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The Unclear Picture of Child Sexual Abuse Material (CSAM) Online Volumes During the COVID-19 Pandemic

Abstract: The COVID-19 global pandemic altered the social lives of people around the globe and centred our activities around the internet and new technologies even more than before. As countries around the world responded with lockdowns and social restrictions in order to prevent spreading the virus, concerns about the effects of those measures on child sexual abuse materials (CSAM) volumes on the internet and CSAM related offending online arose. While it is impossible to measure the entire volume of CSAM available online and CSAM related offending, there are some indicators that can be used to assess the scale of online CSAM and whether there was an upward or downward trend in CSAM related activity online and reporting over the pandemic time. Such indicators include the number of reports to hotlines combating CSAM, the number of criminal investigations and cases, and the measurements of the offenders' online activity monitored by law enforcement and other entities. The aim of this paper is to analyse the data available in these areas and see how they picture the CSAM online problem during the COVID-19 pandemic.

Keywords: child exploitation material, child online victimization, child pornography, cybercrime, online sexual offences

Introduction

When The World Health Organization (WHO) declared the COVID-19 outbreak a global pandemic on March 11, 2020¹, and countries around the world

1 WHO, WHO Director-General's opening remarks at the media briefing on COVID-19–11 March 2020, <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> (10.07.2021).

responded with lockdowns and social restrictions in order to prevent spreading the virus, concerns about the effects of those measures on child sexual abuse (CSA) online, including child sexual abuse material (CSAM) related criminal activities, arose².

For many people, including children, confinement measures introduced due to COVID-19 pandemic resulted in increased time spent on the internet, and as the global health crisis was developing, the data and reports on how the child sexual abuse material related online activity and reporting changes were being released. For example, in the report released in June 2020, Europol warned about a surge in online distribution of child sexual abuse material (CSAM) as a result of the COVID-19 pandemic indicated by their intelligence³. In March and April 2020, the National Center for Missing & Exploited Children (NCMEC), a non-profit clearinghouse and comprehensive reporting centre for all issues related to the prevention of and recovery from child victimization in the United States, recorded an exponential rise in CSAM reports received⁴. In September 2020, INTERPOL communicated that “information from multiple sources including INTERPOL member countries indicate a significant increase in the sharing of online CSAM through the use of peer-to-peer networks during the COVID-19 pandemic⁵”.

The picture emerging from the data being published as the COVID-19 pandemic continues its march indicates the growing scale of the CSAM problem. However, the reports and other publications available are usually based on fragmented data collected in different periods of time and different locations, whereas CSAM on the internet is a global issue. Despite the common interest, the reports mentioned above are based on divergent indicators, measured differently, and obtained from multiple sources. It is because the CSAM reporting, investigation, identification, and removal process involves many different actors and differs from country to country, depending on legal frameworks in this matter. CSAM is usually found on the internet by a member of public, or, in most cases as a result of proactive search, by law enforcement, hotlines combating CSAM, or Internet Service Providers (ISP). Further procedure varies depending on the entity filing a report, as well as the stakeholder handling it, and country of reporting, but also the country where CSAM is being hosted, among other factors. Thus, there are multiple scenarios for dealing with CSAM reports.

2 NetClean, NetClean report: Covid-19 impact 2020. A report about child sexual abuse crime, 2021, p. 15.

3 Europol, Exploiting isolation: Offenders and victims of online child sexual abuse during the COVID-19 pandemic, 2020, p. 2 (22.07.2021).

4 NCMEC CyberTipline, <https://www.missingkids.org/gethelpnow/cybertipline> (10.07.2021).

5 INTERPOL, Threats and trends child sexual exploitation and abuse. COVID impact, 2020, p. 10.

While it is impossible to measure the entire volume of CSAM available online and CSAM related offending, there are some indicators that can be used to assess the scale of CSAM, and whether there was an upward or downward trend in CSAM related online activity and reporting over the pandemic time⁶. Such indicators include the number of reports to hotlines combating CSAM, the number of criminal investigations and cases, and the measurements of the offenders' online activity monitored by law enforcement and other entities. I will analyse the data available in these areas and see how they picture the CSAM online problem during the COVID-19 pandemic.

1. Reports to Hotlines Combating CSAM

INHOPE is the global network connecting and supporting hotlines in their efforts to combat CSAM⁷. INHOPE Member Hotlines enable the public to anonymously report online material they suspect may be illegal. The hotline's analysts investigate the reports and, after confirming the material reported is illegal, act to remove the content from the internet as rapidly as possible. The network consists of 47 hotlines that receive CSAM reports in 43 countries and collaborate in its removal. One of the tools that INHOPE offers its partners is ICCAM, a secure platform that enables the exchange of CSAM between hotlines operating in different jurisdictions, with the aim of its quick removal from the internet. Once a hotline receives a possible CSAM report, the hotline analyst usually evaluates the reported material. If the site is believed to contain illegal material, the URL is entered into ICCAM. The system enables a recognition of previously assessed content URLs, which means fewer analysts' exposure to harmful material and more efficient removal of known CSAM. ICCAM supports INHOPE's hotlines around the world in classifying images and videos according to international legislation (INTERPOL's baseline criteria) as well as national regulations.

