 .tm domains.³⁷ Such a significant discrepancy requires further clarification, but even the higher figure indicates weak development of local online content and Internet business.

Rules for registering domains in the .tm zone differ for second- and third-level domains. For second-level domains (e.g., example.tm) there are formally no residency restrictions for the applicant.³⁴ However, to register third-level domains (e.g., example.com.tm) the applicant must be a resident of Turkmenistan.³⁴ Registration of internationalised domain names (IDN) using Turkmen language characters is supported.³⁴

An interesting feature of the .tm domain is its use by companies outside Turkmenistan because of its similarity to the common abbreviation "TM" (trade mark – trademark).³⁴

The transfer in 2020 of exclusive rights to register .tm domains to the Economic Society "Türkmen Domen", established by state telecommunications monopolists, is a significant step towards strengthening state control over the national domain space. Whereas previously registration could be carried out through various accredited registrars³⁴, the concentration of this function in the hands of a single entity closely linked to the state simplifies monitoring and control over registered domains for the authorities, as well as the potential application of censorship or blocks already at the domain-name registration stage. This measure fully corresponds to the general trend of tightening state control over all aspects of Internet infrastructure in the country.

Even if we accept the higher estimate of the number of registered .tm domains (9,800 in 2025 according to the Internet Society³⁷), this number remains extremely low for a country with a population of about 7 million people. This indicates the underdevelopment of the local Internet segment, the small number of local web resources, the weak online presence of Turkmen business, and possibly the lack of incentives to create and host content within the national domain zone due to strict regulatory conditions and the general state of Internet freedom.

2.2. Number of Users

Estimates of the number of Internet users in Turkmenistan and the level of Internet penetration are also characterised by discrepancies between different sources, which is typical for countries with limited information transparency.

According to the DataReportal report, as of early January 2025 Turkmenistan had 2.64 million Internet users, corresponding to a penetration level of 34.9%.⁶ Over the year from January 2024 to January 2025 the number of users increased by 50 thousand (+1.9%). At the same time, 4.92 million people, or 65.1% of the population, did not use the Internet at the beginning of 2025 according to the same source.⁶ A year earlier, in January 2024, DataReportal reported 2.59 million users and a penetration level of 39.5%.⁴¹

Other sources give slightly different figures. The Internet Society, citing 2023 International Telecommunication Union (ITU) data, estimated the share of Internet users in Turkmenistan at approximately 21%.³⁷ However, World Bank data, also based on ITU statistics, indicated a penetration level of 21.25% already in 2019⁴², and the World Bank's Data360 resource (citing ITU) shows 21.3% for 2024.⁴³ An official Turkmen source, the website of the National Information Centre of the Ministry of Education nic.bilim.tm, reported in 2023 that the number of Internet users in the country had exceeded three million, which, according to them, was more than 20% higher than the 2019 level.⁴⁴

Significant discrepancies between data from various sources, especially between international estimates and statements by official Turkmen structures, make it difficult to accurately assess the real population coverage by Internet services. DataReportal data, based on consistent methodology and annual reports, allow tracking dynamics, but they may not fully reflect the specifics of a closed country. The nic.bilim.tm statement about “more than 3 million” users in 2023⁴⁴ noticeably exceeds DataReportal estimates for the same period (2.47 million at the beginning of 2023⁴⁷) and may be related to a desire to present the situation in a more positive light or to a different counting methodology (for example, counting all registered SIM cards with Internet access rather than unique users).

Despite the annual increase in the absolute number of Internet users recorded by most sources⁶, the growth rate of overall penetration remains slow. A significant part of the population — 65.1% at the beginning of 2025 according to DataReportal⁶ — still has no access to the Internet. This indicates the existence of systemic barriers such as high cost of services, underdeveloped infrastructure (especially in rural areas), strict state censorship and blocking, and low level of digital literacy of the population. The anomalously high jump in the number of users in 2020–2021⁴⁵ may have been associated with a change in DataReportal's counting methodology during that period or reflect a short-term effect, for example, increased need for online communication during the global COVID-19 pandemic, although the official authorities of Turkmenistan denied the presence of the virus in the country.

2.2.1. Fixed-line Internet

Data on the fixed broadband (fixed-line broadband) segment in Turkmenistan indicate its extremely low level of development. According to World Bank statistics, in 2022 there were 377,000 fixed broadband subscribers in the country.⁴⁸ This corresponds to a penetration level of 5.22 subscribers per 100 population.⁴⁹ A year earlier, in 2021, this indicator was 4.08 per 100 people.⁴⁹ International Telecommunication Union (ITU) data presented on the DataHub platform also confirm the figure of 5.22 per 100 people for 2022.⁵¹ The DigWatch resource, citing the same sources (ITU/World Bank), provides a similar penetration indicator, referring it to the period 2018–2023.²⁶

The information from the DigWatch report that 65.96% of households had Internet access at home (data for the period 2018–2023, without specifying the exact year and primary source)²⁶ raises questions. This figure appears significantly overstated against the background of extremely low fixed broadband penetration indicators and the overall number of Internet users and requires critical evaluation and comparison with other data.

The low level of fixed broadband penetration makes the majority of the population dependent on mobile Internet. Mobile access is generally more expensive, less stable for tasks requiring large traffic volumes or high bandwidth, and, most importantly in the context of Turkmenistan, is technically easier to control and disable by the authorities through the sole mobile operator.

Indirect confirmation of the extremely low level of fixed Internet infrastructure development, especially in rural areas, is provided by data from the Progres Foundation citing Turkmenistan's 2023 Voluntary National Review. According to these data, only 37.2% of schools in the country have Internet access for educational purposes, with 64.4% in cities and only 23.3% in rural schools.³³ This casts serious doubt on the effectiveness of state digitalisation programmes for education and earlier statements about universal computerisation and Internet access in schools.³³ The lack of reliable and affordable fixed Internet in educational institutions deprives students and teachers of access to modern educational resources and technologies, exacerbating digital inequality.

2.2.2. Mobile Internet

Mobile Internet plays a key role in providing Internet access to the population of Turkmenistan, especially given the underdevelopment of fixed infrastructure.

According to DataReportal, at the beginning of 2025 there were 5.14 million active mobile connections in the country, equivalent to 68.0% of the total population.⁶ Of these, 80.7% were classified as “broadband”, i.e. carried out via 3G, 4G or 5G networks.⁶

The dynamics of the number of mobile connections according to DataReportal for previous years are as follows:

- Beginning of 2024: 4.34 million connections (66.2% of population).⁴¹
- Beginning of 2023: 4.98 million connections (77.0% of population).⁴⁷
- Beginning of 2022: 4.92 million connections (79.9% of population).⁴⁶
- January 2021: 4.89 million connections (80.4% of population).⁴⁵

World Bank data indicate 6.25 million mobile subscribers in 2021.⁵² Penetration rates of mobile communications exceeding 100% in some years when using alternative (lower) population estimates may indicate the widespread practice of using multiple SIM cards by one person. This is often observed in markets with limited choice of operators, unstable connection quality, or tariffs that encourage the purchase of several SIM cards for different purposes.

Data on the number of mobile connections from DataReportal⁶ show some volatility and even a decline from peak values of around 80% penetration in 2021–2022 to 68% in 2025. Such a decline is untypical for developing mobile markets, where steady growth is usually observed. This may be due to a combination of factors, including economic difficulties of the population leading to abandonment of additional or unused SIM cards, tighter control and policy by the sole mobile operator (e.g. forced disconnection of inactive numbers or stricter registration procedures), or changes in the methodology of international organisations.

Despite the fact that a significant share of mobile connections (80.7% at the beginning of 2025⁶) is formally classified as “broadband” (3G/4G/5G), the actual speed of mobile Internet in Turkmenistan remains extremely low, as evidenced by international rankings (see section 2.3). This indicates that the presence of a device supporting modern communication standards does not guarantee a quality Internet connection. The reasons may include network overload due to insufficient capacity of backbone channels, lack of modern base stations (especially outside the capital), use of outdated equipment, or even deliberate bandwidth limitation by the operator on the instructions of the authorities. As a result, many modern Internet services requiring high speed and stable connection (e.g. streaming video, cloud storage, video conferencing,

interactive online applications) remain practically inaccessible to most mobile Internet users in the country.

2.3. Internet Access Speed and Quality of Services Provided

Internet access speed in Turkmenistan is among the lowest in the world, as confirmed by various international studies. This critically limits citizens' ability to use the network for obtaining information, education, access to online services and participation in the digital economy.

According to Ookla data presented in DataReportal reports:

- At the beginning of 2025 the median download speed for fixed Internet was **3.60 Mbit/s**, 31.4% lower than a year earlier.⁶
- At the beginning of 2024 this indicator was **5.25 Mbit/s**, showing significant growth (+114%) compared to the beginning of 2023.⁴¹
- At the beginning of 2023 the median fixed-line Internet speed was **2.45 Mbit/s**.⁴⁷
- At the beginning of 2022 – **1.98 Mbit/s**.⁴⁶

A 2024 study by Cable.co.uk showed that the average download speed in Turkmenistan is **2.72 Mbit/s**, placing the country 228th out of 229 countries studied.⁵³ In 2021, according to the same source, the speed was even lower — **0.50 Mbit/s**, which corresponded to last place in the world among 224 countries.⁵⁴ This meant that in 2021 it took a user in Turkmenistan more than 22 hours to download a 5 GB movie.⁵⁴

Other sources also confirm extremely low indicators. Progres Foundation, citing Speedtest data for October 2024, indicated an average speed of **3.44 Mbit/s**.³³ "Chronicle of Turkmenistan", also citing Speedtest (July measurements, probably 2024, since the article is dated August 2024), provided the figure of **4.31 Mbit/s** (161st place out of 162 countries).⁵⁵ Internet Society Pulse data for 2025, based on a sample of 300 users, show an average download speed of **6.78 Mbit/s** and upload speed of **6.67 Mbit/s**³⁷, which is somewhat higher than other estimates but still a low indicator. Even in 2019 it was noted that Turkmenistan, along with Tajikistan and Vietnam, belongs to countries where 100 Mbit/s Internet speed is not widely available.⁵⁶

The extremely low Internet speed, despite Turkmenistan's significant financial resources from hydrocarbon exports²⁴, raises serious questions. This situation may indicate either a deliberate state policy of restricting access to information through artificial deterioration of connection quality, or extreme inefficiency in the management of the telecommunications sector and a high

level of corruption.²⁵ In any case, the result is the same — citizens are deprived of the opportunity to fully use the Internet.

The discrepancy between the formal presence of “broadband” mobile Internet (80.7% of connections via 3G/4G/5G⁶) and the actual low mobile Internet speed⁴⁶ indicates that the existing infrastructure is either critically overloaded or its bandwidth is artificially limited. This makes most modern Internet services such as streaming video, cloud services, video conferencing and interactive applications practically inaccessible to the majority of users, turning the Internet from a tool of development and communication into a source of frustration.

