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MUSO DISCOVER  
**UNLICENSED  
DEMAND REPORT**  
WIPO ALERT DOMAIN BLOCKING DATE  
ANALYSIS  
AUGUST 2023



# INTRODUCTION

Unlicensed audiences represent a bigger picture, and MUSO believes conventional inputs to the data model only tell half the story. Our data revealed that during 2022 there were over 219 billion visits to piracy sites across the globe.

MUSO Discover is a data measurement platform for global piracy demand, built to pull back the curtain on unlicensed activity across an increasingly competitive content landscape. It measures industry-wide piracy demand for film, TV, music, software and publishing content across a wide range of piracy sites (streaming, torrent, web download and stream ripping sites).

MUSO's Piracy Demand Reports explore the popularity of unlicensed content region-by-region, examining the extent to which they under or over index against global popularity, or against similar titles and genre groupings.

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# REPORT METHODOLOGY

In this study, we utilized a list of domains blocked by WIPO member states using data from the WIPO Alert database. The file contains the domain name, the country that blocked it and the blocking date. If a domain is blocked by multiple countries, we considered the earliest blocking date for analysis.

We matched WIPO Alert blocked domains with MUSO's database of Piracy Domains, resulting in three possible outcomes:

- 1 No Match:** The domain is not listed as a Piracy Domain.
- 2 Match - No Data:** The domain is listed as a Piracy Domain, but visits to it are very low and fall below our threshold for data collection.
- 3 Match - Data:** We have visit data for these Piracy Domains

If visit data was available, we measured visits from 90 days before the blocking date to 90 days after. This visit data was then categorized based on when traffic occurred in relation to the blocking date.

Categorizing the visit data based on the timing of the traffic in relation to the blocking date is a good methodology approach for several reasons. First, it allows us to identify any changes in traffic patterns for the blocked domains after they were blocked. Second, it can help us determine the effectiveness of blocking actions in reducing visits to blocked domains. Third, it can provide insights into user behaviour regarding piracy domain DNS blocking, and how it changes over time.

By categorizing the data, we can distinguish three main categories of traffic: pre-blocking date traffic (visits before blocking), post-blocking date traffic (visits after blocking), and blocking date traffic (visits on the day of blocking).

Analyzing these categories helps us assess the impact of blocking actions on domain traffic. For instance, a significant decrease in post-blocking date traffic suggests effective piracy reduction. Conversely, little to no change in post-blocking date traffic indicates a need for further action to combat piracy.

With a simplified category system, we can interpret the data and draw conclusions about the impact of blocking actions on domain traffic more easily:

### Domain Visits Categories



| When Visits Occurred                    | Description   |
|---|---|
| No Visits Post                          | All visits occurred prior to the Blocking Date                              |
| 90+% Visits Pre                         | At least 90% of visits occurred prior to Blocking Date                      |
| 70+% Visits Pre                         | At least 70% of visits occurred prior to Blocking Date                      |
| 50+% Visits Pre                         | At least 50% of visits occurred prior to Blocking Date                      |
| 50+% Visits Post                        | At least 50% of visits occurred after the Blocking Date                     |
| 70+% Visits Post                        | At least 70% of visits occurred after the Blocking Date                     |
| 90+% Visits Post                        | At least 90% of visits occurred after the Blocking Date                     |
| Post Visits Only                        | All Visits occurred after the Blocking Date                                 |
| < 50% Visits Pre &<br>< 50% visits Post | Visits were evenly distributed between pre-blocking and post-blocking dates |
| Only Visits on Blocking Date            | Visits only occurred on the day of Blocking                                 |

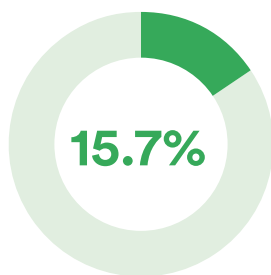
# REPORT SUMMARY

The data shows that a significant proportion (57.1%) of blocked domains received little to no visits after being blocked. Additionally, 15.7% of domains blocked had no visits subsequent to being blocked. Furthermore, 41.4% of blocked domains had either 90% of their visits prior to blocking date or no visits at all after being blocked. This could suggest that infringing domain blocking is an effective measure for reducing traffic to piracy domains.

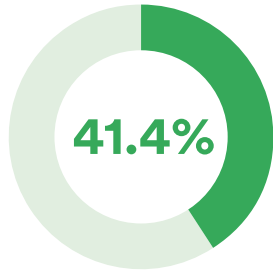
Interestingly, most of visits for the majority of blocked domains occurred prior to being blocked. Specifically, 72.7% of domains blocked had most of their visits prior to being blocked. This highlights the importance of identifying and blocking piracy domains as early as possible.

When looking at specific countries, the data shows that a high proportion of domains blocked by Russia had either 90% of visits prior to blocking date or no visits subsequent to being blocked, with 46.9% falling into this category. Furthermore, 78.5% of domains blocked by Russia had most of their visits prior to being blocked.

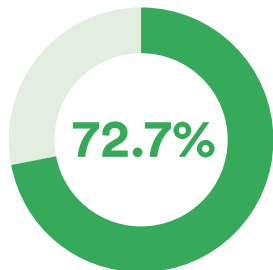
In contrast, 46.3% of domains blocked by Lithuania had the majority of their visits subsequent to being blocked, suggesting that blocking may not be as effective in reducing traffic for domains blocked by this country. Finally, 47.1% of domains blocked by Korea had either 90% of visits prior to blocking date or no visits after being blocked, indicating that Blocking may have been effective in reducing traffic for many of the domains blocked by this country.



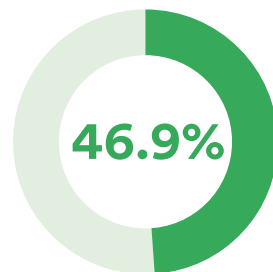
of Domains Blocked have No Visits  
Subsequent to Being Blocked



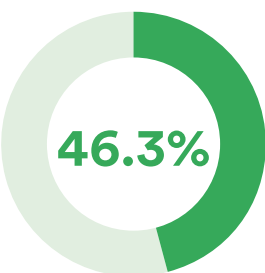
of Domains blocked have either 90% of Visits Prior to Blocking Date or No Visits subsequent to Blocking Date



of Domains blocked had the majority of Visits prior to Blocking Date



of Domains Blocked by Russia have either 90% of Visits Prior to Blocking Date or No visits Subsequent to Blocking Date



of Domains Blocked by Lithuania had the Majority of Visits Subsequent to Blocking Date

## WIPO Alert Blocking Date Overview

The data provided by WIPO consists of details regarding the blocked domains, the country of origin responsible for blocking them, and the respective blocking dates. The subsequent chart and graph showcase the distribution of these domains according to their blocking dates.