In 2020, more than 1 million URLs of individual media files, *e.g.*, video, images, *etc.*, were exchanged via ICCAM, of which 267,192 URLs were assessed as illegal⁸. 2020 was also a year when INHOPE started reporting data in their annual reports differently, presenting newly and previously assessed URLs separately, which allows observing that 60% of all assessed URLs in 2020 came from previously evaluated material⁹. This means that formerly known CSAM is continuously spreading, and the same content (although oftentimes hosted in different internet locations) is being

6 Europol, Catching the virus. Cybercrime, disinformation, and the COVID-19 pandemic, 2020, p. 7, NetClean, NetClean..., *op. cit.*, pp. 6–7.

7 INHOPE, Annual report 2020, Amsterdam 2021, p. 10.

8 *Ibidem*, p. 25.

9 *Ibidem*, p. 32.

repeatedly reported¹⁰. It is also worth noting that the number of CSAMs entered into ICCAM is lower than the total number of reports received by member hotlines for various reasons, e.g., the material reported was not illegal or was only hosted in the hotline's jurisdiction¹¹.

Figures presented in the INHOPE 2020 Annual Report are not comparable to numbers published in the previous year's reports as they presented data differently (i.e., they provided the number of reports assessed, not individual files, and volumes of previously assessed content URLs were not published¹²). Thus, based on INHOPE Annual Reports, we cannot tell if there were substantial differences in reporting to INHOPE hotlines during the COVID-19 pandemic compared to pre-pandemic times. According to INHOPE, "reports of child sexual exploitation activity to cybertip hotlines are up by an average of 30 percent globally¹³" as of 23 April 2020.

In 2020, the top reporting hotlines within the INHOPE network were the ones located respectively in Netherlands (21% from all worldwide reporting), Austria (21%), the United Kingdom (12%), Canada (10%), Colombia (9%), Germany (5%), Poland, the United States, Ireland (each; 3%), Czech Republic, and Finland (each; 2%)¹⁴. To see if there have been changes in the volume of CSAM reported to hotlines during the COVID-19 crisis, I will present 2020 reporting data from selected top reporters, depending mainly on the data availability in English.

CyberTipline is a hotline receiving reports about multiple forms of online child sexual exploitation, operated by the NCMEC¹⁵. In 2020, the total number of reports received by CyberTipline increased by 28% from 2019, with 21.7 million reports¹⁶. However, in March 2020 alone, NCMEC had recorded a 106% increase in CyberTipline reports of suspected child sexual exploitation – rising from 983,734 reports in March 2019 to over 2 million this year¹⁷. The number of reports was even higher in April 2020 (4.2 million reports according to press releases¹⁸). The majority of reports received in 2020 in general (99.6%) were related to suspected CSAM and included 65.4 million images, videos, and other files, including 33.6 million images, of which 10.4 million were unique, and 31.6 million videos, of which 3.7 million were

10 *Ibidem*, p. 32.

11 *Ibidem*, p. 32.

12 *Ibidem*, p. 26.

13 *Ibidem*, p. 32.

14 *Ibidem*, p. 32.

15 NCMEC..., *op. cit.*

16 *Ibidem*.

17 O. Solon, Child sexual abuse images and online exploitation surge during pandemic, <https://www.nbcnews.com/tech/tech-news/child-sexual-abuse-images-online-exploitation-surge-during-pandemic-n1190506> (7.07.2021).

18 F. Alfonso III, The pandemic is causing an exponential rise in the online exploitation of children, experts say, <https://www.cnn.com/2020/05/25/us/child-abuse-online-coronavirus-pandemic-parents-investigations-trnd/index.html> (10.07.2021).

unique¹⁹. Compared to 2019, the absolute number of files included in the reports decreased by 5%²⁰. The number of files reported being much larger than the number of reports shows that many of these materials were circulated or shared multiple times, appearing in different internet locations, thus being reported to helplines more than once²¹.

The majority of CyberTipline's reports (99% of a total number of reports in 2019 and 2020) have been received from the US-based Electronic Service Providers (ESP) on US-based CSAM²². The US law requires that internet companies based in the US report to NCMEC any CSAM instances on their networks they are aware of. Because the majority of the largest ESPs in the world are based in the US, NCMEC "*de facto* centralizes the reporting of child sexual abuse globally²³". Some of these companies detect and remove CSAM from their services. CyberTipline's analysts do not process such materials because they have already been removed from the internet. Nevertheless, US-based ESPs still have a legal obligation to report CSAM incidents to NCMEC in accordance with 18 USC 2258A²⁴. This means that the CSAM volume detected by US-based ESPs is even larger than the number of files presented in NCMEC data. To date, over 1400 companies are registered to make reports, but most of them (94–95% in 2019 and 2020) came from Facebook²⁵. This bias is believed to be largely a result of different levels of compliance with the mandatory reporting by ESPs. NCMEC points out, "Higher numbers of reports can be indicative of a variety of things including higher numbers of users on a platform or how robust an ESP's efforts are to identify and remove abusive content from their platforms²⁶".