2.4. Development of Providers and Autonomous Systems

The internet services market in Turkmenistan is fully controlled by the state.²⁶ In fact, the only authorized internet service provider (ISP) is the state-owned telecommunications company “Turkmentelkom” and its affiliated structures.²⁸ The key players in the market are:

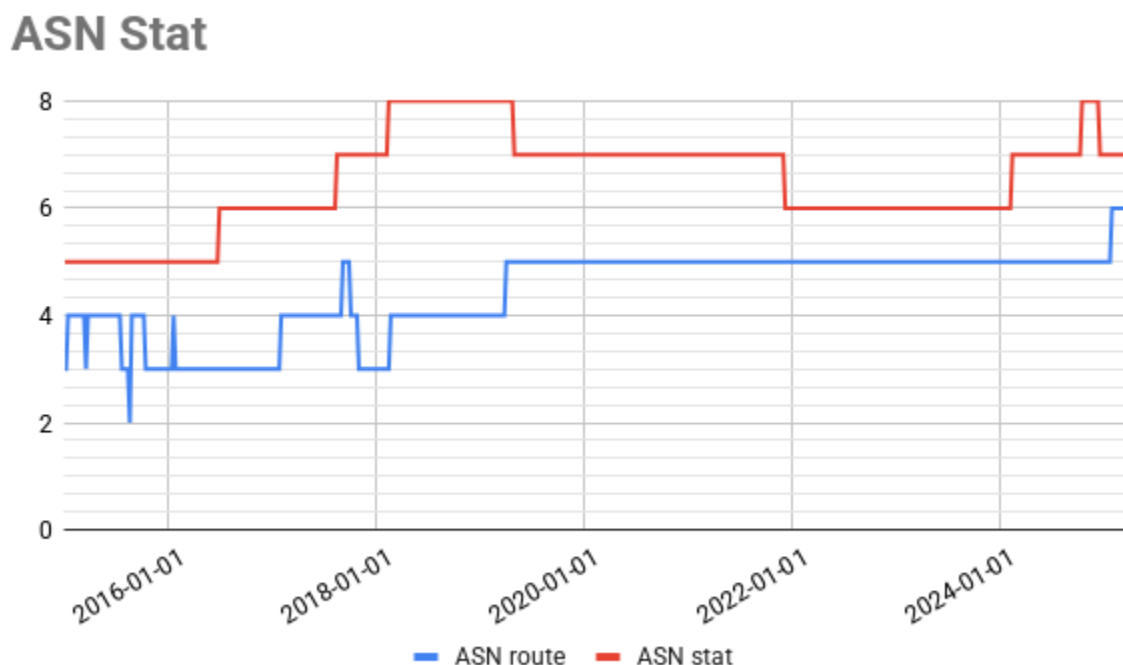
- **“Turkmentelkom”**: the national telecommunications company providing fixed telephony services, mobile communications (through “Altyn Asyr”), broadband internet access, IT services, and others.⁵⁸
- **AGTS (Ashgabat City Telephone Network)**: provides local telephony services, CDMA, IPTV, and broadband internet access (ADSL, Wi-Fi) in Ashgabat.⁶¹ It is a closed joint-stock company with participation of the Ministry of Communications of Turkmenistan and the State Concern “Turkmentelkom”.⁶¹
- **“Altyn Asyr” (TMCell)**: state-owned mobile operator, a structural subdivision of “Turkmentelkom”.⁶³ Provides services in 2G, 3G, and 4G (LTE) standards.⁶³

According to Internet Society Pulse data for 2025, the ISP market share is distributed as follows: TURKMENTELECOM-AS – 92%, AGTS-AS – 6%.³⁷ This clearly demonstrates almost complete monopolization of the market. Information on the status of the company “MTS-Turkmenistan” during the reporting period is limited; it is known that the incident with MTS in 2017–2019 (suspension and subsequent termination of operations) negatively affected the investment climate in the telecommunications sector.²⁸

The number of active Autonomous Systems (AS) in Turkmenistan is extremely small, indicating a low level of development and connectivity of the national internet infrastructure. According to Internet Society Pulse and other sources, in 2023–2025 there were only seven of them.³⁷ In

2020, RIPE NCC noted the presence of only two Local Internet Registries (LIR) in the country and a significantly smaller number of networks compared to other Central Asian countries.⁷⁰

Chart 3: Dynamics of Autonomous Systems in Turkmenistan (2015–2025)



The most obvious conclusion from the chart is a long period of stagnation. From the beginning of 2018 to 2025, the total number of registered autonomous systems (red line, ASN stat) practically did not change, remaining at the level of 8. The number of active systems participating in routing (blue line, ASN route) was also stable at 5, with slight fluctuations to 6 in the last year.

Absence of growth: Over the past seven years, virtually no new independent internet operator has appeared in the country. Minor changes in routing may indicate technical work or switching by existing operators, but not market growth.

State control: Such a static picture for an entire industry over many years is only possible under conditions of strict state control and the absence of market mechanisms. Entry to the market for new players is apparently closed.

To understand the scale of the lag, it is enough to compare the number of autonomous systems per capita. In Turkmenistan, with a population of about 6.7 million people, there are only 8 autonomous systems, meaning approximately 837,500 people per AS.

For comparison, in neighboring Kyrgyzstan (population ~7.2 million), this indicator is more than 11 times better — about 72,000 people per AS. In Kazakhstan (population ~20 million), approximately 104,000 people per each of the 192 systems. Even in Tajikistan and Uzbekistan the situation is significantly more competitive: in Tajikistan (population ~10.5 million) — about 338,000 people per AS, and in Uzbekistan (population ~36.4 million) — about 364,000.

The data indicate that the internet in Turkmenistan is under full state control through the monopoly operator "Turkmentelkom". The lack of growth in the number of autonomous systems over many years and the colossal lag behind all countries in the region indicate that the development of a free and competitive internet market is not a priority for the country's authorities. This directly affects the quality, speed, and cost of internet access for citizens.

Table 5: Top 10 Largest Autonomous Systems in Turkmenistan

#	Number of AS	Name	Web Site	Foreign neighbour count	Local neighbour count	Total neighbour count	Foreign neighbours share
1	20661	TurkmenTelecom-AS		4	5	9	44%
2	51495	AGTS-AS		2	2	4	50%
3	215487	Tehnomerkez		0	1	1	0%
4	205471	CDMA-AGTS-AS		0	1	1	0%
5	204579	TH		0	1	1	0%
6	201558	TFEB-AS		0	1	1	0%
7	59974	TMCELL-NET		0	1	1	0%

Analysis of the table shows that in Turkmenistan there is only one gateway to the outside world: Of the seven listed autonomous systems, only two have connections to foreign operators (Foreign neighbour count column):

- **TurkmenTelecom-AS (AS20661):** The main and essentially state operator, which has 4 connections to external networks.

- **AGTS-AS (AS51495):** The second operator with two connections.

Complete dependence of the other operators: The remaining 5 autonomous systems (Tehnomerkez, CDMA-AGTS-AS, TH, TFEB-AS, TMCELL-NET) have no connections to the external internet (Foreign neighbours share – 0%). Each of them has only one local connection (Local neighbour count – 1).

Structure of the monopoly: This means that all five of these operators are simply clients of TurkmenTelecom-AS. They are not autonomous in the full sense of the word, as they are completely dependent on the state provider for access to the global network. Such a scheme is called "single-homed" and is a sign of lack of competition and low network resilience.

The internet in Turkmenistan is not a market with several independent players, but a strictly centralized system:

There is one main state operator, TurkmenTelecom, which controls almost all access to the country. There is a second, significantly smaller operator, AGTS. All other organizations that have an autonomous system number are in fact not independent providers, but merely subsidiary structures or large clients fully dependent on the state monopoly.

Such a network architecture allows the state to easily control and filter all internet traffic in the country, and also makes the emergence of real competition impossible, which leads to high prices and low quality of services.

The monopoly position of state providers and the extremely small number of Autonomous Systems make Turkmenistan's internet infrastructure not only inefficient in terms of quality and cost of services, but also extremely vulnerable to total state control, censorship, and possible shutdowns. Such a high degree of centralization simplifies traffic filtering, blocking of undesirable resources, and surveillance of users for the authorities. The small number of AS also means a limited number of connection points to the global internet, which reduces the overall resilience of the national network.

The appearance in the AS list of organizations such as "Turkmen hemrasy" (AS204579) and "Tehno Merkez" (AS215487)⁶⁷ may indicate attempts to create specialized networks, for example, for state needs, satellite communications, or servicing new technological projects such as the "smart city" Arkadag. However, under conditions of total state control over the telecommunications sector²⁶ and the lack of information about their activities as independent commercial providers, it is unlikely that their appearance indicates real demonopolization of the

market or the emergence of competition for private independent players. Rather, it reflects the further expansion of the state's presence in various segments of digital infrastructure.

2.5. IPv6 Penetration

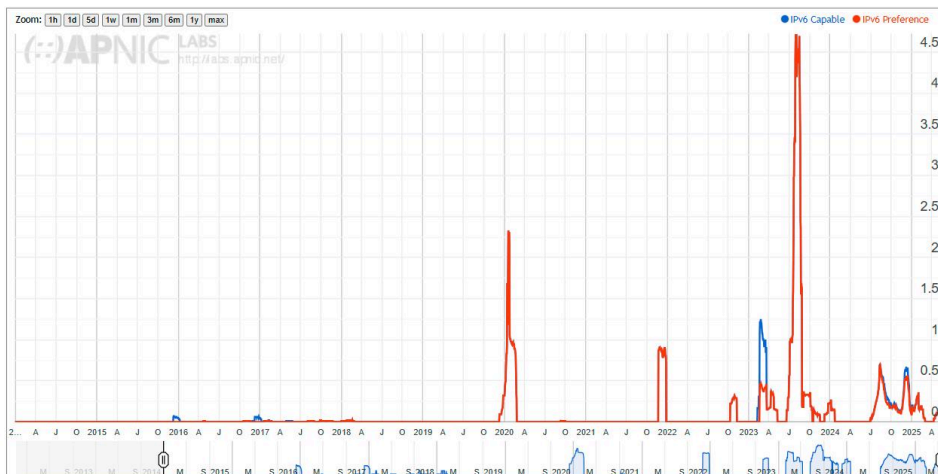
The transition to the new version of the internet protocol IPv6, necessary for the further growth of the global network given the exhaustion of IPv4 addresses, is practically not taking place in Turkmenistan.