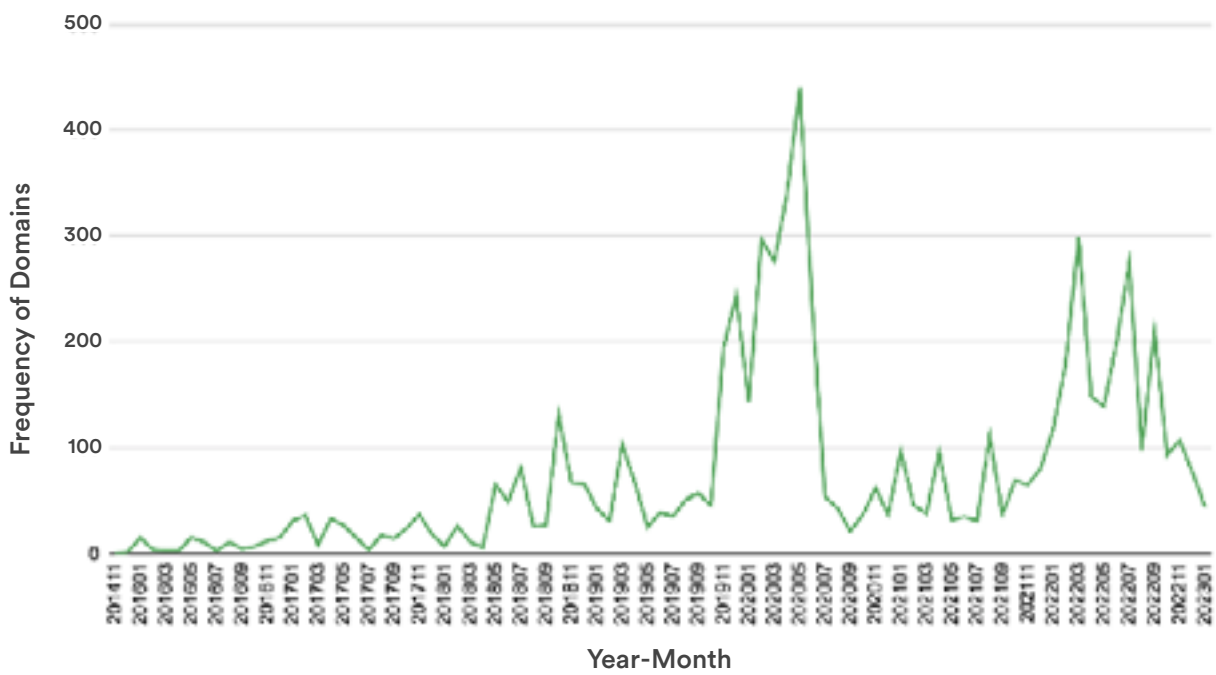
### WIPO Alert Domain Blocking Date



| Year-Month | Frequency of Domains | Year-Month | Frequency of Domains | Year-Month | Frequency of Domains |
|------------|----------------------|------------|----------------------|------------|----------------------|
| 201411     | 1                    | 201804     | 6                    | 202009     | 21                   |
| 201512     | 2                    | 201805     | 65                   | 202010     | 37                   |
| 201601     | 15                   | 201806     | 49                   | 202011     | 62                   |
| 201602     | 4                    | 201807     | 81                   | 202012     | 37                   |
| 201603     | 3                    | 201808     | 26                   | 202101     | 97                   |
| 201604     | 3                    | 201809     | 27                   | 202102     | 46                   |
| 201605     | 15                   | 201810     | 131                  | 202103     | 38                   |
| 201606     | 11                   | 201811     | 67                   | 202104     | 96                   |
| 201607     | 3                    | 201812     | 66                   | 202105     | 32                   |
| 201608     | 11                   | 201901     | 43                   | 202106     | 35                   |
| 201609     | 5                    | 201902     | 31                   | 202107     | 31                   |
| 201610     | 7                    | 201903     | 103                  | 202108     | 111                  |
| 201611     | 12                   | 201904     | 67                   | 202109     | 37                   |
| 201612     | 15                   | 201905     | 25                   | 202110     | 69                   |
| 201701     | 31                   | 201906     | 39                   | 202111     | 65                   |
| 201702     | 36                   | 201907     | 35                   | 202112     | 80                   |
| 201703     | 8                    | 201908     | 51                   | 202201     | 117                  |
| 201704     | 33                   | 201909     | 57                   | 202202     | 179                  |
| 201705     | 27                   | 201910     | 46                   | 202203     | 299                  |
| 201706     | 15                   | 201911     | 194                  | 202204     | 148                  |
| 201707     | 4                    | 201912     | 244                  | 202205     | 139                  |
| 201708     | 17                   | 202001     | 143                  | 202206     | 199                  |
| 201709     | 14                   | 202002     | 297                  | 202207     | 274                  |
| 201710     | 24                   | 202003     | 276                  | 202208     | 98                   |
| 201711     | 37                   | 202004     | 340                  | 202209     | 211                  |
| 201712     | 18                   | 202005     | 440                  | 202210     | 93                   |
| 201801     | 7                    | 202006     | 233                  | 202211     | 107                  |
| 201802     | 26                   | 202007     | 54                   | 202212     | 77                   |
| 201803     | 11                   | 202008     | 43                   | 202301     | 44                   |



## Frequency of Domains by Blocking Date



## Distribution of Global Visits in Relation to Blocking Date

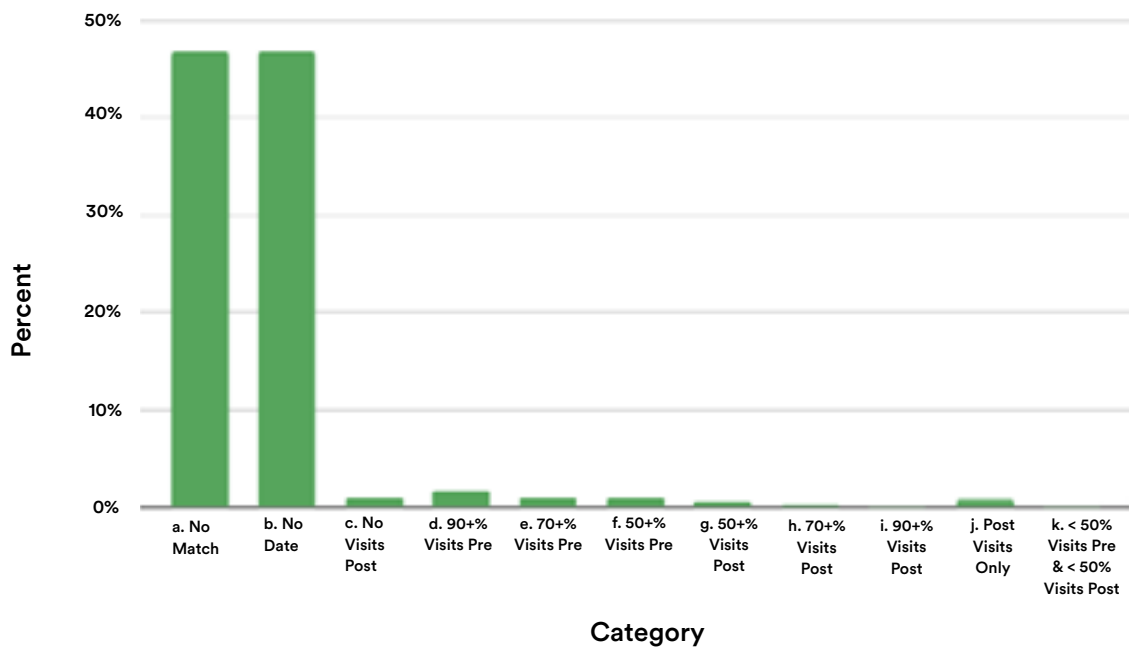
An analysis of the distribution of visits in relation to the blocking date is provided in the following sections, encompassing all domains supplied across the WIPO Alert data provided. The categories used in this analysis include 'Pre' for the 90-day period prior to the date blocked, 'Post' for the 90-day period after the date blocked, 'No Match' for domains not found in MUSO data, and 'No Data' for domains found in MUSO data, but no visits were measured for these domains.

### All Supplied WIPO Alert Domains

| Category                                | No. of domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 3,069          | 46.7%           |
| b. No Data                              | 3,072          | 46.7%           |
| c. No Visits Post                       | 68             | 1.0%            |
| d. 90+% Visits Pre                      | 111            | 1.7%            |
| e. 70+% Visits Pre                      | 68             | 1.0%            |
| f. 50+% Visits Pre                      | 67             | 1.0%            |
| g. 50+% Visits Post                     | 40             | 0.6%            |
| h. 70+% Visits Post                     | 12             | 0.2%            |
| i. 90+% Visits Post                     | 1              | 0.0%            |
| j. Post Visits Only                     | 56             | 0.9%            |
| k. < 50% Visits Pre & < 50% visits Post | 8              | 0.1%            |
| l. Only Visits on Blocking Date         | 1              | 0.0%            |
| <b>OVERALL</b>                          | <b>6,573</b>   | <b>100.0%</b>   |



## Frequency of Domains by Visits Category



Notably, over 90% of WIPO Alerts flagged domains provided to MUSO did not match to our database. To ensure the dataset represents the broadest view of active global piracy traffic, MUSO has a growing catalogue containing more than 500,000 historic and currently active domains considered as potential piracy sites.