The Internet Watch Foundation (IWF) is a not-for-profit organization based in the United Kingdom, covering 43 countries, that enables reporting CSAM through the UK hotline and international reporting portals established for countries that do not have functioning hotlines²⁷. IWF is also one of the few hotlines that actively searches the internet for CSAM²⁸. In 2020, 299,619 CSAM reports were assessed by IWF (13% more than in 2019), with 154,311 reports being a result of an active

19 NCMEC..., *op. cit.*

20 *Ibidem.*

21 *Ibidem.*

22 *Ibidem.*

23 European Commission, EU strategy for a more effective fight against child sexual abuse, Brussels 2020, pp. 1–2.

24 INHOPE, Annual report 2020..., *op. cit.*, p. 33.

25 NCMEC..., *op. cit.*

26 *Ibidem.*

27 IWF, Face the facts. Annual report, <https://annualreport2020.iwf.org.uk> (10.07.2021).

28 S. Charitakis, D. Di Giacomo, G. Endrodi, F. Herrera, M. Kisat, B. Kudzmanaitė, G. Maridis, N. Meurens, K. Noti, M. Pillinini, K. Regan, S. Talpo, Study on Framework of best practices to tackle child sexual abuse material online, European Commission, Luxembourg 2020, p. 5.

search²⁹. A total number of 153,383 reports were assessed as CSAM or UK-hosted non-photographic CSAM³⁰. This is a 16% increase from 2019. There has been a 50% increase in reports of CSAM from the public during the UK lockdown, with 44,809 reports. The increase over this period was registered predominantly in March with 11,689 public reports³¹.

The number of URLs with images suspected to represent a sexual exploitation of minors investigated by Dutch hotline Meldpunt Kinderporno operating within The Expertise Centre for Online Child Sexual Abuse (EOKM) more than doubled in 2020 with 742,022 URLs (comparing to 308,430 URLs in 2019)³². However, EOKM argues that the considerable spike resulted from introducing a new, automated Sexual Child Abuse Reporting Tool system in 2020, making it harder to compare the number of investigated URLs to previous years³³. For the Austrian Hotline Stopleveline, a total of 27,000 online reports were received in 2020, which marked an increase of 300% compared to the previous year³⁴. In Australia, there was an 80% increase in reports of CSAM online from mid-March to mid-July³⁵. On the other hand, the Polish Dyżurnet hotline noted a 12% decrease in received CSAM reports in 2020 with 8,021 reports.³⁶

Drawing conclusions from the scattered data available on CSAM volume reported to hotlines proves difficult. Because of the lack of dedicated monitoring and evaluation (M&E) frameworks within the particular hotlines as well as the lack of a common M&E framework across INHOPE hotlines (beyond the use of ICCAM), the data is gathered and reported on an *ad hoc* basis³⁷. Most of the hotlines publish their annual reports on their websites (however, accessing them might require some extensive searching, and they are not always available in English; publishing schedules also vary) but the metrics used are inconsistent – not only with the metrics used by other hotlines, but sometimes also across the reports produced by the same hotline. Indicator of CSAM cases confirmed by hotlines (vs. reports of suspected CSAM received), based on the data provided by all the hotlines operating in countries all over the world, would probably show a more accurate picture of the CSAM volume detected on the internet, especially considering the international nature of the phenomenon.

29 IWF, Face..., *op. cit.*

30 *Ibidem.*

31 *Ibidem.*

32 EOKM, Child sexual exploitation materials hotline. Annual report 2020, <https://www.eokm.nl/wp-content/uploads/2021/04/EOKM-Jaarveslag-2020-DEF-ENG.pdf>, p. 7 (10.07.2021).

33 *Ibidem*, p. 7.

34 Stopleveline, <https://www.stopleveline.at/en/statistics> (10.07.2021).

35 Paul Fletcher MP, Minister for Communications, Cyber Safety and the Arts. “Questions Without Notice: Children’ eSafety”, <https://www.youtube.com/watch?v=Ql8A9QQHWBU> (15.07.2021).