According to Internet Society Pulse data for 2025, less than 1% of users in Turkmenistan had the ability to access online resources using IPv6.³⁷ This indicator sharply contrasts with the average IPv6 penetration level in the Asia-Pacific region, which, according to the same source, is 39%³⁷, and according to APNIC Labs as of April 2025, has already reached 50%.⁷¹ Global IPv6 penetration at the beginning of 2025 was estimated at just over 43%.⁷²

Charts from ipv6-test.com show very slow growth in IPv6 support in Turkmenistan over many years, tending toward a hypothetical 50% IPv4 / 50% IPv6 ratio, but specific percentage values for the period 2019–2025 in text form are missing.⁷³

Chart 4: IPv6 Penetration in Turkmenistan (2015–2025)

Use of IPv6 for Turkmenistan (TM)



Source: stats.labs.apnic.net

The practically zero level of IPv6 deployment against the background of the active global transition to this protocol indicates deep technological stagnation of Turkmenistan's internet

infrastructure. This points to the lack of strategic planning in this area by state bodies and monopoly providers, lack of investment in network modernization, and possibly a shortage of qualified specialists. Such technological lag may become a serious obstacle to the future development of the internet in the country, limiting the growth of connections and the availability of modern online services.

The absence of IPv6 exacerbates the problem of IPv4 address shortage, forcing providers to more widely use Network Address Translation (NAT) technology, where many users access the internet under a single external IP address. This, on the one hand, complicates the direct identification of individual users by IP address, which can create certain difficulties for law enforcement agencies in investigating cybercrimes. On the other hand, this situation can be used by the authorities as a pretext for introducing deeper and more intrusive methods of monitoring all internet traffic passing through the gateways of state providers, under the guise of ensuring security and combating anonymity.

2.6. Connectivity Index

Two key indicators based on the analysis of pairwise connections (peering) between Autonomous Systems (ASN) are used to assess the level of integration of the internet segment.

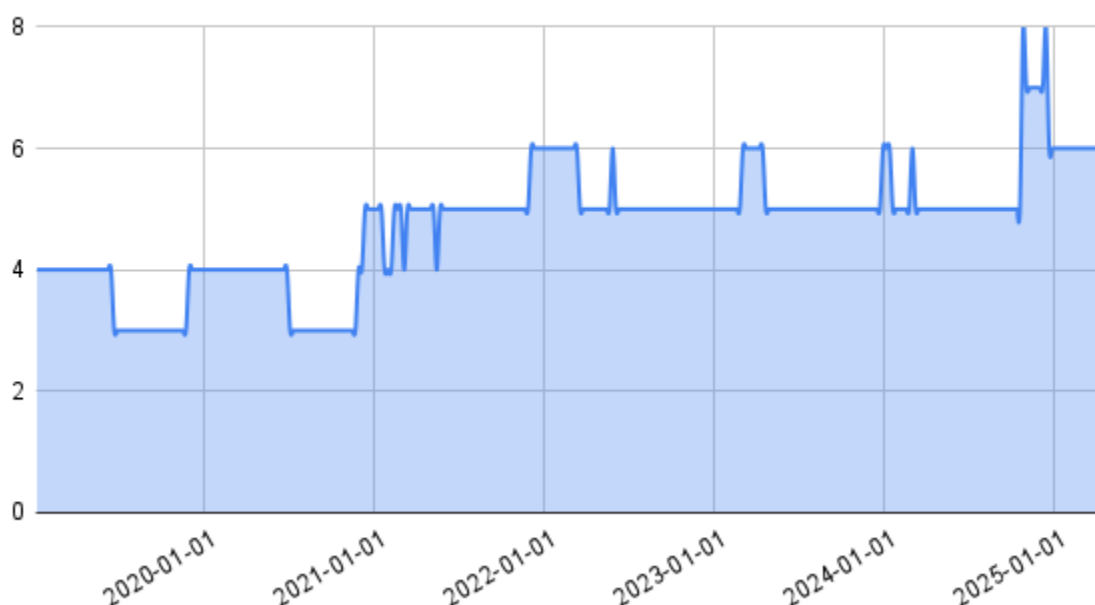
Global Connectivity Index: This index represents the total number of unique connections between each local ASN and each external (foreign) ASN. Essentially, it measures how widely and diversely the internet segment is connected to the rest of the world. The higher this indicator, the more "windows" the country has to the global network.

Local Connectivity Index: This index is calculated as the total number of unique connections between different local Turkmen ASNs. It reflects the intensity and complexity of the internal internet market, in particular, activity at internet exchange points (IXP). A high indicator indicates a developed internal ecosystem that allows efficient local data exchange within the country, minimizing delays and dependence on external channels for local data.

Analysis of the ratio of these two indices allows us to understand the strategic orientation of the national network: whether it is predominantly self-sufficient or deeply integrated into the global infrastructure.

Chart 5: Dynamics of Global Connectivity of Turkmenistan's Autonomous Systems (2019–2025)

Global connectivity statistics

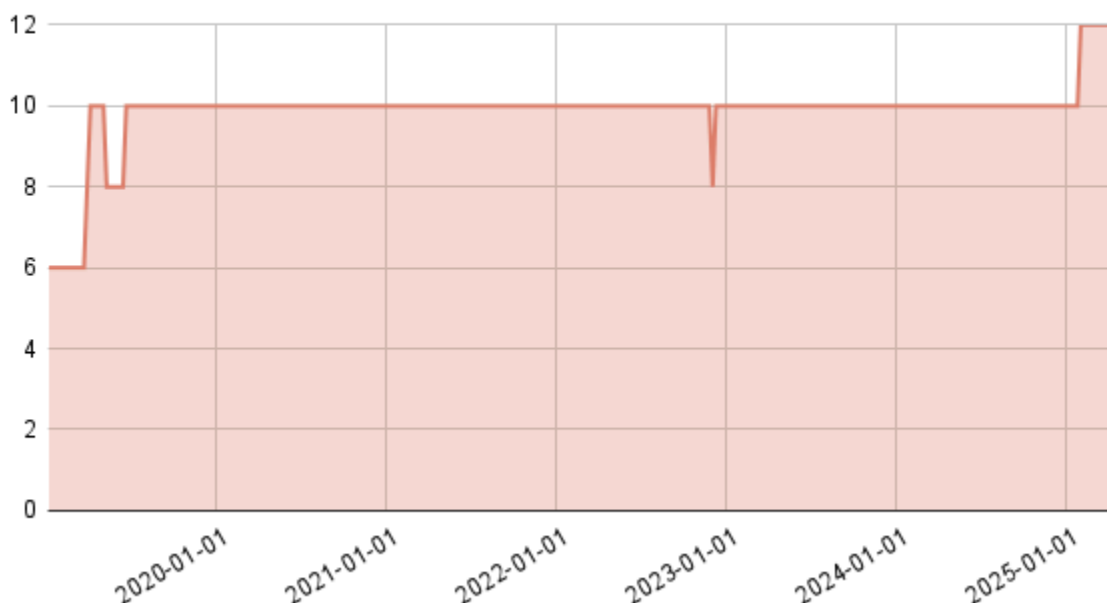


The chart shows that the number of unique connections of Turkmen operators with the outside world is critically small and unstable. Over five years, the indicator fluctuated in a very narrow range, mostly between 3 and 6. This indicates a lack of diversification and development of international channels. The segment depends on an extremely limited number of "windows to the world," making it vulnerable to failures and external control.

Short-term spikes, for example, at the beginning of 2025, do not indicate qualitative growth but rather resemble temporary technical connections or tests, as they are followed by a rapid rollback to previous low values. As a result, the internet segment of Turkmenistan is not expanding its integration into the global network, remaining at the level of minimally necessary connection.

Chart 6: Dynamics of Local Connectivity of Turkmenistan's Autonomous Systems (2019–2025)

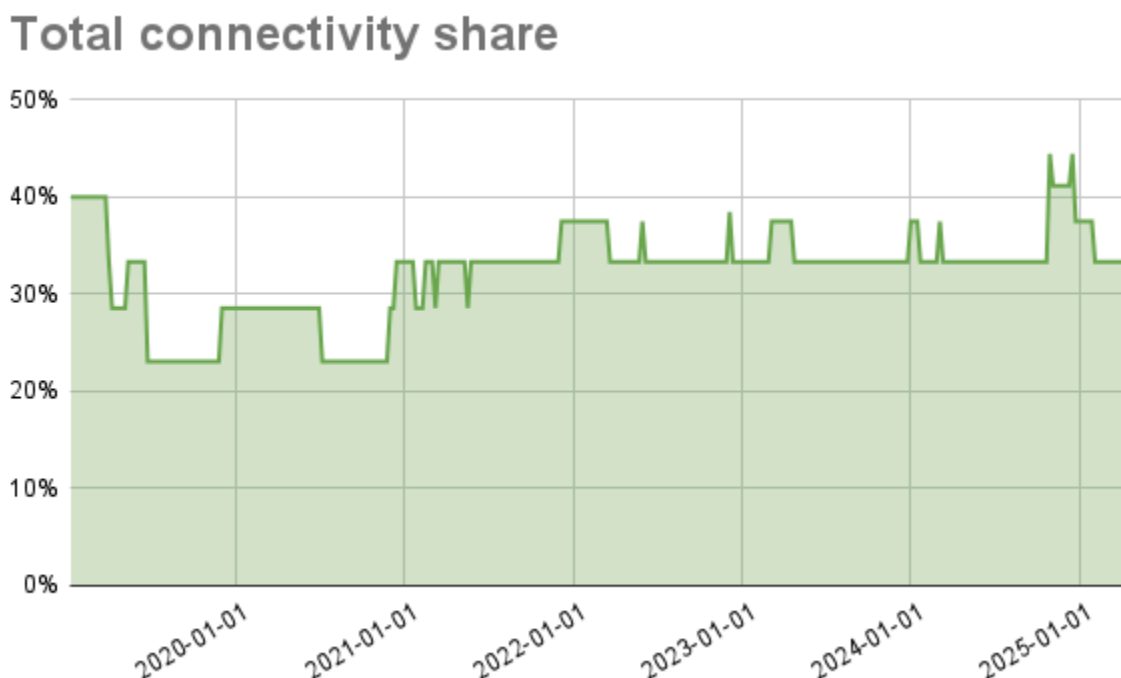
Local connectivity statistics



The local connectivity chart demonstrates a complete lack of development of the internal internet market. After a jump at the beginning of 2020 to 10 connections, this indicator remained absolutely unchanged for almost five years. Such an ideal "shelf" on the chart is a sign of an artificially fixed, non-market system where peering interactions do not change for years.

In a healthy ecosystem, this indicator constantly fluctuates, reflecting the connection of new players, route changes, and the development of traffic exchange points. Here we see a picture of a frozen internal structure where all connections between the few participants are rigidly defined and do not change. This confirms the conclusion that there is no competition in the country, but only a static hierarchy managed from one center.

Chart 7: Dynamics of the Ratio of Global and Local Connectivity of Turkmenistan's Autonomous Systems (2019–2025)



This chart shows the share of international connections in the total number of all connections and reflects the strategic isolation of the network. The indicator fluctuates around 30–40%, which means that the number of internal connections steadily exceeds the number of external ones. At the same time, the noticeable "nervousness" of the chart (frequent sharp peaks) is not a sign of dynamics but only a consequence of working with very small numbers, where disabling or enabling even one or two channels leads to a sharp change in the percentage ratio.