Website traffic activity across the entire database of domains is monitored to identify the highest traffic piracy sites. The active piracy sites included undergo a piracy classification process to confirm piracy intent for these high-risk sites.

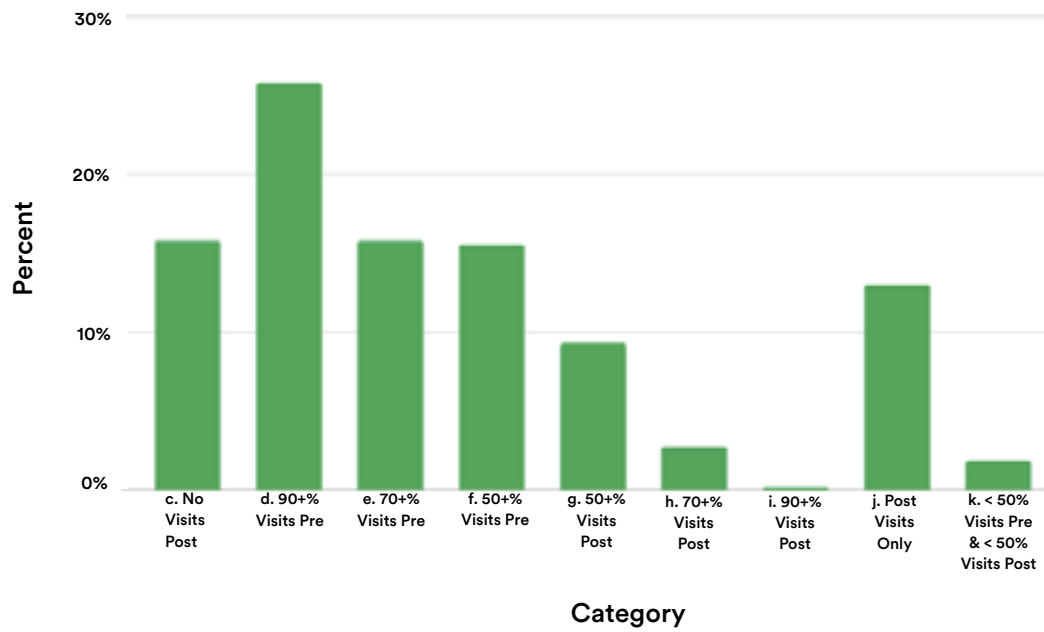
### Excluding No Match/No Data Domains (for clearer category comparison)

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| c. No Visits Post                       | 68             | 15.7%           |
| d. 90+% Visits Pre                      | 111            | 25.7%           |
| e. 70+% Visits Pre                      | 68             | 15.7%           |
| f. 50+% Visits Pre                      | 67             | 15.5%           |
| g. 50+% Visits Post                     | 40             | 9.3%            |
| h. 70+% Visits Post                     | 12             | 2.8%            |
| i. 90+% Visits Post                     | 1              | 0.2%            |
| j. Post Visits Only                     | 56             | 13.0%           |
| k. < 50% Visits Pre & < 50% visits Post | 8              | 1.9%            |
| l. Only Visits on Blocking Date         | 1              | 0.2%            |
| <b>OVERALL</b>                          | <b>432</b>     | <b>100.0%</b>   |

When we focus on WIPO Alert submitted domains that match MUSO's website database in our analysis, we find that 15.7% of the domains fall into the category labeled 'No Visits Post'. This means that for these domains, there has been no traffic after they were blocked. Additionally, 25.7% of domains fall into the category labeled '90+% Visits Pre'. This indicates that for these domains, the majority of traffic occurs before they are blocked, with less than 10% of traffic occurring after blocking.

To determine the effectiveness of website blocking, it is desirable to have a higher proportion of domains in the categories on the left-hand side of the chart as highlighted on the next page.

## Frequency of Domains by Visits Category



## ES - Spain



Out of 224 blocked domains, 30 have MUSO global visits data, indicating that they were active infringing domains with a significant level of monthly visits. 148 domains had no data, while 46 had no match to MUSO's domains data. Notably, 70% of the blocked domains had most visits prior to the blocking date, indicating that the domains may have been popular before they were blocked.

### Percentage of all Country Visits Prior / Post Blocking Date



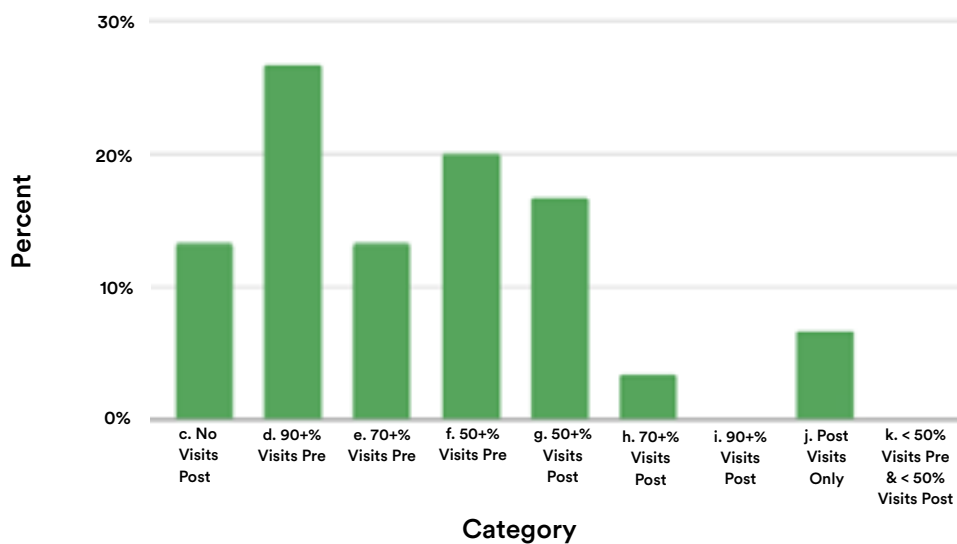
| All | Match | % Match |
|-----|-------|---------|
| 224 | 30    | 13%     |



## All Supplied WIPO Alert Domains for Spain

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 46             |                 |
| b. No Data                              | 148            |                 |
| c. No Visits Post                       | 4              | 13.3%           |
| d. 90+% Visits Pre                      | 8              | 26.7%           |
| e. 70+% Visits Pre                      | 4              | 13.3%           |
| f. 50+% Visits Pre                      | 6              | 20.0%           |
| g. 50+% Visits Post                     | 5              | 16.7%           |
| h. 70+% Visits Post                     | 1              | 3.3%            |
| i. 90+% Visits Post                     |                |                 |
| j. Post Visits Only                     | 2              | 6.7%            |
| k. < 50% Visits Pre & < 50% visits Post |                |                 |
| l. Only Visits on Blocking Date         |                |                 |

## Frequency of Domains by Visits Category



## GR - Greece

Only 12 out of 555 blocked domains had MUSO global visits data, indicating a relatively low rate of popular or active domains being submitted for blocking for Greece. Among these matches, 150 domains had no MUSO data, suggesting that they were no longer active or had changed their content.