36 NASK Państwowy Instytut Badawczy, Dyżurnet.pl Raport 2020, Warsaw 2021, p. 17.

37 S. Charitakis et al., Study..., *op. cit.*, p. 7.

It is also important to note that the hotlines operate in different legal systems, and the legal definition of CSAM varies from country to country. Hence, some material that is considered illegal in certain countries (such as non-photographic CSAM in the UK) might be treated differently across the other hotlines. The main differences in legal definitions of CSAM include the age of consent to sexual relations, the scope of content being criminalized (*i.e.*, being considered CSAM), as well as legal sanctions for production, distribution, and possession of CSAM. The content that is regulated differently across countries include, among other things, drawing/manga/artistic interpretations of CSAM, digitally generated CSAM / realistic images representing a minor engaged in sexually explicit conduct, apparent self-generated sexual material, sexualized modelling or posing, sexualized images of children, text (also fictional) depictions of CSAM, manuals on CSA, declaration of committing CSA, and praise of paedophilia or CSA³⁸.

Not only the legal definition of CSAM, but also the legal framework of the scope of hotlines operation differs across the countries. As mentioned before, some hotlines receive most of the reports from the public, while others can also receive reports from ESPs or proactively search for CSAM. Hence, the CSAM reports volume changes might indicate not only changes in CSAM volume *per se* but also changes in reporting behaviours and hotlines' capacities of proactive searches. It is also important to note that the data available for hotlines' reports is skewed towards countries with established hotlines or using the IWF reporting portal. There is obviously no data on reporting CSAM to hotlines available in certain countries that do not have such mechanisms in place.

Considering all the limitations, the data available indicates an increase in received reports of suspected CSAM across the hotlines. The IWF data also shows an increase in the numbers of materials assessed as CSAM by their hotline analysts along with increased reporting. However, it is impossible to tell whether the increase in reporting means that there is more material online³⁹. Many possible factors might have influenced the changes in numbers of reports other than increased CSAM volumes available online itself.

Due to the pandemic confinements, people spent more time online, which might have resulted in coming across CSAM accidentally more often while being active on the internet for other reasons⁴⁰. There were several cases of CSAM going viral by being shared with an intent to identify the victim, as part of a public movement to actively search for and report CSAM to bring attention to the issue, or as comic

38 INHOPE, Annual report 2020..., *op. cit.*, pp. 18–21.

39 IWF, 'Definite jump' as hotline sees 50% increase in public reports of online child sexual abuse during lockdown, <https://www.iwf.org.uk/news/%E2%80%98definite-jump%E2%80%99-as-hotline-sees-50-increase-public-reports-of-online-child-sexual-abuse-during> (22.07.2021).

40 INTERPOL, Threats..., *op. cit.*, p. 11; NetClean, NetClean..., *op. cit.*, p. 27.

material, especially at the beginning of the pandemic⁴¹. It resulted not only in increased number of reports but, most importantly, in constant revictimizing of children pictured in the materials. After investigating the content, it reported to NCMEC, Facebook stated: “90% of this content was the same as or visually similar to previously reported content. And copies of just six videos were responsible for more than half of the child exploitative content we reported in that time period⁴²”

On the other hand, previously shared and viral CSAM being responsible for 90% of Facebook’s reports does not necessarily mean that CSAM rates on Facebook and other social media platforms have been low during the pandemic. Rather than that, it indicates that the platform struggles with detecting other types of CSAM, relying heavily on AI, which is more suitable for detecting already known CSAM, while human moderators are critical in assessing previously unreported CSAM⁴³.

“During the second quarter of 2020, the company removed less than half of the child sexual abuse material from Instagram than it did the quarter before — not because there was less of it, but because the company was less equipped to catch it.”, press reports⁴⁴. The reason behind it is the limited number of content moderators doing their job because of pandemic confinement, as CSAM viewing is not usually possible in remote work settings⁴⁵. Research shows that both law enforcement and hotline analysts representatives working on CSAM cases have similar observations on Facebook’s reporting⁴⁶. In the words of a hotline manager: “A lot of people that are coming in and reporting to us have said or have claimed that they’ve reported directly to the platform on numerous occasions and the platform is either not responsive or they get that sort of auto generated message saying you know, because of COVID-19, their moderator team has decreased or there’s not the same amount of staff and so it will take longer to get a response⁴⁷”.

41 NetClean, NetClean..., *op. cit.*, p. 26, 34; O. Solon, Child..., *op. cit.*

42 A. Davis, Preventing Child Exploitation on Our Apps, <https://about.fb.com/news/2021/02/preventing-child-exploitation-on-our-apps/> (22.07.2021).

43 E. Bursztein, E. Clarke, M. DeLaune, D.M.Eliff, N. Hsu, L. Olson, J. Shehan, M. Thakur, K. Thomas, T. Bright, Rethinking the detection of child sexual abuse imagery on the Internet. In The world wide web conference, 2019, p. 2606, <https://web.archive.org/web/20190928174029/https://storage.googleapis.com/pub-tools-public-publication-data/pdf/b6555a1018a750f39028005bfbdb9f35eae4b947.pdf> (22.07.2021); I. Lapowsky, How COVID-19 helped — and hurt — Facebook’s fight against bad content, <https://www.protocol.com/covid-facebook-content-moderation> (22.07.2021); NetClean, NetClean..., *op. cit.*, pp. 38–39.