Essentially, this chart confirms that the network is not oriented toward deep integration into the global infrastructure. Instead, it is closed in on itself, and its weak and underdeveloped external connectivity makes it insufficiently integrated and at the same time not self-sufficient. This is characteristic of a closed, centrally controlled internet infrastructure.

3. Internet Legislation

3.1. Principles of Internet Governance

Internet governance in Turkmenistan is characterized by a rigid state-oriented model, which corresponds to the general position of the Regional Commonwealth in the Field of Communications (RCC), of which Turkmenistan is a member. This model implies total state control over the entire internet infrastructure and regulation of the digital space, which is fundamentally different from the multistakeholder approach promoted by international organizations. Despite the formal participation of Turkmenistan's representatives in regional events such as the Central Asian Internet Governance Forum (CAIGF), in practice the country consistently strengthens and centralizes state control over the network.

The legislative framework consists of acts such as the Law "On Legal Regulation of the Development of the Internet Network and Provision of Internet Services in Turkmenistan" and the Law "On Cybersecurity". These laws establish the legal framework for activities in the information sphere and grant state bodies, in particular the Agency "Turkmenaragatnashyk" (Turkmentsvyaz), broad powers to control and regulate. The declared goals, such as ensuring information security and protecting national interests, in practice lead to total content filtering and restriction of access to information. Broad and vague formulations in the legislation allow the authorities to legitimize almost any actions to restrict digital freedoms under the pretext of protecting "national security" or "public order". Turkmenistan's support for the state-oriented model within the RCC indicates the intention to further strengthen full state sovereignty over the national internet segment.

3.1.1. Regulation

The main document defining the legal framework for the development and use of the internet in Turkmenistan is the Law of Turkmenistan "On Legal Regulation of the Development of the Internet Network and Provision of Internet Services in Turkmenistan" dated December 20, 2014, No. 159-V, with subsequent amendments and additions (the latest known amendments dated November 13, 2021).⁷⁴

According to Article 3 of this Law, its main objectives are to create a stable and effective legal framework for the development of the Internet in the interests of all subjects of relations, strengthening state guarantees for the protection of the rights and legitimate interests of citizens of Turkmenistan and state interests in relations related to the internet, as well as establishing the legal foundations for entrepreneurial activity in Turkmenistan in the provision of internet services.⁷⁴

Article 6 of the Law "On Legal Regulation..." sets out the main principles of state regulation, including ensuring the rights and freedoms of citizens to use the Internet and access to information posted therein, taking into account internationally established organizational norms and technical procedures for the development of the internet, as well as preventing refusal to conclude a contract for the provision of internet services on equal terms with other users.⁸¹ State policy, according to Article 7, is aimed at ensuring universal and equal access to internet connection services, including through the creation and maintenance of infrastructure, providing benefits to socially vulnerable groups of the population, developing infrastructure in rural and remote areas, as well as ensuring the quality of internet services through their state certification and licensing of the activities of persons providing these services.⁸¹ Article 8 declares state support for the development of the internet, including measures to ensure equal and non-discriminatory access, prevention of unjustified restrictions for providers and information exchange, as well as prevention of monopolization and unfair competition in the internet services market.⁸¹

Other important legislative acts are:

- **Law of Turkmenistan "On Communications"** dated March 12, 2010, No. 93-IV, regulating general issues of activity in the field of telecommunications and postal communications.⁸²
- **Law of Turkmenistan "On Information about Private Life and Its Protection"** dated March 20, 2017, No. 519-V, establishing rules for the collection, processing, and protection of personal data.⁹¹
- **Constitution of Turkmenistan**, Article 26 (in some editions Article 28) of which guarantees the right to freedom of thought and its free expression, as well as the right to receive information if it is not a state or other secret protected by law. Article 23 (Article 25) guarantees the right to protection from arbitrary interference in private life and the secrecy of correspondence, telephone, and other communications.⁹³

Despite the formal declaration of the goals of internet development and protection of citizens' rights, the legislation contains norms that create the basis for strict state control. Principles such as "ensuring national information security" and "combating offenses on the network" are often interpreted and applied in such a way as to justify censorship and restrictions on access to information. The International Telecommunication Union (ITU) in its ICT Regulatory Tracker classifies Turkmenistan's regulatory environment as a "regulated state monopoly" with a command-administrative approach to ICT, giving the country an extremely low score of 6.70 out of 100 in 2022.²⁸

The declarative provisions of the laws on freedom of information, internet development, and protection of users' rights (for example, in the Law "On Legal Regulation of the Development of the Internet Network...") sharply contrast with the real practice of total control, censorship, blockings, and the low level of development of the internet sphere in the country.²⁸ This allows us to conclude that legislation in this area is often used not as a tool for protecting rights and stimulating development, but as a facade covering repressive state policy in the information sphere. Norms aimed at protecting rights are either not implemented or are interpreted by the authorities in such a way as to legitimize restrictions.

Similarly, the provisions on "state support for the development of the Internet" and "prevention of monopolization" (Article 8 of the Law "On Legal Regulation..."⁸¹) are in fact not implemented. The internet services market is completely monopolized by state companies,²⁸ and the development of infrastructure and quality of services remains at an extremely low level, indicating the absence of real competition and the inefficiency of the declared state support measures.

3.1.2. Regulatory Bodies and Responsible Persons

State structures play a key role in regulating the internet sphere in Turkmenistan. **The Agency "Turkmenaragatnashyk"** (Turkmensvyaz), part of the structure of the Agency of Transport and Communications under the Cabinet of Ministers of Turkmenistan, is the authorized organization for the development of the digital economy, ensuring cybersecurity, and exercising control in the field of communications.²⁷ As of 2023–2025, the head of the agency "Turkmenaragatnashyk" is Khajimurat Khudaygulyev.¹⁰²

The Ministry of National Security (MNB) plays a significant, though not always publicly advertised, role in controlling the internet space. Its functions include checking content distributed through national media and blocking citizens' access to information from abroad.²⁸

There are reports of instructions from the president to the head of the MNB to strengthen state control over the internet.¹⁰⁴

The Law "On Legal Regulation of the Development of the Internet Network..." introduces the concepts of **National Coordinator and National Registrar**. The National Coordinator, determined by the agency "Turkmenaragatnashyk", is responsible for managing second-level national domains and ensuring the functioning of the corresponding database.⁷⁵ The National Registrar, in turn, is determined by the National Coordinator (currently these functions are performed by the economic society "Türkmen Domen") and carries out direct registration of domain names in the national .TM zone, maintaining a database of registered domains and providing hosting services.⁷⁴

The concentration of regulatory and control functions in the hands of the agency "Turkmenaragatnashyk", closely connected with the government, and the active participation of the MNB in content and access control, emphasize the total state control over the internet sphere. The absence of an independent regulator deprives both users and the few market participants (if any appear) of the opportunity to appeal the decisions of the authorities or influence the formation of policy in this area.

The dual role of the agency "Turkmenaragatnashyk", which simultaneously acts as both a regulator and, through companies affiliated with it ("TurkmenTelecom", "Altyn Asyr", AGTS, which are founders of the economic society "Türkmen Domen"³⁴), as the main provider of internet services, creates an obvious conflict of interest. Such a structure not only strengthens state control but also completely suppresses any potential competition or independent initiative in the market. In fact, the state regulates itself as the dominant player, which excludes the possibility of independent oversight and fair conditions for the development of the industry.

The active involvement of the Ministry of National Security in internet regulation issues, including direct instructions on content blocking²⁸ and strengthening overall control over the internet,¹⁰⁴ unequivocally indicates that the internet is viewed by the Turkmen authorities primarily through the prism of a potential threat to national security and political stability, and not as a tool for the development of society, economy, and realization of citizens' rights. The priority of security considerations over rights and freedoms is a characteristic feature of authoritarian approaches to internet governance and explains the rigidity and arbitrariness of the applied control and censorship measures.

3.2. Market Monopolization

The market for telecommunications services and internet access in Turkmenistan is characterized by an almost complete state monopoly. Key state companies such as "Turkmentelkom" (fixed communications and backbone channels operator) and "Altyn Asyr" (mobile operator TMCCell) are actual monopolists in their segments.²⁸ The Ashgabat City Telephone Network (AGTS) is also a major player closely linked to state structures.

Formally, the Law of Turkmenistan "On Communications" contains a provision that operators occupying a monopoly (dominant) position in the market must not abuse it and infringe on the interests of other economic entities and users of communication services [⁸⁴ (Article 9 of the Law "On Communications" of 1996, similar principles are likely preserved in later editions)]. However, in practice, this provision does not work, as there are practically no real independent market participants capable of competing with state giants.

Antimonopoly legislation in Turkmenistan is either practically absent or not applied to state telecommunications companies.¹⁰⁷ The Committee on Restricting Monopolistic Activity and Developing Competition, created in the first years of independence, was abolished back in 1995, and since then no effective independent antimonopoly body has been created.¹⁰⁷

The lack of competition has an extremely negative impact on the availability, cost, and quality of telecommunications services, including internet access.²⁸ Users are deprived of choice, and state monopolists lack incentives to improve service quality, reduce tariffs, and introduce new technologies. The incident with the Russian operator MTS, which was forced to cease operations in Turkmenistan in 2017–2019, also deterred potential foreign investors from entering the Turkmen telecommunications market.²⁸

Legislative norms formally prohibiting discrimination by monopolists¹⁰⁸, in conditions where the state itself through its companies is the monopolist and there is no independent antimonopoly control,¹⁰⁷ are ineffective and do not provide protection for consumer rights or potential competitors. In such a system, there are no entities that could effectively challenge the actions of the monopolist, and there is no body capable of objectively considering such complaints.

The departure or actual expulsion from the market of foreign investors such as MTS²⁸ not only reduces the already absent competition but also deprives the country of access to advanced technologies, management experience, and investments that could contribute to the modernization of the industry. This further preserves the technological lag of national providers and exacerbates problems with the quality and availability of internet services for the population.