### Percentage of all Country Visits Prior / Post Blocking Date



| All | Match | % Match |
|-----|-------|---------|
| 555 | 12    | 2%      |

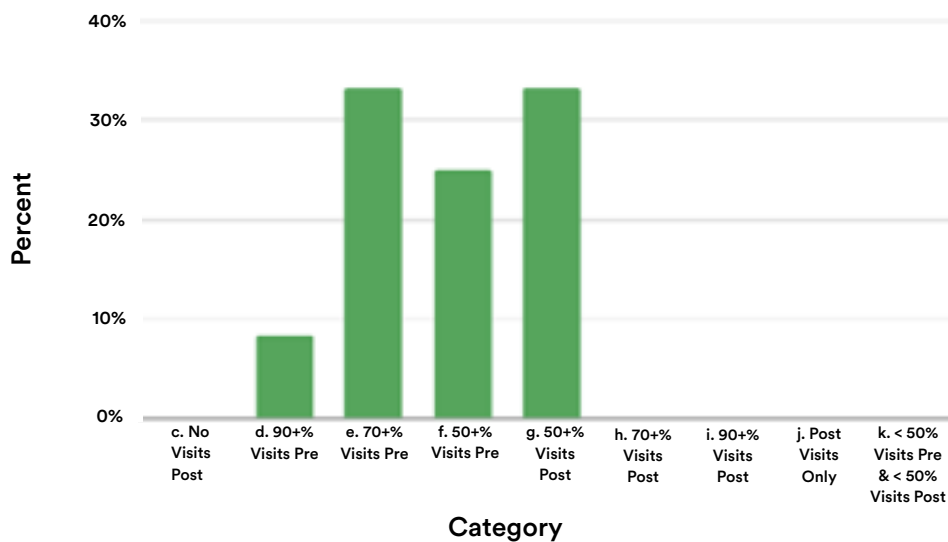
- Visits Prior to Blocking Date
- Visits Post Blocking Date



## All Supplied WIPO Alert Domains for Greece

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 393            |                 |
| b. No Data                              | 150            |                 |
| c. No Visits Post                       |                |                 |
| d. 90+% Visits Pre                      | 1              | 8.3%            |
| e. 70+% Visits Pre                      | 4              | 33.3%           |
| f. 50+% Visits Pre                      | 3              | 25.0%           |
| g. 50+% Visits Post                     | 4              | 33.3%           |
| h. 70+% Visits Post                     |                |                 |
| i. 90+% Visits Post                     |                |                 |
| j. Post Visits Only                     |                |                 |
| k. < 50% Visits Pre & < 50% visits Post |                |                 |
| l. Only Visits on Blocking Date         |                |                 |

## Frequency of Domains by Visits Category

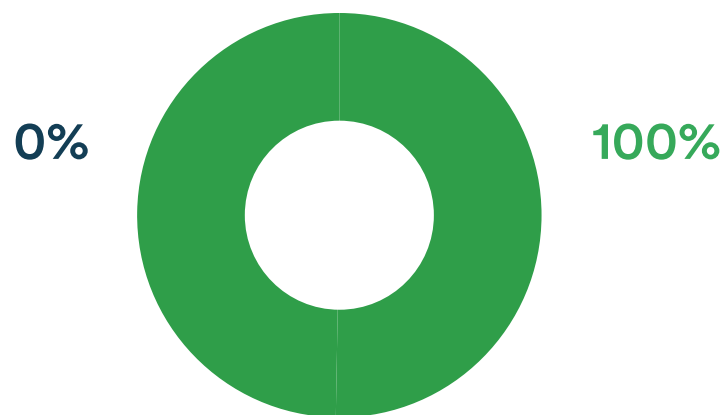


## IT - Italy

Out of 661 blocked domains, only one had a match to MUSO's global visits data, indicating a low rate of streaming infringing content in the country. This domain had 100% of visits prior to the blocking date, suggesting that it may have been a popular site before it was blocked.



### Percentage of all Country Visits Prior / Post Blocking Date



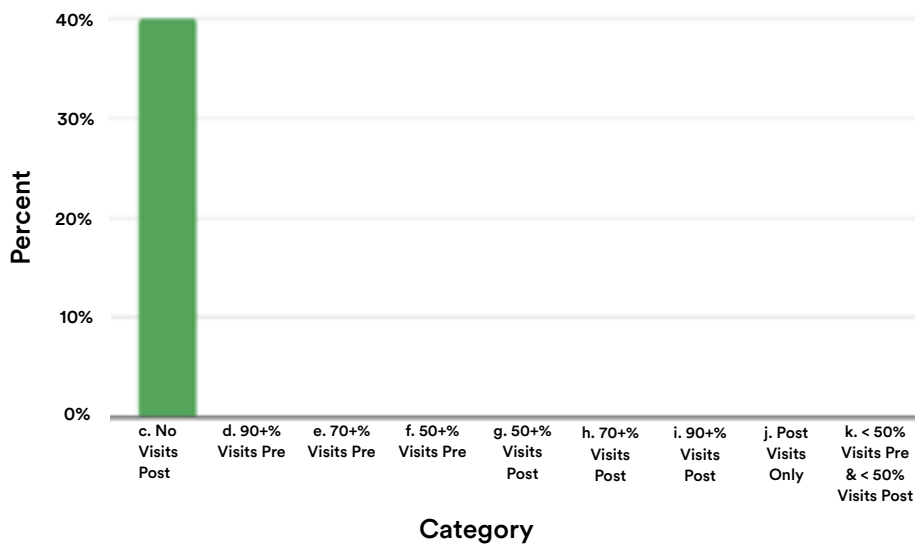
| All | Match | % Match |
|-----|-------|---------|
| 661 | 1     | 0.1%    |

- Visits Prior to Blocking Date
- Visits Post Blocking Date

## All Supplied WIPO Alert Domains for Italy

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 652            |                 |
| b. No Data                              | 8              |                 |
| c. No Visits Post                       | 1              | 100.0%          |
| d. 90+% Visits Pre                      |                |                 |
| e. 70+% Visits Pre                      |                |                 |
| f. 50+% Visits Pre                      |                |                 |
| g. 50+% Visits Post                     |                |                 |
| h. 70+% Visits Post                     |                |                 |
| i. 90+% Visits Post                     |                |                 |
| j. Post Visits Only                     |                |                 |
| k. < 50% Visits Pre & < 50% visits Post |                |                 |
| l. Only Visits on Blocking Date         |                |                 |

## Frequency of Domains by Visits Category

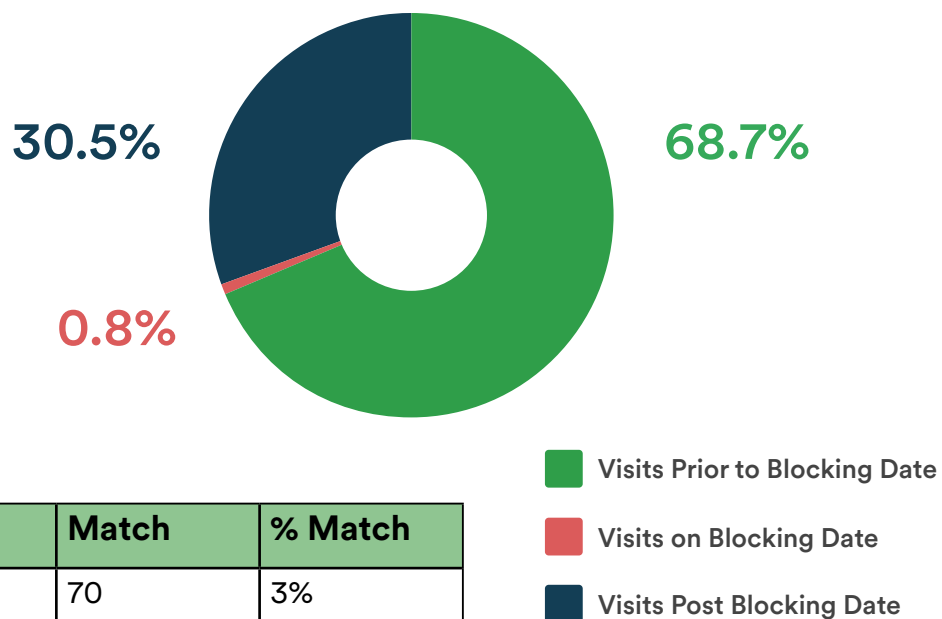


## KR - Korea (Republic Of)



With 2,534 blocked domains, Korea had the highest number of blocked domains among the listed countries. Among these domains, 70 had a match in the MUSO global visits data, indicating that they were supplying infringing content. Over 70% of these domains had a majority of visits prior to the blocking date, indicating that they may have been popular before they were blocked. 18.6% of these domains had post-blocking date visits only.