44 I. Lapowsky, How..., *op. cit.*

45 *Ibidem*.

46 NetClean, NetClean..., *op. cit.*, pp. 38–39; M. Salter, W.K.T. Wong, Research report. The impact of COVID-19 on the risk of online child sexual exploitation and the implications for child protection and policing, Sydney 2021, p. 36–37, <https://www.arts.unsw.edu.au/sites/default/files/documents/eSafety-OCSE-pandemic-report-salter-and-wong.pdf> (22.07.2021).

47 M. Salter, W.K.T. Wong, Research..., *op. cit.*, p. 37.

2. Criminal Investigations and Cases

There is no universal system of registering CSAM related criminal cases in different jurisdictions around the world. Therefore, there is no indicator for the global volume of CSAM related crime investigations and convictions. It is only possible to look into criminal statistics for particular countries, being careful with making comparisons across the different legal frameworks. The data presented in this part of the paper results from (1) web searches for law enforcement crime statistics on CSAM available in English and (2) research conducted among law enforcement representatives on the perceived change in the numbers of criminal cases they were dealing with during the COVID-19 crisis.

On 3 April 2020, Europol reported an increase in the number of reports from the public to law enforcement for some countries⁴⁸. It provided the data from the Spanish Police, which noted a “significant increase” in the number of complaints submitted by the public about suspected CSAM online since the beginning of March 2020, comparing to the same period in 2017–2019⁴⁹. However, the graph provided shows that March 2020 reports’ number increased only slightly compared to March 2018 and 2019, with respectively less than 100 and less than 50 reports⁵⁰. From February to March 2020, there was a spike of 100 complaints more than in the previous month⁵¹. According to the data presented on the same graph, the volumes of CSAM reported to the Spanish Police over the years of 2017–2020 varied greatly, sometimes from month to month, and comparing the same month in different years as well, without a consistent pattern⁵². Drawing substantial conclusions based on the data from the very beginning of pandemic only (March 2020) proves difficult.

The data available for 2020 for Canada, and Poland, despite a very different sample size, both show some degree of an increase in police reports. Statistics for 2020 released by police in Canada show that the rate of police-reported CSAM incidents increased by 23% in 2020 with 11,055 crimes reported⁵³. In Poland, on the other hand, the number of police case openings related to CSAM and presenting adult pornography increased only by 6% with 705 cases in 2020 compared to 2019

48 Europol, *Catching...*, *op. cit.*, p. 7, <https://www.europol.europa.eu/publications-documents/catching-virus-cybercrime-disinformation-and-covid-19-pandemic> (22.07.2021).

49 *Ibidem*, p. 7.

50 *Ibidem*, p. 7.

51 *Ibidem*, p. 7.

52 *Ibidem*, p. 7.

53 After five years of increases, police-reported crime in Canada was down in 2020, but incidents of hate crime increased sharply, <https://www150.statcan.gc.ca/n1/daily-quotidien/210727/dq210727a-eng.htm> (22.07.2021).

(however, due to legislation differences, those statistics include some offences not related to CSAM)⁵⁴.

The results of the survey conducted by the NetClean⁵⁵ between 12 June and 17 October 2020 among 470 police officers from 39 countries, show that half of the respondents reported an increase in possession, receipt, and distribution of CSAM cases⁵⁶. One of the interviewed officers stated: “For my department, I have only seen an increase in cybertips which have uploads/downloads dates from the period when the lockdown started” which corresponds with the spike in reports received by NCMEC in the beginning of the pandemic⁵⁷. However, there were some noticeable differences in responses from police officers from different countries and regions. Whereas 66% of the US and 53% of the UK respondents reported an increase in CSAM possession, receipt, and distribution cases, only 22% of Swedish respondents, and 31% of all European respondents said the same⁵⁸.

Results of the Salter & Wong study of 77 surveyed participants from the Australasian region, North America, Europe, the United Kingdom, Africa, and the Middle East, of which 62% represented law enforcement⁵⁹, confirm this picture. Over 50% of respondents reported “some” or a “major” increase in reports of online child abuse (59.3%) as well as an increase in investigations (61%)⁶⁰. Some of the interviewed participants noticed more viral CSAM files were being shared, which is in line with previously described explanations for the spike in NCMEC reports.

On the other hand, INTERPOL registered a reduction in the use of its International Child Sexual Exploitation (ICSE) database by member countries since the introduction of confinement measures⁶¹. Namely, 60% of member countries who regularly use the ICSE database have either not accessed the database or reduced their database activities significantly during the COVID-19 pandemic⁶². It might indicate the disruptions in law enforcement capacity in investigating CSAM cases resulting from the COVID-19 crisis rather than a change in case openings. The other data available on the volumes of CSAM criminal investigations and cases presented earlier, however fragmented and unsystematic, indicate some increase in reports received by law enforcement agencies and case openings in samples analysed. It is not clear whether this increase can be attributed to the pandemic situation, or if it is

54 Komenda Główna Policji, Statystyka, <https://statystyka.policja.pl/st/kodeks-karny/przestępstwa-przeciwko-6/63503,Pornografia-art-202.html> (22.07.2021).