3.3. Internet Shutdowns on Government Orders

Turkmenistan's legislation does not contain clear and transparent procedures governing the complete or partial shutdown of internet access on government orders. However, general provisions of laws concerning the ensuring of national security, public order, and combating illegal activities on the network can be used as legal cover for such actions. For example, Article 25 of the Law "On Legal Regulation of the Development of the Internet Network..." speaks of state measures to counteract the illegal use of the internet, and Article 31 of the same law gives the authorized state body the right to suspend the operation of technical means and communication networks in case of their use to the detriment of the interests of the individual, society, and the state, including for criminal purposes.⁸¹

During the reporting period, cases of deliberate internet shutdowns or significant access restrictions were recorded, especially during socially significant events, alleged protests, or other situations that the authorities might consider "critical".³³ One of the most notable incidents was the almost complete internet shutdown in Turkmenistan on April 10–12, 2022, which followed the blocking of social networks, VPN services, and cloud platforms.¹⁰⁹ The international organization Access Now, which tracks internet shutdowns worldwide, documented 296 shutdowns in 54 countries in its 2024 report and 283 shutdowns in 39 countries in its 2023 report, highlighting the global nature of this problem.¹¹² Although detailed information on Turkmenistan for each year from these global reports requires additional analysis of specialized databases, the very fact of confirmed shutdowns in the country is a serious violation of digital rights.

Internet shutdowns, even if temporary or local, have a cumulative negative impact. They not only directly violate the right to access information and freedom of expression but also reinforce an atmosphere of fear and self-censorship among the population. Citizens, knowing about the possibility of sudden communication shutdowns, may refrain from discussing sensitive topics online or using certain online services. This also undermines trust in any government initiatives in the field of digitalization, as it demonstrates the willingness of the authorities to use technology not for development but for repression.

The use of internet shutdowns as a control tool during "critical events" or periods of social tension¹¹¹ indicates that the Turkmen authorities view free and uncontrolled access to

information as a direct threat to their stability and prefer creating an information vacuum to the potential spread of alternative viewpoints or coordination of civic activity.

3.4. Legislation on "Words on the Internet"

Turkmenistan's legislation contains a number of norms that can be used to hold individuals accountable for statements on the internet. Although the country's Constitution formally guarantees freedom of thought and its free expression, as well as the right to receive information (Article 26, in some editions Article 28⁹³), these guarantees are significantly limited by other legislative acts and law enforcement practice.

The key document in this regard is **the Law "On Legal Regulation of the Development of the Internet Network and Provision of Internet Services in Turkmenistan"**. Article 19 of this law places full responsibility on the person providing information via the internet for its content in accordance with the legislation of Turkmenistan.⁸¹ Moreover, Article 30 details the types of information for the dissemination of which users bear responsibility. These include:

- Information whose dissemination is restricted or prohibited by the legislation of Turkmenistan.
- Information constituting state or other secrets protected by law.
- Materials containing public calls for the violent change of the constitutional order.
- Materials containing insults or slander against the President of Turkmenistan.
- Propaganda of war, violence and cruelty, racial, national, religious hatred or enmity.
- Pornography.
- Slander and insults.
- Incitement to commit criminal offenses.⁷⁶

The Law of Turkmenistan "On Mass Media" also contains provisions concerning responsibility for distributed content. It prohibits the abuse of freedom of mass information, which includes, in particular, the dissemination of information that does not correspond to reality, defaming the honor and dignity of citizens or harming their legitimate interests, as well as influencing the court.¹¹⁴ The law provides for the right of citizens and legal entities to demand refutation of such information.

Criminal liability for statements, including on the internet, may arise under the following articles of **the Criminal Code of Turkmenistan**:

- **Article 131 "Slander":** dissemination of knowingly false information defaming the honor and dignity of another person or undermining their reputation.¹¹⁵ The 2015 amendments clarified that liability arises if the slander is carried out in a public speech, publicly displayed work, or mass media.¹¹⁶
- **Article 211 "Slander against a judge, juror, prosecutor, investigator, or person conducting inquiry".**¹¹⁵
- **Article 378 "Dissemination of knowingly falsified information":** this article is in the section on crimes in the field of computer information, which directly indicates its applicability to online content.¹¹⁵ The text of the article itself is missing from the provided materials, but its title and location in the Criminal Code indicate its relevance. Council of Europe documents also mention Article 334 of the Criminal Code "Dissemination of knowingly false information"⁸⁶, which may be either an alternative number for the same article or a separate offense.
- **Article 177 "Incitement of social, national, or religious enmity"** (text not provided, but often used in similar contexts in the region).
- **Article 178 "Insult of the President of Turkmenistan" and Article 179 "Slander against the President of Turkmenistan"** (texts not provided, but typical for the legislation of countries with authoritarian regimes and actively used to suppress criticism).

The Code of Turkmenistan on Administrative Offenses also provides for liability for:

- **Article 337 "Slander":** dissemination of knowingly false fabrications defaming the honor and dignity of another person.¹¹⁷
- **Article 338 "Insult":** humiliation of the honor and dignity of another person expressed in an indecent form.¹¹⁷

The broad and vague wording of many of these legal norms, especially concerning "knowingly false information", "slander", "insult", and protection of "honor and dignity" (including the president and other officials), creates fertile ground for their arbitrary application in order to suppress any criticism of the authorities and restrict freedom of speech on the internet. The absence of clear definitions and an independent judicial system capable of objectively assessing the presence of an offense or crime leads to the fact that any statement unflattering to the authorities can be qualified as illegal.

Particular concern is caused by Article 30 of the Law "On Legal Regulation of the Development of the Internet Network...", which places responsibility on users for a wide range of content,

including "insult or slander against the President of Turkmenistan" and the dissemination of information calling for the "violent change of the constitutional order".⁸¹ In the absence of clear legal definitions and guarantees of a fair trial, these provisions effectively criminalize any form of online dissent and criticism of state policy. This is confirmed by numerous cases of persecution of activists, journalists, and ordinary citizens for their publications on social networks and other online platforms (see section 4.2).

3.5. Legislation on Internet Blocking

Turkmenistan's legislation contains provisions allowing the authorities to block internet resources. One of the key regulatory acts creating the basis for such restrictions is the Law "On Combating Extremism". This law, by analogy with the legislation of neighboring countries, is usually used to stop the dissemination on the internet of materials that the authorities may consider extremist.

In addition, the Law "On Combating Terrorism" directly prohibits the dissemination of information that "promotes or justifies terrorism", as well as information that may "hinder the conduct of a counter-terrorism operation". In turn, the Law "On Legal Regulation of the Development of the Internet Network and Provision of Internet Services in Turkmenistan" establishes the responsibility of users for sending via internet channels information whose dissemination is "restricted or prohibited by the legislation of Turkmenistan". These legislative norms create broad and often vague legal grounds for the authorities to restrict access to online content, usually under the pretext of ensuring national security and combating terrorism and extremism.

3.5.1. Legislation

Several legislative acts form the legal basis for blocking internet resources in Turkmenistan, although they do not always contain clear and transparent procedures.

The Law "On Legal Regulation of the Development of the Internet Network and Provision of Internet Services in Turkmenistan" contains a number of articles that can be used to justify blocking:

- **Article 11** grants authorized state bodies powers to "combat offenses committed using the internet".⁷⁴ This general provision can serve as a basis for taking measures to restrict access to resources recognized as illegal.

- **Article 11¹** grants the National Registrar (economic society "Türkmen Domen") the right to refuse registration of a domain name or suspend the right to a registered domain name in the national .TM domain zone in case of detection of facts or actions contrary to the legislation of Turkmenistan or the Domain Name Registration Procedure.⁷⁴ This is a direct mechanism for blocking sites in the national domain zone.
- **Article 25** obliges the state to take legislative and other measures to counteract the illegal use of the internet. Within the framework of these measures, internet providers are required to store information about users and the services provided to them for at least 12 months and provide it upon request of judicial and/or law enforcement agencies.⁷⁴ Although blocking is not directly mentioned here, this provision creates a mechanism for identifying and prosecuting illegal online activities, which may be accompanied by restriction of access to the relevant resources.
- **Article 31** grants the authorized state body in the field of communications the right to suspend the operation of any technical means and telecommunication networks, regardless of their departmental affiliation and form of ownership, in case of use of communication facilities by internet service operators for purposes detrimental to the interests of the individual, society, and the state, including for criminal purposes.⁷⁴ This norm gives broad powers for shutdown or blocking of access.

The Law of Turkmenistan "On Mass Media" in Article 13 provides for the possibility of termination or suspension of the activities of mass media (including online publications registered as media) by a court decision on the basis of a claim by an authorized state body in case of repeated violations by the editorial board of the requirements of Article 4 of this Law (concerning the inadmissibility of abuse of freedom of mass information, including the dissemination of illegal content).¹¹⁴

The Law of Turkmenistan "On National Security"¹⁸⁴ and **the Law "On Combating Terrorism"** (text not provided) may also contain provisions allowing restriction of access to information on the internet for the purposes of ensuring national security and combating terrorism. This is indirectly indicated by the statement of the representative of Turkmenistan at the UN that there are no restrictions on the use of internet sites, "except for those prohibited by law, in particular, for the propaganda of terrorist and radical intentions".³³

The Law "On Information about Private Life and Its Protection"⁹¹ and **the Law "On Electronic Document and Electronic Document Flow"**⁸⁶ also form part of the legal field, but their direct relation to website blocking procedures requires a more detailed study of the texts.

Despite the existence of these legislative acts, blocking procedures remain non-transparent, and decisions are often made arbitrarily, without proper judicial oversight and the possibility of appeal for resource owners.³³

3.5.2. Blocking Procedures

The procedures for blocking internet resources in Turkmenistan are characterized by extreme opacity and the absence of clear, publicly available regulations. Decisions on blocking are often made arbitrarily, without prior notification of resource owners and without the possibility of effective judicial appeal.³³

The Ministry of National Security (MNB) and the agency "Turkmenaragatnashyk" play a key role in making blocking decisions and monitoring their implementation.²⁸ The MNB is likely responsible for identifying "undesirable" content and forming lists of resources subject to blocking, based on considerations of "national security" and political expediency. The agency "Turkmenaragatnashyk" and the communication operators under its control ("Turkmentelkom", AGTS, "Altyn Asyr") ensure the technical implementation of blocking.

Formally, the Law "On Legal Regulation of the Development of the Internet Network..." provides that the National Registrar (economic society "Türkmen Domen") may suspend a domain name in the .TM zone in case of violation of the legislation.⁷⁴ However, this applies only to sites in the national domain zone. The blocking of foreign resources and IP addresses is apparently carried out at the level of backbone providers on the instructions of state bodies, primarily the MNB.

The lack of independent judicial control and clear criteria for blocking leads to a wide range of resources falling under restrictions, including independent news sites, social networks, human rights platforms, and censorship circumvention tools.⁹⁵ Users and resource owners are deprived of effective mechanisms to challenge blocking decisions.

3.5.3. Registries of Blocked Internet Resources

There is no official, publicly available registry of blocked internet resources in Turkmenistan.³³ The authorities do not publish lists of prohibited sites and do not provide explanations regarding the reasons for blocking. This creates an atmosphere of legal uncertainty and makes it difficult for citizens and organizations to understand what content is considered permissible and what is prohibited. The lack of transparency also makes public control over the actions of the authorities in the field of internet censorship impossible.