### Percentage of all Country Visits Prior / Post Blocking Date

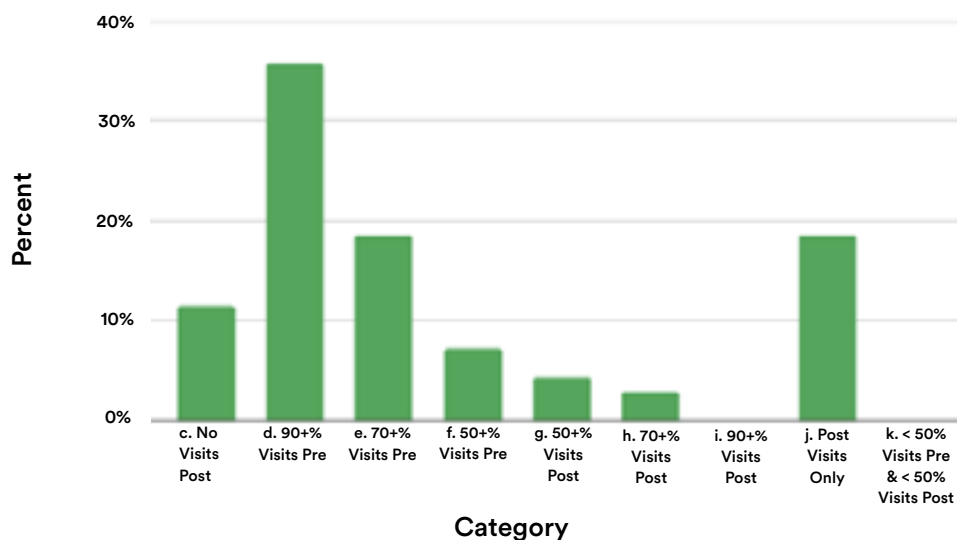


| All   | Match | % Match |
|-------|-------|---------|
| 2,534 | 70    | 3%      |

## All Supplied WIPO Alert Domains for Korea

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 1,259          |                 |
| b. No Data                              | 1,205          |                 |
| c. No Visits Post                       | 8              | 11.4%           |
| d. 90+% Visits Pre                      | 25             | 35.7%           |
| e. 70+% Visits Pre                      | 13             | 18.6%           |
| f. 50+% Visits Pre                      | 5              | 7.1%            |
| g. 50+% Visits Post                     | 3              | 4.3%            |
| h. 70+% Visits Post                     | 2              | 2.9%            |
| i. 90+% Visits Post                     |                |                 |
| j. Post Visits Only                     | 13             | 18.6%           |
| k. < 50% Visits Pre & < 50% visits Post |                |                 |
| l. Only Visits on Blocking Date         |                | 1.4%            |

## Frequency of Domains by Visits Category

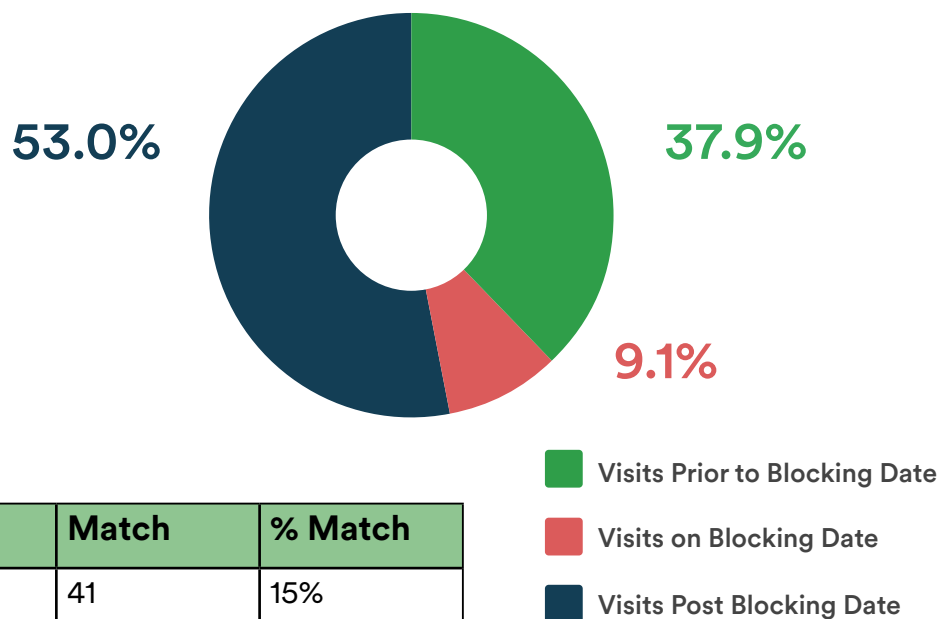


## LT - Lithuania



Out of 276 blocked domains, 41 had a match in MUSO's global visits data, indicating that they were popular infringing domains. 116 domains had no data, while 119 had no match to MUSO data, suggesting that they were no longer active or had changed their content. Interestingly, 53% of all visits to matched domains were after the Blocking date, suggesting that users continued to visit the blocked domains.

### Percentage of all Country Visits Prior / Post Blocking Date

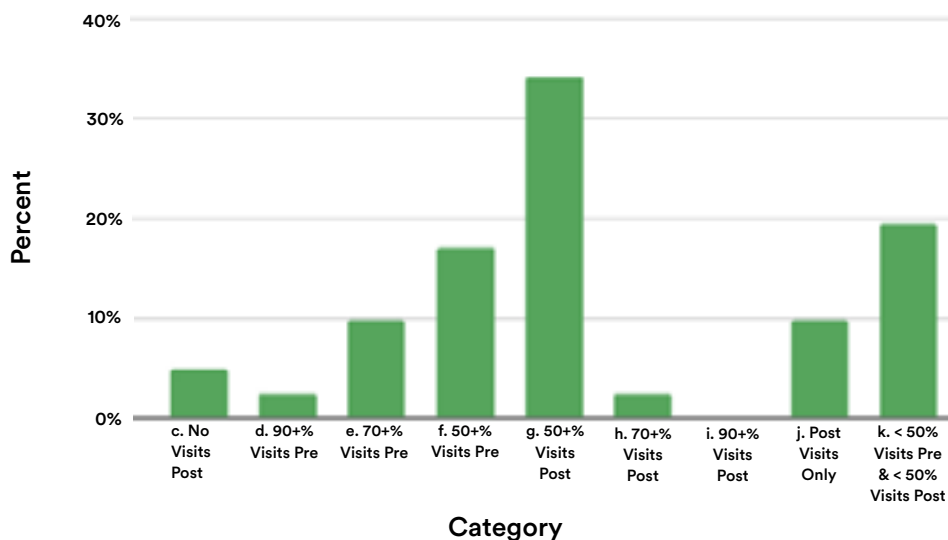


| All | Match | % Match |
|-----|-------|---------|
| 276 | 41    | 15%     |

## All Supplied WIPO Alert Domains for Lithuania

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 119            |                 |
| b. No Data                              | 116            |                 |
| c. No Visits Post                       | 2              | 4.9%            |
| d. 90+% Visits Pre                      | 1              | 2.4%            |
| e. 70+% Visits Pre                      | 4              | 9.8%            |
| f. 50+% Visits Pre                      | 7              | 17.1%           |
| g. 50+% Visits Post                     | 14             | 34.1%           |
| h. 70+% Visits Post                     | 1              | 2.4%            |
| i. 90+% Visits Post                     |                |                 |
| j. Post Visits Only                     | 4              | 9.8%            |
| k. < 50% Visits Pre & < 50% visits Post | 8              | 19.5%           |
| l. Only Visits on Blocking Date         |                |                 |

## Frequency of Domains by Visits Category



## PE - Peru



Out of 38 blocked domains, only 3 had a match to MUSO's global visits data, indicating a relatively low rate of popular domains being submitted to WIPO Alert. 20 domains had no data, while 15 had no match to MUSO data, suggesting that they were no longer active or had changed their content.