55 NetClean, <https://www.netclean.com/about-us> (22.07.2021).

56 NetClean, *NetClean...*, *op. cit.*, p. 31.

57 *Ibidem*, p. 31.

58 *Ibidem*, p. 31.

59 M. Salter, W.K.T. Wong, *Research...*, *op. cit.*, p. 11.

60 *Ibidem*, p. 22.

61 INTERPOL, *Threats...*, *op. cit.*, p. 7.

62 *Ibidem*, p. 7.

a part of an ongoing trend. Typically, case openings “lag behind the online activity”, so it is “too early to see a spike”, according to Brian Herrick, assistant chief of the FBI’s Violent Crimes Against Children and Human Trafficking Section⁶³.

3. Online Activity Monitored by Law Enforcement and other Entities

Online activity relating to CSAM, such as attempts to access CSAM, downloads of CSAM on peer-to-peer (P2P) networks, offenders’ activity on social media, forums, and other locations of the surface web, and activity on the darknet, is monitored by law enforcement and used to provide intelligence. This information might give an indication of offenders’ internet activity relating to CSAM⁶⁴. In the reports released on 3 April⁶⁵ and 19 June 2020⁶⁶, Europol assured that since the beginning of the COVID-19 crisis, it has been monitoring various indicators to determine whether there is an increase in the production and distribution of CSAM. It signalled that there had been an increase in detection and reporting of CSAM on the surface web and an increase of CSAM related activity on the darknet during the national lockdowns period⁶⁷. In the report released in September 2020, INTERPOL informed that its member countries and NGOs have reported increases in online activity relating to CSAM⁶⁸.

In April 2020, Brian Herrick noted: “Activity is peaking on the platforms where it takes place, very similar to how it peaks around holiday time when people are off work”, confirming that “a lot of activity” took place in coded conversations on mainstream social media platforms, with the “most egregious child sexual abuse material” being shared on the dark web⁶⁹. According to child safety experts and law enforcement, distributors of child sexual abuse images are trading links to material in plain sight on platforms including YouTube, Facebook, Twitter and Instagram using coded language to evade the companies’ detection tools⁷⁰.

The interest in this type of material may be evidenced by the increase in the number of searches for CSAM being conducted online. Europol member countries reported a spike in the number of attempts to access websites featuring CSAM blocked in their filters during their lockdown periods⁷¹. For instance, Denmark reported a three-fold increase in the number of attempts to access illegal websites featuring

63 O. Solon, *Child...*, *op. cit.*

64 NetClean, *NetClean...*, *op. cit.*, p. 22.

65 Europol, *Catching...*, *op. cit.*, p. 3.

66 Europol, *Exploiting...*, *op. cit.*, p. 5.

67 *Ibidem*, p. 14.

68 INTERPOL, *Threats...*, *op. cit.*, p. 9.

69 O. Solon, *Child...*, *op. cit.*

70 *Ibidem*.

71 Europol, *Exploiting...*, *op. cit.*, p. 7.

CSAM from one week to another, with 55 site searches comparing to 18 searches⁷². In the UK alone, IWF registered 8.8 million blocked attempts to access CSAM over one month (April 2020)⁷³. The India Child Protection Fund (ICPF) reported a spike in online searches for CSAM in India since the beginning of its lockdown⁷⁴. For India, interest in child pornography content is substantiated by online website monitoring data during the same time period, which shows that searches for CSAM related keywords also spiked during the same period⁷⁵.

Furthermore, law enforcement agencies noted an increased number of downloads of CSAM on peer-to-peer (P2P) networks. Spanish Police detected a 25% increase between the weeks commencing 17 March and 24 March 2020. Other Europol member countries reported similar trends, especially in the second part of March 2020, according to Europol's 2020 April and June reports⁷⁶. Child Rescue Coalition (CRC) data on detections of CSAM on P2P networks in Italy and Spain confirm these findings, with both countries reporting a considerable increase in March and April 2020⁷⁷. The CRC also noted an increase for other countries in the dataset, including the US, and China, but in the US numbers of downloads began to rise as early as in mid-February 2020⁷⁸. However, before the numbers spiked, there was an initial decrease in sharing CSAM in the CRC data. According to the CRC COO Glen Pounder, "This may be attributed to predators quarantined at home with other family members, hindering their ability to access CSAM without getting caught"⁷⁹. In September 2020, INTERPOL also informed about the significant increase in the sharing of CSAM through the use of P2P networks referring to multiple sources, including member countries and CRC⁸⁰. Observations made by law enforcement representatives surveyed by NetClean align with these findings: six in ten police officers reported an increase in downloads of CSAM on P2P networks⁸¹.