Despite the absence of official lists, based on data from independent researchers, human rights organizations, and user reports, the following main categories of internet resources subject to blocking in Turkmenistan can be identified:

- **Social networks and messengers:** Most popular international social networks and messaging platforms such as Facebook, X (formerly Twitter), Instagram, YouTube, LinkedIn, Telegram, WhatsApp, VKontakte, Odnoklassniki, Skype, WeChat are blocked or their access is severely restricted.²⁸ In 2023, the ICQ messenger, which gained popularity as an alternative, was reportedly blocked.¹²¹
- **Independent news sites and foreign media:** Websites of independent news outlets covering the situation in Turkmenistan (for example, "Chronicle of Turkmenistan" (chrono-tm.org), Turkmen.news, Radio Azatlyk), as well as many international news resources (BBC, Reuters, Deutsche Welle, Radio Svoboda, Echo of Moscow, Meduza, etc.) are blocked.³³
- **Human rights organizations and resources related to human rights:** Websites of international and local human rights organizations, as well as resources containing information on human rights and criticism of the authorities, are subject to blocking.⁹⁵
- **VPN services and censorship circumvention tools:** The authorities actively block access to VPN services and other technologies that allow bypassing internet censorship.²⁸ This includes both the websites of VPN providers themselves and the IP addresses of their servers.
- **Cloud storage and file-sharing services:** Access to some popular cloud storage (for example, Dropbox, WeTransfer, CloudFront) and file-sharing services is reportedly blocked.¹²⁰
- **Platforms for developers and designers:** Cases of blocking access to resources used by IT specialists, such as GitHub, have been noted.¹²⁴
- **Entertainment content and specific categories:** Adult content (pornography) is blocked, as well as, according to some data, resources related to LGBTQ+ and gender education.¹¹⁸ Cases of blocking sites containing the word "porn" in the domain name, regardless of their actual content, and sites on the WordPress.org platform (suffix w.org) were recorded.¹¹⁸
- **Other resources:** In 2019, Wikipedia was reportedly temporarily blocked.³³ In March 2021, the Zoom video conferencing service and the PayPal payment system were blocked.³³

The scale of blocking is enormous. A study conducted in 2021–2022 showed that more than 122,000 domains are blocked in Turkmenistan.¹¹⁸ According to some estimates, up to three-quarters of all IP addresses in the world are blocked in the country.¹²¹

3.5.4. Development of Blocking

The Turkmen authorities use a set of technical methods to implement internet censorship and blocking of undesirable resources. These include:

- **IP address blocking:** One of the most common methods, when access to servers hosting unwanted sites is blocked by their IP addresses. Often entire IP subnets are blocked, leading to "carpet blocking" and restriction of access to many legitimate resources unrelated to the original blocking purpose.³³ This may be due to both technical laziness of those responsible for blocking and a deliberate policy of maximum access restriction.
- **DNS filtering (DNS spoofing):** Manipulation of the domain name system, when DNS servers of the provider return a false IP address (for example, the address of a certain "stub" or non-existent address) or do not respond at all to a request for a blocked domain. This method is actively used to block access to sites.¹¹⁸
- **Deep Packet Inspection (DPI):** A technology that allows real-time analysis of the content of internet traffic. DPI systems can detect attempts to access blocked resources by keywords in URLs, HTTP/HTTPS headers (for example, the Host field in HTTP or Server Name Indication (SNI) in TLS), or even by the content of transmitted data. Upon detection of prohibited content or request, the connection can be reset (for example, by sending TCP RST packets) or redirected.¹¹⁸ Studies confirm the use of DPI for blocking HTTP and HTTPS traffic in Turkmenistan.¹³⁰
- **Rule-based blocking:** Automatic blocking of domains or URLs containing certain words or character sequences. For example, all domains containing the word "porn" or sites ending in ".w.org" (WordPress) were reportedly blocked.¹¹⁸ This method often leads to overblocking (collateral damage), when resources unrelated to the prohibited topic fall under the ban.
- **Blocking of VPN services and protocols:** The authorities actively combat the use of VPNs and other censorship circumvention tools by blocking known IP addresses of VPN servers and possibly analyzing traffic to detect characteristic signs of VPN protocols.⁹⁵
- **Throttling:** Intentional slowing down of access speed to certain resources or types of traffic, making their use practically impossible even if they are not formally blocked.¹¹¹

Studies such as those conducted by the Qurium Media Foundation¹¹⁹ and a team of computer scientists who published the work "Measuring and Evading Turkmenistan's Internet Censorship"¹¹⁸ confirm the use of a combination of these methods. In particular, it is noted that Turkmenistan uses different blocking lists for different protocols (DNS, HTTP, HTTPS) and uses methods that allow censorship even without observation points inside the country (for example, through traffic analysis on border routers).¹³⁰

4. Human Rights Violations on the Internet

The internet space in Turkmenistan is characterized by systematic and gross violations of human rights, including the right to freedom of expression, the right to access information, the right to privacy, and the right to freedom of association in the digital environment. The state exercises total control over the internet, using it as a tool of repression and suppression of any dissent, rather than as a means for development and realization of citizens' rights.²⁸

4.1. Internet Shutdowns on Government Orders

Deliberate internet shutdowns are one of the harshest forms of violation of digital rights, completely depriving citizens of access to information, communication means, and online services. Cases of such shutdowns have been recorded in Turkmenistan, especially during periods of alleged social or political tension.

Table 6: Recorded Cases of Significant Restrictions and Internet Shutdowns in Turkmenistan (2019–2025)

Start Date	End Date	Duration	Scope	Estimated Cause / Context	Source(s)
July 2019	N/A	N/A	Significant deterioration, VPN blocking	Following reports of the president's presumed death; Independence Day celebrations in September 2019	119

April 10, 2022, 14:00 UTC	April 12, 2022, 06:00-07:00 UTC	~1 day 16-17 hours (40 hours)	National (near-total outage)	Followed blocking of social media, VPN providers, and cloud platforms.	109
July 2022	N/A	N/A	National (near-total outage)	Noted in a Freedom House report 131 as one of the incidents in 2022.	131

Note: N/A – no data. Exact information on the reasons and scale of all shutdowns is often hidden by the authorities.

The lack of clear legislative regulation of the internet shutdown procedure⁸¹ makes such actions arbitrary and non-transparent. The authorities can resort to shutdowns, citing general considerations of national security or the need to prevent "illegal activities", but without any independent oversight or possibility of appeal.

The consequences of such shutdowns for human rights and the country's economy can be very serious. They violate the right to freedom of expression and access to information, hinder the work of journalists and human rights defenders, complicate communication between people, including in emergency situations, and undermine economic activity dependent on online services.³³ As noted in the joint report of Progres Foundation and Access Now for the UN Committee on Economic, Social and Cultural Rights, internet shutdowns in Turkmenistan negatively affect the right to education, the right to a healthy life, the right to culture and scientific progress, as well as the right to economic development.³³ The international community increasingly recognizes that deliberate internet shutdowns are a violation of international human rights law.³³

4.2. Criminalization of Online Speech

The Turkmen authorities actively use legislation to persecute citizens for their online statements, especially if they contain criticism of the government, officials, or the president, or highlight negative aspects of life in the country. The vague wording of laws on slander, insult, dissemination of "false information", and protection of "honor and dignity" (see section 3.4)

create wide opportunities for arbitrary application and suppression of online freedom of speech.

Numerous cases have been recorded where activists, bloggers, journalists, and ordinary citizens were subjected to criminal or administrative prosecution for their publications on social networks, comments, or dissemination of information deemed "undesirable" by the authorities.

Known cases of persecution for online activity (2019–2025):

- **Nurgeldy Halykov:** Freelance correspondent for Turkmen.news, arrested in July 2020 and sentenced in September 2020 to 4 years imprisonment on a fabricated fraud charge. The real reason for the persecution, according to colleagues and human rights defenders, was his forwarding of a photograph of a WHO delegation taken during the COVID-19 pandemic, which the Turkmen authorities officially denied.⁹⁷ Released in June 2024 after serving his sentence, but in January 2025 he was banned from leaving the country.⁹⁷
- **Mansur Mingelov:** Human rights defender protecting the rights of the Baloch minority, sentenced in 2012 to 22 years imprisonment on fabricated charges (including dissemination of pornography and drug trafficking) after documenting cases of torture and human rights violations.⁹⁸ In prison, his health has seriously deteriorated, and he is not provided with adequate medical care.¹³⁹
- **Murat Dushemov:** Blogger sentenced in August 2021 to 4 years imprisonment on charges of "intentional infliction of medium-gravity bodily harm", "threat", and attempted bribery of a doctor. The persecution is linked to his attempts to obtain information about the real COVID-19 situation in the country and his critical videos.⁹⁸
- **Murat Ovezov:** YouTube blogger sentenced in 2020 to 5 years imprisonment on fabricated fraud charges for openly expressing critical views on the internet.¹³⁷
- **Rovshen Klychev:** Activist who openly criticized the government on social networks, deported from Turkey to Turkmenistan in July 2023 and reportedly sentenced to 17 years imprisonment on unknown criminal charges.⁹⁷
- **Merdan Mukhamedov:** Activist from an emigrant political opposition group, deported from Turkey in June 2023. In August 2023, sentenced on several criminal charges, including conspiracy to overthrow the government, in a closed trial. The sentence was not made public.⁹⁷ According to other data, he was accused of extremism in retaliation for his online criticism of the government.¹⁴⁶

- **Khursanay Ismatullaeva:** Doctor seeking justice after illegal dismissal, sentenced in 2021 on fabricated fraud charges after her case was mentioned at a public event with European Parliament members. Released under amnesty in December 2022.¹³⁷
- **Pygamberdy Allaberdyev:** Lawyer sentenced to 6 years imprisonment in September 2020 on fabricated charges of alleged connections with activists abroad. Released under amnesty in December 2022.¹³⁷
- **Other cases:** Reports of detentions and fines of residents of Balkan velayat for interacting with content from independent news sites and opposition groups on social networks in July 2024.¹²³ The authorities also persecute citizens who publish requests for help on the internet due to difficult financial situations, accusing them of "discrediting the country".¹²³

These cases demonstrate the systematic nature of persecution for online activity. Charges are often fabricated (fraud, hooliganism, drug possession, infliction of bodily harm), concealing the true reason – criticism of the authorities or dissemination of undesirable information. Trials are usually held behind closed doors, with violations of the right to a fair trial and access to a lawyer.⁹⁷

4.3. Persecution of Media and NGOs

Independent media and non-governmental organizations (NGOs) in Turkmenistan face total pressure from the authorities, making their free activity inside the country practically impossible. The main part of independent information about the situation in Turkmenistan comes from media and NGOs based abroad, which are also subjected to persecution.