### Percentage of all Country Visits Prior / Post Blocking Date



| All | Match | % Match |
|-----|-------|---------|
| 38  | 3     | 8%      |

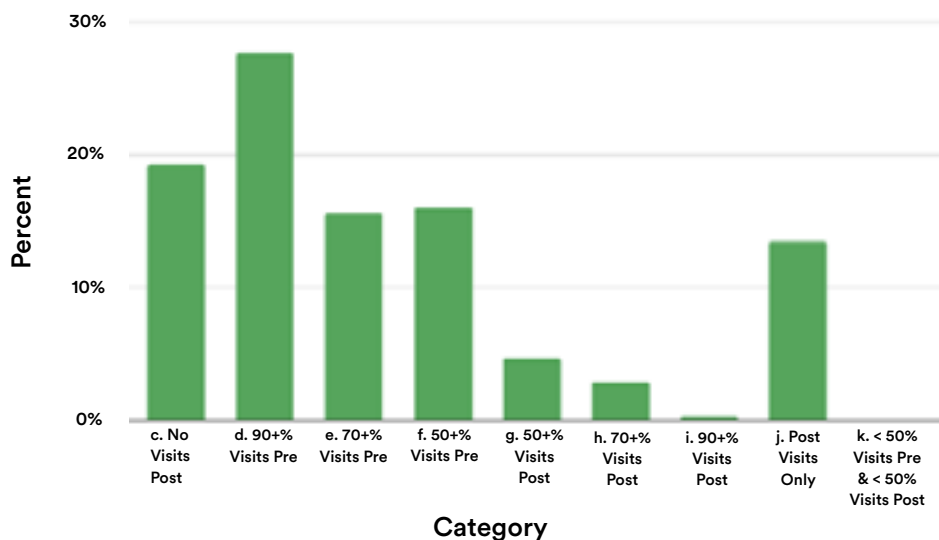
- Visits Prior to Blocking Date
- Visits Post Blocking Date



## All Supplied WIPO Alert Domains for Peru

| Category                                | No. of Domains | % Domain Visits |
|---|----------------|-----------------|
| a. No Match                             | 15             |                 |
| b. No Data                              | 20             |                 |
| c. No Visits Post                       |                | 19.3%           |
| d. 90+% Visits Pre                      |                | 27.6%           |
| e. 70+% Visits Pre                      |                | 15.6%           |
| f. 50+% Visits Pre                      | 2              | 16.0%           |
| g. 50+% Visits Post                     | 1              | 4.7%            |
| h. 70+% Visits Post                     |                | 2.9%            |
| i. 90+% Visits Post                     |                | 0.4%            |
| j. Post Visits Only                     |                | 13.5%           |
| k. < 50% Visits Pre & < 50% visits Post |                |                 |
| l. Only Visits on Blocking Date         |                |                 |

## Frequency of Domains by Visits Category

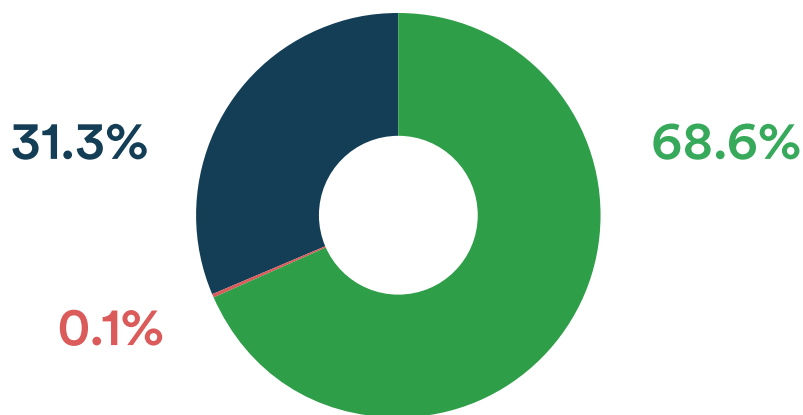


## RU - Russian Federation



With 2,283 blocked domains, Russia had the second-highest number of blocked domains among the listed countries. Among these domains, 275 had a match in the MUSO global visit data, indicating that they were popular infringing domains. Interestingly, 68.6% of the visits to matching domains were prior to the blocking date, suggesting that they may have been popular before they were blocked, and that visits significantly reduced post blocking date.

### Percentage of all Country Visits Prior / Post Blocking Date



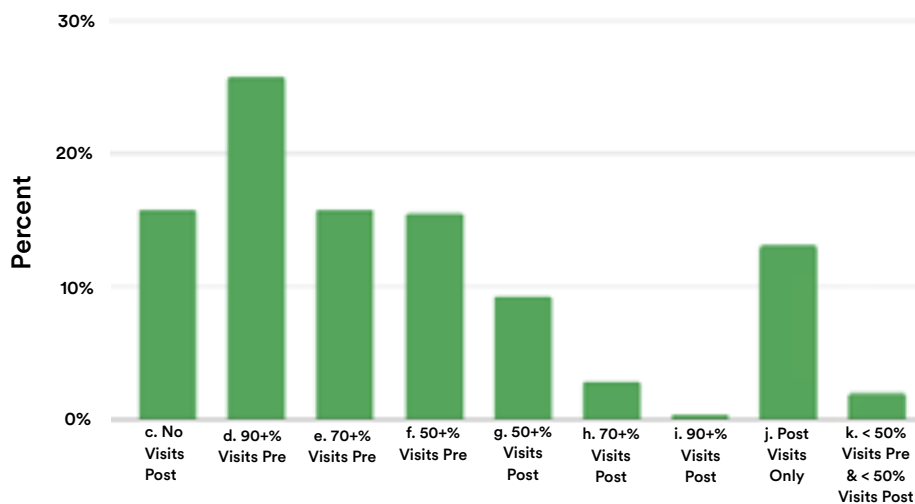
| All   | Match | % Match |
|-------|-------|---------|
| 2,283 | 275   | 12%     |

- Visits Prior to Blocking Date
- Visits on Blocking Date
- Visits Post Blocking Date

## All Supplied WIPO Alert Domains for Russian Federation

| Category                                | Domains | % Domain Visits |
|---|---------|-----------------|
| a. No Match                             | 585     |                 |
| b. No Data                              | 1,423   |                 |
| c. No Visits Post                       | 53      | 15.7%           |
| d. 90+% Visits Pre                      | 76      | 25.7%           |
| e. 70+% Visits Pre                      | 43      | 15.7%           |
| f. 50+% Visits Pre                      | 44      | 15.5%           |
| g. 50+% Visits Post                     | 13      | 9.3%            |
| h. 70+% Visits Post                     | 8       | 2.8%            |
| i. 90+% Visits Post                     | 1       | 0.2%            |
| j. Post Visits Only                     | 37      | 13.0%           |
| k. < 50% Visits Pre & < 50% visits Post |         | 1.9%            |
| l. Only Visits on Blocking Date         |         | 0.2%            |