72 Europol, *Catching...*, *op. cit.*, p. 7.

73 IWF, Millions of attempts to access child sexual abuse online during lockdown, <https://www.iwf.org.uk/news/millions-of-attempts-to-access-child-sexual-abuse-online-during-lockdown> (22.07.2021).

74 India Child Protection Fund, Child sexual abuse material in India. Report on demand for child pornography

& pilot deterrence using artificial intelligence, 2020, p. 5, https://7d53df5d-623a-479f-89b5-c88a0757a721.filesusr.com/ugd/aeb656_0247bfeedc04490b8e44e4fba71e3ad7.pdf (22.07.2021).

75 *Ibidem*, p. 5.

76 Europol, *Catching...*, *op. cit.*, p. 8.

77 Child Rescue Coalition, Online Safety Advisory: CRC finds increase in distribution of child sexual abuse material in file sharing networks during COVID-19, <https://childrescuecoalition.org/online-safety-advisory-crc-finds-increase-in-distribution-of-child-sexual-abuse-material-in-file-sharing-networks-during-covid-19/> (22.07.2021).

78 *Ibidem*.

79 *Ibidem*.

80 INTERPOL, *Threats...*, *op. cit.*, p. 10; Child Rescue Coalition, *Online...*, *op. cit.*

81 NetClean, *NetClean...*, *op. cit.*, p. 23.

The increased activity of CSAM interested offenders on the surface web was accompanied by an increase in their activity on the darknet forums. Discussions about the COVID-19 situation and its possible effects on CSAM availability and access to children started appearing when the pandemic emerged, with offenders anticipating an increase of child sexual abuse opportunities and CSAM volumes as well as shortcomings of the restrictions⁸². Web-IQ, a specialist cybersecurity company that monitors dark web and other online activity, noted a more than 200% increase in new posts on known child sex abuse forums that link to downloadable images and videos hosted on the surface internet in March 2020, compared to the previous month, with 9,255 links believed to be “highly likely to point to child abuse material” identified⁸³. Parks *et al.*, recruiting participants on the darknet for the “Prevent It” program, an anonymous internet-based cognitive behavioural therapy program, established that in the largest forum monitored, there were typically 100–150 active persons at one time, but after the lockdown, the numbers increased to 300–400 on average⁸⁴. Such change in activity was also seen in other, smaller forums⁸⁵. They noted that “based on conversations of the individuals in the chat rooms, the impression is that the increase is a combination of current users having more time to spend online, new users taking the step to explore onion sites to find more extreme material, as well as users who have tried to quit but have now returned⁸⁶”. The increase of CSAM related activity on the darknet was also observed by the surveyed police officers and other professionals working on CSAM cases (with 50% and 74% of them noting an increase in different samples)⁸⁷. Interviewed law enforcement representatives observed a rise of active individuals as well as an increase in shared CSAM⁸⁸.

The data collected indicate that there was an increase in searching for, accessing, downloading, and sharing CSAM. Europol’s intelligence notes that: “Although the data is still fragmented and incomplete, there are strong indications there has been an increase in the number of cases of child sexual abuse. Referrals from industry and third-party countries have reached record highs in recent months, particularly in relation to material accessed and distributed on the surface web and in peer-to-

82 Europol, *Catching...*, *op. cit.*, p. 8; A. Parks, C. Sparre, E. Söderquist, S. Arver, G. Andersson, V. Kaldo, K. Görts-Öberg, C. Rahm, *Illegal Online Sexual Behavior During the COVID-19 Pandemic: A Call for Action Based on Experiences From the Ongoing Prevent It Research Study*, “Archives of Sexual Behavior” 2020, no. 49, p. 1434; NetClean, *NetClean...*, *op. cit.*, p. 20, 23.

83 Europol, *Exploiting...*, *op. cit.*, p. 9; L. Donovan, C. Redfern, *Online child abuse flourishes as investigators struggle with workload during pandemic*, <https://www.telegraph.co.uk/global-health/science-and-disease/online-child-exploitation-flourishes-investigators-struggle/> (22.07.2021)

84 A. Parks *et al.*, *Illegal...*, *op. cit.*, p. 1434.

85 *Ibidem*, p. 1434.

86 *Ibidem*, *op. cit.*, p. 1434.