Persecution of independent media:

- **Website blocking:** Websites of all independent news resources covering events in Turkmenistan (for example, "Chronicle of Turkmenistan" (project of the Turkmen Initiative for Human Rights – TIPH), Turkmen.news, Radio Azatlyk (Turkmen service of Radio Liberty)) and many international media are systematically blocked on the territory of the country.²⁸
- **Cyberattacks:** Websites of independent media are regularly subjected to DDoS attacks and other types of cyberattacks, presumably initiated by Turkmen special services, in order to disrupt their operation and hinder access to information¹²¹ (attack on the Turkmen.news website). "Chronicle of Turkmenistan" reported particularly intense DDoS attacks in April 2019 and September 2020.¹⁴⁸

- **Persecution of journalists and correspondents:** Journalists cooperating with independent foreign publications are subjected to intimidation, surveillance, arbitrary detentions, physical assaults, and criminal prosecution on fabricated charges (see cases of Nurgeldy Halykov, Soltan Achilova, Khudayberdy Allashov).⁹⁷ The authorities also exert pressure on their relatives.¹⁵⁰
- **Discrediting campaigns:** Turkmen state media regularly publish materials aimed at discrediting independent sources of information and their employees, accusing them of spreading "false" and "falsified" information.¹¹⁹

Pressure on NGOs and activists:

- **Ban on the activities of unregistered NGOs:** Turkmenistan's legislation prohibits the activities of unregistered public associations, and the registration procedure is extremely burdensome and practically impossible for independent human rights groups.¹⁵⁴ International human rights NGOs have no access to the country.⁹⁸
- **Persecution of activists for online activity:** Civil activists using the internet to express their opinions, criticize the authorities, or organize any public activity are subjected to persecution, including surveillance, intimidation, arbitrary detentions, and imprisonment on fabricated charges (see cases of Mansur Mingelov, Murat Dushemov, Rovshen Klychev, Merdan Mukhamedov, etc. in section 4.2).⁹⁷
- **Transnational repression:** The Turkmen authorities persecute activists and critics of the regime abroad, including by pressuring their relatives in Turkmenistan, initiating criminal cases, and attempting to achieve their deportation.⁹⁷ Reports of deportations of activists from Turkey and Russia followed by their imprisonment in Turkmenistan.⁹⁷ In particular, in November 2023, the head of the Turkmen Helsinki Foundation for Human Rights (THF) Tadjigul Begmedova was deported from Turkey for "national security" reasons.¹²⁷ Turkmen.news editor Ruslan Myatiev was also deported from Turkey in July 2024 on similar grounds.⁹⁷
- **Pressure on relatives of activists:** A common practice is exerting pressure on relatives of activists living in Turkmenistan in order to silence their critically minded relatives abroad.¹³⁷

Such a repressive environment completely suppresses the possibility for independent media and NGOs to work freely in the country and cover the human rights situation, including digital rights. This leads to the creation of an information vacuum, which the authorities fill with state propaganda.

5. Civil Society in the Field of Internet Governance

Civil society in Turkmenistan, especially with regard to digital rights and internet governance, is in an extremely suppressed state. The authoritarian nature of the political regime, strict control over the information space, and persecution of any independent public activity leave no room for the formation and functioning of independent organizations that could engage in protecting citizens' digital rights or participating in the development of internet governance policy within the country.⁹⁸

Legislation on public associations contains burdensome registration requirements, and the activities of unregistered NGOs are prohibited.¹⁵⁴ Under such conditions, any attempts to create independent groups engaged in monitoring internet censorship, protecting user rights, or promoting digital literacy are associated with a high risk of persecution by the authorities.

The main activity on protecting digital rights and monitoring the internet situation in Turkmenistan is carried out by a few human rights groups and independent media based outside the country, as well as international human rights organizations.⁹⁸ These organizations play an important role in collecting and disseminating information about violations, conducting research, and advocacy at the international level.

5.1. Organizations

There are no registered and independently operating NGOs inside Turkmenistan specializing in digital rights or internet governance. The state does not allow the creation of such organizations and seeks to control all spheres of public life.

Activities on monitoring and protecting digital rights with respect to Turkmenistan are mainly carried out by the following types of organizations:

Turkmen human rights groups and independent media in exile:

- **Turkmen Initiative for Human Rights (TIPH) and its project "Chronicle of Turkmenistan" (chrono-tm.org):** one of the oldest human rights organizations actively covering the human rights situation, including freedom of speech and access to information on the internet. The organization's website is regularly blocked and subjected to cyberattacks.¹¹⁹

- **Turkmen.news:** An independent news outlet covering events in Turkmenistan, including internet problems and persecution of activists. Employees and correspondents of the outlet are subjected to pressure.⁹⁷
- **Radio Azatlyk (Turkmen service of Radio Liberty/Radio Free Europe):** One of the few sources of independent information in the Turkmen language, actively covering internet problems and human rights. The website is blocked, correspondents are persecuted.¹⁴⁹
- **Progres.Online:** A relatively new resource publishing analytical materials and reports on the state of the internet and digital rights in Turkmenistan.²⁸
- **Turkmen Helsinki Foundation for Human Rights (THF):** A human rights organization engaged in monitoring and documenting human rights violations in Turkmenistan, including those related to the internet. The head of the foundation has been subjected to persecution and deportation.¹²⁷

International human rights organizations:

- **Human Rights Watch (HRW):** Regularly publishes reports on the human rights situation in Turkmenistan, including violations of digital rights, censorship, and persecution.⁹⁷
- **Amnesty International:** Also monitors and documents human rights violations, including freedom of expression and access to information on the internet.⁹⁸
- **CIVICUS Monitor:** Tracks the state of civic space, including restrictions on freedom of speech and access to information online.¹⁰⁵
- **Freedom House:** Publishes annual reports "Freedom on the Net" and "Nations in Transit" evaluating the level of internet freedom and democracy, where Turkmenistan traditionally ranks last.⁵⁷
- **Reporters Without Borders (RSF):** Evaluates media freedom, including the online environment, and regularly includes Turkmenistan among the "enemies of the internet".¹¹⁸
- **Committee to Protect Journalists (CPJ):** Protects the rights of journalists and documents cases of their persecution, including for online publications.¹³⁴
- **Access Now and the #KeepItOn coalition:** Monitor and document internet shutdowns and fight for digital rights worldwide, including Turkmenistan.³³
- **Internet Society:** Conducts research on internet infrastructure, resilience, and access, including data on Turkmenistan within the Pulse project.³⁷
- **Qurium Media Foundation:** Conducted technical research on internet censorship in Turkmenistan.¹¹⁹
- **OONI (Open Observatory of Network Interference):** Collects data on website and application blocking worldwide, including Turkmenistan.¹⁷⁰

Official or quasi-official structures:

- **Apparatus of the Ombudsman of Turkmenistan:** The institution of the human rights commissioner formally exists¹⁷⁴, but its independence and effectiveness in protecting digital rights raise serious doubts in the conditions of an authoritarian regime. Ombudsman reports usually do not address internet freedom issues or cover them extremely limitedly.

The participation of Turkmenistan's civil society in international internet governance forums (for example, IGF) is absent or minimal and, most likely, represented by pro-government delegates, if any.

5.2. VPN and Censorship Circumvention Tools

In conditions of total internet censorship and blocking of many popular web resources, the use of VPN services and other censorship circumvention tools has become for many citizens of Turkmenistan the only way to gain access to alternative information and the free internet.

5.2.1. Status of VPN Services

Officially, the use of VPN services in Turkmenistan is strictly limited or effectively prohibited. Although there may not be a direct legislative act declaring all VPNs illegal, existing regulatory acts create the legal basis for this. The Law "On Legal Regulation of the Development of the Internet Network..." prohibits the use of "uncertified" means of cryptographic information protection (Article 31)¹²⁷, which can be interpreted as a ban on the use of most commercial VPN services that have not undergone state certification (which for such services is likely impossible). It has also been reported that legislation criminalizes "intentional provision of illegal services providing technical programs" on the internet, which can be applied to VPN distributors.¹²⁷

Some sources directly indicate that VPNs in Turkmenistan are illegal or their use is prohibited.⁵⁷ Turkmenistan is among the few countries in the world (along with Iraq and North Korea) where the use of VPNs is completely prohibited.¹⁷⁵ The authorities actively block access to VPN provider websites and the IP addresses of their servers.²⁸ Instead of "blacklists" (blocking specific prohibited resources), Turkmenistan, according to some data, uses "whitelists", allowing access only to a limited number of government-approved sites, which makes bypassing blocks even more relevant.¹⁸⁰

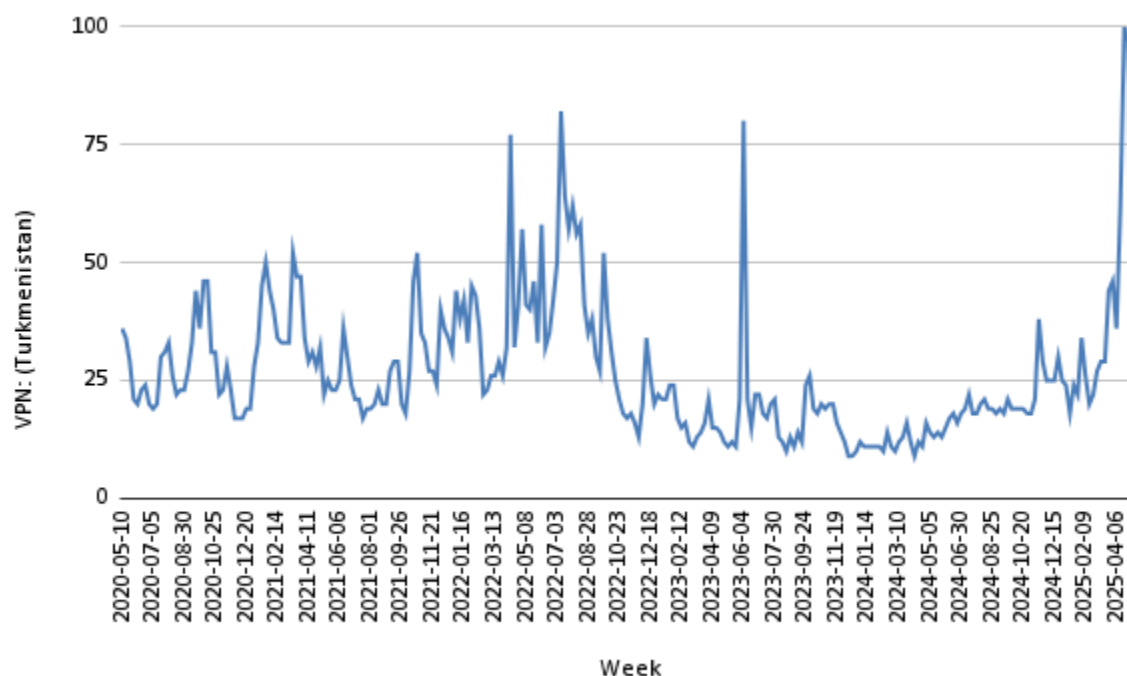
5.2.2. Number of VPN Users

There are no exact statistical data on the number of VPN users in Turkmenistan, which is due to both the general closed nature of the country and the illegal status of VPNs themselves. However, indirect data and numerous reports indicate high demand for such services.