## Frequency of Domains by Visits Category



## All Country Visits Summary by Pre Blocking and Post Blocking Date

| Country                  | No. of Domains | % Pre-Blocking Visits | % Post-Blocking Visits |
|--------------------------|----------------|-----------------------|------------------------|
| ES - Spain               | 30             | 15.7%                 | 34.1%                  |
| GR - Greece              | 12             | 25.7%                 | 49.6%                  |
| IT - Italy               | 1              | 15.7%                 | 0.0%                   |
| KR - Korea (Republic Of) | 70             | 15.5%                 | 30.5%                  |
| LT - Lithuania           | 41             | 9.3%                  | 53.0%                  |
| PE - Peru                | 3              | 0.2%                  | 52.8%                  |
| RU - Russian Federation  | 275            | 13.0%                 | 31.3%                  |
| <b>OVERALL</b>           | <b>432</b>     | <b>55.7%</b>          | <b>41.6%</b>           |

After implementing domain blocking measures, global visits to domains blocked within Spain surged from 15.7% to 34.1%. Domains submitted for blocking by Greek authorities experienced a significant increase in global traffic as well, rising from 25.7% to 49.6%. In contrast, the domain submitted for blocking in Italy observed a complete drop in traffic after blocking, while domains submitted within Lithuania and Peru saw substantial traffic spikes of 53.0% and 52.8% respectively. South Korea's blocked domain list rose to 30.5% from 15.5%, and global visits to domains blocked by Russian authorities increased slightly to 31.3% from 13.0%. Overall, the implemented blocking yielded mixed results across these countries, with the combined global traffic to these domains declining from 55.7% to 41.6%.

The data highlights changes in global visits to blocked domains after the implementation of blocking measures in various countries. To better assess the effectiveness of website blocking, in the following sections we consider local traffic within each country, to provide a more accurate measure of the impact on domestic online activities from website blocking.

## Distribution of Global Visits by Country Group

The first data group comprises of European countries Spain, Greece, Italy, and Lithuania, where all domains match. Spain has a high percentage of visits pre-blocking at 70% and above, followed by Greece, Italy, and Lithuania. Over 27% of Lithuania's visits are 70% or higher pre-blocking, while Spain and Greece have over 19% of their visits falling in the 50% range pre-blocking.

### Group: ES, GR, IT, LT



The second data group consists of Korea, Peru, and Russia, with 100% matches. Russia has the highest percentage of visits pre-blocking at over 27%, followed by Korea, and Peru. Korea has a higher percentage of visits post-blocking only at 18.6%, and Russia has the highest percentage of visits 90% or higher pre-blocking. The overall data group indicates that more than 15% of domains have no visits post-blocking.

### Group: KR, PE, RU



### All Supplied Domains

| Country Group  | All          | Data Available | % Match     |
|----------------|--------------|----------------|-------------|
| ES, GR, IT, LT | 1,716        | 84             | 5%          |
| KR, PE, RU     | 4,857        | 348            | 7%          |
| <b>OVERALL</b> | <b>6,573</b> | <b>432</b>     | <b>6.5%</b> |

It should be noted that global visits data includes consumers visiting the website from outside the jurisdiction. In the following sections of this report, we examine the impact of website blocking on website visits from consumers inside the blocking jurisdiction compared to website visits from outside the jurisdiction.

## ES, GR, IT, LT

| Category                                | Domains | % Domain Visits |
|---|---------|-----------------|
| a. No Match                             | 1,210   |                 |
| b. No Data                              | 422     |                 |
| c. No Visits Post                       | 7       | 8.3%            |
| d. 90+% Visits Pre                      | 10      | 11.9%           |
| e. 70+% Visits Pre                      | 12      | 14.3%           |
| f. 50+% Visits Pre                      | 16      | 19.0%           |
| g. 50+% Visits Post                     | 23      | 27.4%           |
| h. 70+% Visits Post                     | 2       | 2.4%            |
| i. 90+% Visits Post                     | 0       |                 |
| j. Post Visits Only                     | 6       | 7.1%            |
| k. < 50% Visits Pre & < 50% visits Post | 8       | 9.5%            |
| l. Only Visits on Blocking Date         | 0       |                 |

## KR, PE, RU

| Category                                | Domains | % Domain Visits |
|---|---------|-----------------|
| a. No Match                             | 1,859   |                 |
| b. No Data                              | 2,650   |                 |
| c. No Visits Post                       | 61      | 17.5%           |
| d. 90+% Visits Pre                      | 101     | 29.0%           |
| e. 70+% Visits Pre                      | 56      | 16.1%           |
| f. 50+% Visits Pre                      | 51      | 14.7%           |
| g. 50+% Visits Post                     | 17      | 4.9%            |
| h. 70+% Visits Post                     | 10      | 2.9%            |
| i. 90+% Visits Post                     | 1       | 0.3%            |
| j. Post Visits Only                     | 50      | 14.4%           |
| k. < 50% Visits Pre & < 50% visits Post | 0       |                 |
| l. Only Visits on Blocking Date         | 1       | 0.3%            |

# Comparison of Visits Location for Blocked Domains

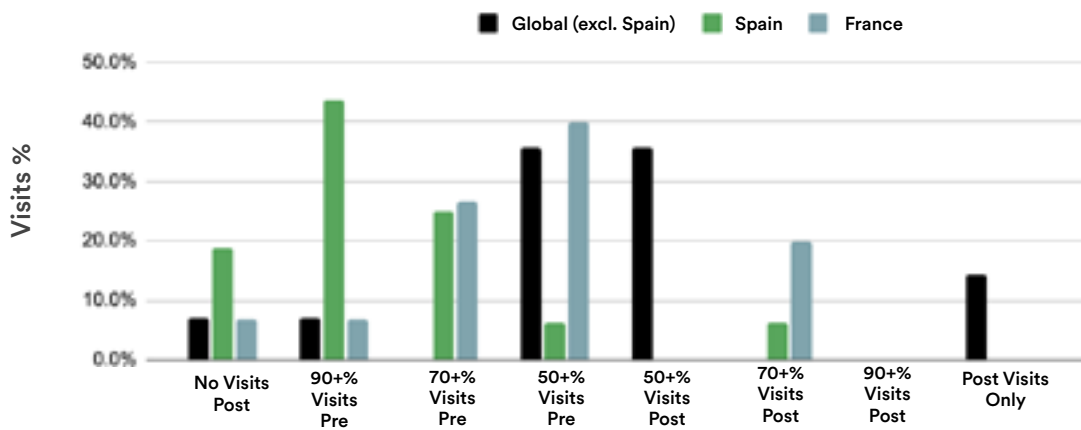
This section examines the proportion of blocked domains with higher in-country traffic compared to a control country and global average. Studying these metrics provides insights into domain traffic localization and country-specific patterns. This information helps assess local effectiveness of blocking measures and the balance between local and international audience appeal.

## Summary of Visits Location Data

- This section illustrates the traffic patterns before and after websites are blocked, categorized into three groups: traffic from the country listing the sites (e.g., Spain), traffic from a control country (e.g., France), and the rest of the world.
- Referring to the chart for Spain, the first set of three columns on the left, labeled 'No Visits Post,' indicates the following: 7.1% of domains blocked by Spain have no visits from global traffic (excluding Spain) after being blocked, 18.8% have no visits from Spanish traffic after being blocked, and 6.7% have no visits from French traffic after being blocked. These figures suggest that Spain's website blocking is most effective at preventing traffic from Spain compared to traffic from the rest of the world or France.
- Similarly, the second set of three columns, labeled '90+ Visits Pre,' reveals that 43.8% of domains listed by Spain had 90% or more of their traffic originating from Spain prior to being blocked.
- To summarise, the figures in the boxes indicate the proportion of listed domains where the majority of traffic occurred before the domain was listed. This comparison focuses on the relationship between country traffic and the country's listed domains.
- Therefore, among the three countries analyzed (Spain, Korea, Lithuania), Spain has been the most successful at reducing domestic traffic. Korea has been most successful at reducing global traffic. Lithuania's listing has had a similar effect on domestic and global traffic.