87 NetClean, *NetClean...*, *op. cit.*, p. 23; M. Salter, W.K.T. Wong, *Research...*, *op. cit.*, p. 24.

88 NetClean, *NetClean...*, *op. cit.*, p. 23–24.

peer (P2P) networks during the COVID-19 crisis. Activities on dark web forums have also increased, including high levels of posts and responses. In many ways, these discussions were «business as usual^{89»».}

Conclusions

It is essential to note that the data presented – not only on offenders' online activity, but in the other areas as well – is fragmented and incomplete, and, some of it, anecdotal. There is a lack of representative data on CSAM online as well as universal and reliable indicators of CSAM reports, criminal cases, and offenders' activity. Therefore, our knowledge of the CSAM phenomenon is limited by a scarcity of standardized or comparable categorization approaches. ECPAT recognizes the sources of this problem: “These challenges largely relate to differences in the sampling, case recording, and data categorisation approaches between existing studies. This in turn highlights the operational and research challenges presented by different categorisation approaches used by law enforcement operating around the world⁹⁰.” At the same time, UNICEF highlights that the lack of representative data to determine the scale of any form of violence against children is a “critical barrier to making an efficient investment and prioritizing a comprehensive child protection response⁹¹”.

The data obtained from reports received by hotlines combating CSAM, volumes of criminal investigations and cases, as well as indicators on CSAM offenders' online activity show an increase since the surge of the COVID-19 pandemic, especially in its initial period. However, it is essential to note that neither administrative data from hotlines and law enforcement are indicators of CSAM volumes and CSAM related offending but rather of reported or detected CSAM online cases. In turn, intelligence on CSAM related online activities reflects an increase in searching for, accessing, downloading, and sharing CSAM, but more research and online activity monitoring is needed to assess the scale and trends in offenders' activity during the pandemic. The volume of CSAM law enforcement and hotlines are aware that it represents the “tip of the iceberg” of all the CSAM existing and shared online⁹². Interviewed in 2020, Brad Russ, executive director of the National Criminal Justice Training Center at Fox Valley Technical College in Wisconsin, which provides training and technical support to law enforcement, provided an estimate that CSAM on the internet is so

89 Europol, *Exploiting...*, *op. cit.*, p. 5.

90 INTERPOL, *Towards a global indicator on unidentified victims in child sexual exploitation material*, 2018, p. 14, <https://www.ecpat.org/wp-content/uploads/2018/03/TOWARDS-A-GLOBAL-INDICATOR-ON-UNIDENTIFIED-VICTIMS-IN-CHILD-SEXUAL-EXPLOITATION-MATERIAL-Summary-Report.pdf> (22.07.2020).

91 Unicef, *Child Protection*, <https://www.unicef.cn/en/what-we-do/child-protection> (22.07.2021).

92 S. Charitakis et al., *Study...*, *op. cit.*, p. 5.

widespread that less than 10% of detected trading and downloading of the images are investigated⁹³.

Another reason why it is hard to know if the CSAM problem has been compounded because of the COVID-19 pandemic crisis is the growing scale of the phenomenon that had already been observed before. The number of public reports to INHOPE hotlines has more than doubled during the period 2017 to 2019⁹⁴. CSAM on the internet has “outpaced the capabilities of independent clearinghouse analysts and law enforcement to respond⁹⁵” already before the pandemic started. It seems that during the COVID-19 crisis, the problem escalated even further. Considering all the limitations, the available data indicate an increase in received reports of suspected CSAM across the hotlines. However, it seems that multiple factors other than those related with COVID-19 pandemic measures might have influenced the changes in numbers of reports rather than increased CSAM volumes available online itself. We need to establish how much of the increase in CSAM indicators can be attributed to the global pandemic, and what are the circumstances within this crisis that promote it, in order to be able to take preventive measures and formulate adequate preventive policies. Cathal Delaney from Europol’s Child Sexual Abuse Europol Cybercrime Centre notes that, “If more new CSAM has been produced during the pandemic, we are unlikely to see it for some time. In the darknet communities, new material is connected to status and usually only shared among closed groups. Circulation to a wider community usually happens at a later stage⁹⁶”.

The picture of CSAM volumes during the pandemic that emerges from the data available is unclear. It is too early to know the factors that influenced a spike in CSAM reports, cases, and offender activity during the COVID-19 pandemic⁹⁷. Future research will need to establish whether the escalation of the CSAM problem is attributable to the pandemic, a part of an ongoing trend, or both⁹⁸. In order for that to be possible, it is necessary to develop universal CSAM indicators and establish routine data gathering mechanisms in order to provide robust data on CSAM volumes on the internet.

93 D. Racioppi, ‘People don’t want to talk about it,’ but reports of kids being exploited online have spiked amid coronavirus pandemic, <https://www.usatoday.com/story/news/nation/2020/10/22/coronavirus-child-abuse-nj-online-child-exploitation-reports-increase/6004205002/> (22.07.2021).

94 INHOPE, Annual report 2019, *op. cit.*, p. 4.

95 E. Bursztein et al., Rethinking..., *op. cit.*, p. 6.

96 NetClean, NetClean..., *op. cit.*, p. 20.

97 NetClean, NetClean..., *op. cit.*, p. 19–20.

98 M. Salter, W.K.T. Wong, Research..., *op. cit.*, p. 30; NetClean, NetClean..., *op. cit.*, p. 20.

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