Turkmenistan has repeatedly **ranked first in the world in the number of search queries related to VPNs** in Google Trends.⁵⁷ This indicates a massive desire of citizens to bypass state censorship. According to Techopedia as of the end of 2023, 77% of VPN users worldwide used them for work, 51% – for protection in public Wi-Fi networks, 44% – for anonymity, 37% – for secure communication, and **20% – to hide their activities from the authorities.**⁵⁷ The last motive is especially relevant for Turkmenistan.

Despite the lack of exact figures, it can be confidently stated that a significant part of active internet users in Turkmenistan (estimates of the total number of which vary from 2.64 million⁶ to more than 3 million⁴⁴) resorts to using VPNs to access blocked resources.

Chart 8: Dynamics of Search Queries about VPN in Turkmenistan (2020–2025)



Source: trends.google.com

Unlike many other countries, interest in VPN services in Turkmenistan is **constantly high and at the same time reactive**. The chart does not show a low baseline level; on the contrary, it demonstrates a chronically high need to bypass blocks, against which panic spikes occur. This directly indicates that for a significant part of users, VPN is not a tool for solving a sudden problem, but a vital means for daily access to the global network, where most popular world resources are blocked by default.

Such dynamics allow using the chart as an accurate barometer of repressions in the country's digital space. Each significant peak on the chart is not just a reaction to the blocking of one or two resources, but a signal of the beginning of a new, harsher campaign by the authorities to clean up the internet. The constantly high background of queries at the same time speaks of the ongoing struggle of citizens for access to information in conditions of one of the strictest internet censorship regimes in the world.

Connection with news events

The direct correlation between spikes on the chart and the actions of the authorities is easily traced through the news agenda:

- **The peak in the summer of 2022** coincided with reports of the blocking of the last available messenger IMO in the country, which deprived citizens of the main communication channel.
 - **Source:** Radio Azatlyk, "In Turkmenistan, the operation of the IMO messenger is restricted, VPNs are blocked" (August 13, 2022).
- **The sharp spike in the summer of 2023** correlates with a new wave of blocks, when the authorities began to deliberately restrict the operation of censorship circumvention tools, including Tor, and re-blocked Wikipedia. During this period, reports of mass disruptions in internet access throughout the country were reported.
 - **Source:** Turkmen.News, "Internet blocking in Turkmenistan continues — under the 'young' president it's worse than under the 'old'" (July 3, 2023).
- **The record peak in the spring of 2025** became a reaction to an unprecedented in scale campaign against VPNs. Although there are few direct reports for March-April, subsequent news confirms the beginning of a new stage of struggle, when the authorities, according to media reports, began to force citizens to install spyware applications controlled by special services.

- **Source:** The Times of Central Asia, "Turkmenistan Tightens Internet Blocks to Promote State-Controlled VPNs" (July 2025, describes the general escalation during this period).

5.2.3. Cases of Persecution for Using VPN

The authorities of Turkmenistan actively persecute citizens for using and distributing VPN services. These persecutions take various forms:

- **Raids and checks:** Employees of special services and police conduct raids on homes and workplaces of citizens suspected of using or installing VPNs.¹²⁷ Checks of mobile phones are conducted, including among schoolchildren, for the presence of VPN applications.⁹⁷
- **Detentions and administrative arrests:** Persons caught using or installing VPNs may be detained for up to 15 days.¹²⁷
- **Fines:** Administrative fines are imposed for using VPNs.⁹⁸
- **Confiscation of equipment:** Mobile phones and computers may be seized from users for checking.⁹⁷
- **"Preventive conversations" and intimidations:** Citizens are summoned to law enforcement agencies, where "conversations" are held with them, they are intimidated with criminal liability and demanded to stop using VPNs.⁹⁸
- **Requirement to sign an obligation not to use VPN:** Cases have been recorded when citizens, especially when connecting home internet or after detecting VPN, were required to give a written obligation (sometimes even an oath on the Quran) not to use means of bypassing blocks.⁹⁵
- **Disconnection from the internet:** The authorities may disconnect home internet from users caught frequently using VPNs.⁹⁷
- **Dismissal from work or expulsion from educational institutions:** Using VPN may entail loss of job or problems in studies.¹⁷⁷

Despite all these measures, citizens continue to seek and use ways to bypass blocks, as VPN is often the only way to gain access to the global internet.⁵⁷

5.2.4. Monitoring of Blocks

Monitoring of internet blocks in Turkmenistan is carried out mainly by external organizations and researchers due to the impossibility of conducting such activities inside the country.

- **OONI (Open Observatory of Network Interference):** Collects data on internet censorship worldwide using its OONI Probe software. Data on Turkmenistan is available on their OONI Explorer platform and shows the blocking of many sites and applications.¹⁷⁰ On the OONI Explorer platform for Turkmenistan, 196,799 measurements have been collected from 5 local networks.¹⁷⁰
- **Qurium Media Foundation:** Conducted a large-scale study of internet censorship in Turkmenistan in 2021–2022, identifying the blocking of more than 122,000 domains and the filtering methods used. The results are published in the work "Measuring and Evading Turkmenistan's Internet Censorship".¹¹⁸
- **Access Now and the #KeepItOn coalition:** Monitor and document cases of internet shutdowns worldwide, including Turkmenistan.³³
- **NetBlocks:** Also engages in real-time monitoring of internet restrictions and shutdowns.¹⁸²
- **Independent media and human rights groups in exile (Turkmen.news, "Chronicle of Turkmenistan", etc.):** Publish information about new blocks and methods of bypassing them, based on reports from the country and their own research.¹¹⁹
- **Freedom House, Reporters Without Borders, CIVICUS Monitor:** In their annual reports, they also reflect the situation with blocks and internet censorship in Turkmenistan.⁵⁷

These efforts allow obtaining an idea of the scale and nature of internet censorship in the country, despite the lack of official information and transparency from the Turkmen authorities.

6. Conclusion

The analysis of the state of the internet and digital rights in Turkmenistan for the period from 2019 to 2025 reveals a picture of deeply rooted state control, systematic human rights violations, and significant technological lag. Despite the formal presence of legislation declaring the goals of developing the information society and protecting citizens' rights, real practice testifies to the priority of state security considerations and preservation of the political regime over fundamental freedoms.

Compliance with human rights on the internet:

The situation with compliance with human rights on the internet in Turkmenistan remains extremely unfavorable. Key violations include:

1. **Right to freedom of expression and access to information:** Strict censorship, mass blocking of independent news sites, social networks, human rights resources, and censorship circumvention tools (VPN).³³ Criminal and administrative prosecution of citizens, journalists, and activists for online statements, criticism of the authorities, or dissemination of "undesirable" information.⁹⁷ This creates an atmosphere of fear and total self-censorship.
2. **Right to privacy:** Large-scale surveillance of citizens' online activity, monitoring of VPN use, checks of mobile devices.⁹⁷ Legislation obliges providers to store user data and provide it to special services.⁸¹
3. **Right to freedom of peaceful assembly and association (in the online context):** Blocking of communication and coordination platforms, as well as persecution for attempts at online organization or participation in discussions considered by the authorities as a threat.
4. **Right to education and access to cultural values:** Low internet speed, its high cost, and blocking of educational and cultural resources limit citizens' opportunities in these areas.³³

Internet infrastructure and access:

Despite the country's significant financial resources, the internet infrastructure remains extremely underdeveloped:

- **Low penetration level:** The internet is used by a minority of the population, especially in rural areas.⁶
- **Extremely low speed and high quality:** Turkmenistan consistently ranks last in world internet speed rankings, making many modern online services inaccessible.⁶
- **State monopoly:** The internet services market is fully controlled by state providers ("Turkmentelkom", AGTS, "Altyn Asyr"), which leads to lack of competition, inflated prices, and low quality of services.²⁸
- **Technological lag:** Practically zero implementation of the IPv6 protocol indicates stagnation in the development of network infrastructure.³⁷

Legislation and regulation:

The legislative base formally recognizes the importance of internet development, but in practice serves as a tool for strengthening state control. Vague wording of laws on "dissemination of false information", "slander", "insult", and "protection of national security" are used to suppress dissent.⁷⁶ Procedures for blocking sites and shutting down the internet are non-transparent and arbitrary.³³ Regulatory bodies such as the agency "Turkmenaragatnashyk", and security structures (MNB) act in close coordination to ensure total control over the information space.²⁸

Civil society:

Independent civil society in Turkmenistan capable of dealing with digital rights issues is effectively absent inside the country due to the repressive policy of the authorities.⁹⁸ The main work on monitoring, documenting violations, and human rights activities is carried out by a few Turkmen activists and organizations in exile, as well as international NGOs.⁹⁸ The use of VPN and other blocking circumvention tools is widespread among the population, despite the risks of persecution, which indicates citizens' desire for access to uncontrolled information.⁵⁷

Forecast of events development:

Given the immutability of the political course and preservation of the authoritarian system of government, **it is unlikely to expect significant positive changes in the sphere of digital rights and internet freedom in Turkmenistan in the near future (until the end of 2025 and beyond).**

- **Preservation of strict control:** The authorities will most likely continue the policy of total control over the internet space, viewing it as a potential threat. Blocking of undesirable resources, censorship, surveillance, and persecution for online activity will remain the main tools of this control.
- **Technological lag:** Without significant political and economic reforms, attraction of foreign investments, and development of competition, the internet infrastructure will continue to degrade or develop at extremely slow paces. This means preservation of low speed, high cost, and limited accessibility of the internet for the majority of the population.
- **Further restriction of VPN:** The fight against VPN and other means of bypassing blocks will likely intensify, as the authorities seek to completely isolate the population from uncontrolled sources of information. More advanced technical means for detecting and blocking VPN traffic may be introduced.

- **"Sovereign internet":** The idea of creating a "national digital network" not connected to the global internet²⁸, if implemented, will lead to even greater isolation of the country and full control over information flows according to the Chinese or North Korean model.
- **Pressure on activists:** Persecution of activists, journalists, and ordinary citizens for their online activity, both inside the country and abroad (transnational repressions), will continue.⁹⁷
- **Absence of internal civil participation:** Under conditions of repressions, one cannot expect the emergence of a strong and independent civil society inside the country capable of influencing policy in the field of internet governance. The main role in monitoring and advocacy will remain with foreign actors.

Some external factors, such as economic pressure (for example, falling energy prices) or strengthening international attention to the human rights situation in Turkmenistan, could theoretically influence the authorities' policy. However, given the degree of the country's closed nature and the priority of preserving power over economic development and international reputation, the probability of radical changes in the coming years remains low. The situation with digital rights in Turkmenistan will most likely remain one of the worst in the world.

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