Below we compare traffic patterns between three countries of interest, a control country, and global traffic to highlight localization levels of visits, and potential regional variations in domain usage.

## Spain

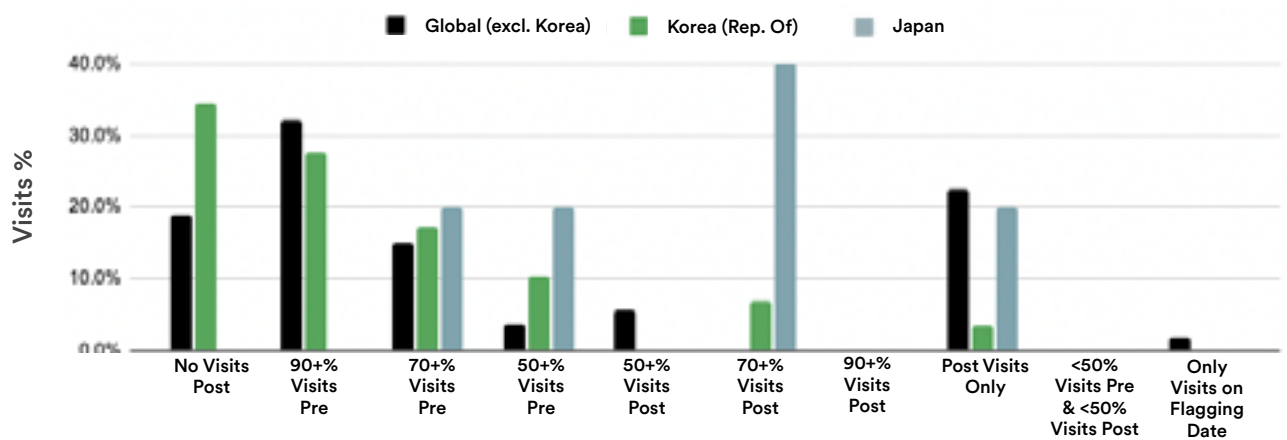


| Spain | Global | France |
|-------|--------|--------|
| 87.7% | 14.3%  | 40%    |



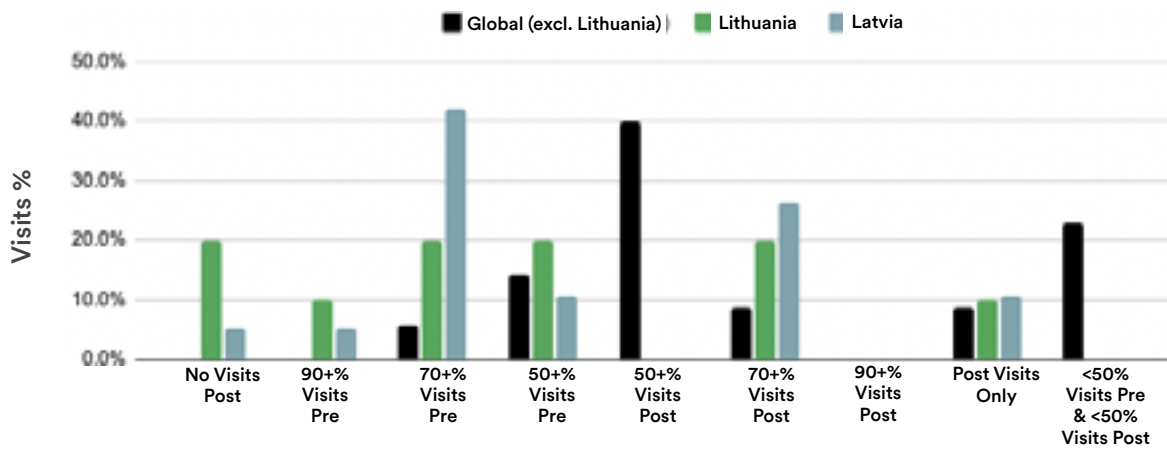
## Comparison of Visits Location for Blocked Domains

### Korea (Rep. of)



| Korea | Global | Japan |
|-------|--------|-------|
| 79.3% | 66%    | 20%   |

## Lithuania



| Lithuania | Global | Latvia |
|-----------|--------|--------|
| 50%       | 5.7%   | 52.6%  |

# METHODOLOGY

MUSO Discover is a powerful and informative dataset, built to pull back the curtain on unlicensed activity across an increasingly competitive content landscape. To provide meaningful and reliable insights, and help users make informed business decisions, it is of paramount importance that the data is underpinned by a robust methodology.

This report uses MUSO's Discover Piracy by Industry measures industry-wide piracy demand for publishing content across a wide range of piracy sites (streaming, torrent, web download and stream ripping sites).

## Overview

The dataset delivers monthly industry insights so you can instantly determine and accurately measure global and regional piracy traffic and trends in each content industry, since January 2017 onwards.

New piracy sites are identified daily, as they arise, classifying them by industry (e.g. film, music) and delivery method (e.g. streaming, torrenting). MUSO partners with an industry-leading website traffic data provider to map visits to our database of piracy sites, creating an industry-wide view of piracy demand.

MUSO's rigorous quality assurance process validates our data by looking for consistent trends across industries and regions. Where we see change in the data for a given industry or region, we conduct extensive investigation into the underlying causes.

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This report uses MUSO's Discover Piracy by Industry dataset, which measures industry-wide piracy demand for publishing content.

## Methodology

Piracy by Industry is a measurement of over 70,000 of the highest traffic active piracy websites.

Over time piracy domains are shut down and become inactive, moving regularly to new domains. MUSO tracks changes in the piracy ecosystem on a 24/7 basis, maintaining a constantly curated view of global piracy.

To ensure the dataset represents the broadest view of active global piracy traffic, MUSO has a growing catalogue containing more than 500,000 historic and currently active domains considered as potential piracy sites. Website traffic activity across the entire database of domains is monitored to identify the highest traffic piracy sites. The active piracy sites included in Piracy by Industry undergo a piracy classification process to confirm piracy intent for these high risk sites.

## MUSO Discover: Delivery Methods

**Public Torrent** – Piracy sites in this category are publicly accessible torrent indexing sites, which are online catalogues of torrent files available for download from the peer to peer (P2P) torrent network. A public torrent indexing site provides the user with a mechanism to search for torrent files and torrent magnet links which facilitates peer-to-peer (P2P) file sharing among users of the BitTorrent protocol. Public torrent is a measurement of visits to the websites offering publicly searchable catalogues of torrents.

**Private Torrent** – Piracy sites in this category are very similar to those in the Public Torrent category, except only members of the site can login and access the site's content. Most private torrent sites operate an invite only policy on membership. Private torrent is a measurement of visits to websites offering privately accessible catalogues of torrents.

**Web Download** - Piracy sites that primarily allow consumption of infringing material via a direct file download from the user's web browser. These sites typically offer a wide range of downloadable content directly searchable from within the site. The site acts as the point of discovery for a user searching for content. The web download site often acts as a referrer to a separate file download hosted on third party anonymous cyberlockers.

**Web Streaming** - Piracy sites that primarily allow consumption of infringing material streamed directly to a media player embedded in the web page of the web browser. These sites typically offer a wide range of content that is searchable from within the site. Sites offering both a download and streaming option are included in this category where streaming is the primary focus.

**Stream Ripper** - Stream Ripper websites are sites which allow a user to supply a link to content hosted on a separate legitimate online streaming service, such as YouTube. The Stream Ripper site is capable of converting the online video/audio stream into an offline download i.e. to 'rip' the content. Stream Ripper sites infringe the terms and conditions of the original site by extracting content into a downloadable unlicensed format.

